

ABOUT US

# West Region Overview



# About GEI

GEI Consultants, Inc. is a consulting engineering firm that delivers value-laden professional services that improve our world's built environment. With more than 900 staff and 42 offices in North America, GEI is a leader in providing multi-disciplined engineering and technical services to a range of private and public sector clients, both domestically and abroad.

As an employee-owned firm, we foster personal relationships with our clients and support our staff in a partnership model, which is underpinned by continuous learning and sharing of knowledge. We retain proven, recognized experts and attract the best young minds to deliver to our clients a refreshing blend of technical expertise, collaborative spirit, and innovation that is rare in our profession.

GEI is consistently ranked among the top 100 engineering firms in Engineering News-Record's (ENR) annual rankings.

## OUR EXPERTISE



Geotechnical



Water  
Resources



Civil Design



Environmental



Construction  
Management



Information  
Management

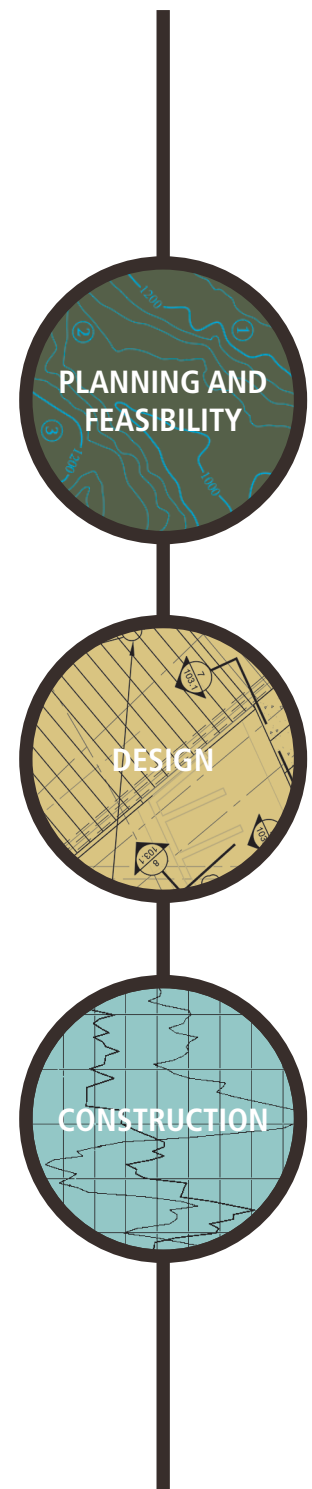


# Targeted Expertise and Integrated Delivery

GEI's multidisciplinary team of engineers, scientists, project managers and technicians brings consulting services to support every aspect of your project lifecycle, from planning and feasibility to design, permitting and construction. Adding GEI's expertise to your team at any stage of a project will pay off, but the greatest benefit comes through our ability to coordinate our diverse resources throughout the development and implementation of your project. Our integrated delivery process provides our clients with efficiencies that save time and money throughout the project.

GEI has worked on thousands of projects, and the West Region is focused on all aspects of water resources including levees, dams and spillways, pipelines, canals, wells, pump stations, water treatment and habitat enhancement. Through our experience on these and other similar projects, we have developed a unique understanding of the issues faced by owners and contractors. We work with our clients, regulatory agencies, and stakeholders to develop solutions that meet their goals, budgets, and time frames. We provide environmental documentation and permitting, geologic investigation, feasibility analysis, engineering design, information management, and construction management across a broad range of projects. One of our strengths is guiding the collaboration that leads to effective multi-benefit projects.

Our experience indicates that significant economic value can be created through a coordinated and comprehensive approach to addressing the ecological, environmental, geotechnical, and construction-related issues on projects. Our team can help you know in advance what issues may be encountered and develop cost-effective solutions to address them.



# Geotechnical

Since 1970, GEI has provided geotechnical engineering consulting for countless landmark construction projects including commercial, institutional and industrial buildings and structures; dams, levees and pipelines; tunnels, highways and bridges, and construction-related structures such as slurry walls and excavation support systems. Many of these projects draw on GEI's environmental, water resources and ecological expertise, fields that are highly synergistic with our comprehensive knowledge of geotechnical engineering.



## **FEATURED PROJECT: URBAN AND NON-URBAN LEEVE EVALUATION, CALIFORNIA DEPARTMENT OF WATER RESOURCES (DWR)**

The DWR is engaged in an unprecedented effort to comprehensively evaluate approximately 350 miles of urban levees and over 1,400 miles of non-urban levees located within California's Central Valley.

GEI was a key member of the multi-firm consulting team responsible for the evaluation of numerous urban and non-urban study areas, including levees in the highly-populated Marysville/Yuba City, Sacramento, and Stockton areas. GEI reviewed existing levee historical data; conducted field explorations (including drilling and geophysical methods, along with associated laboratory testing); performed engineering, stability and seepage analyses; and prepared preliminary design and construction estimates for repairing and upgrading the levees.

# Water Resources

GEI's engineers and scientists are highly experienced in all aspects of water resources planning to address urban, agricultural and environmental water supply needs, and our expertise is unsurpassed in planning for flood protection. We have conducted hundreds of feasibility studies for water supply projects, and developed numerous integrated regional water management plans, agriculture and urban water management plans, groundwater sustainability plans, water quality evaluations, and flood risk assessments. Our staff bring not only advanced skills in surface and groundwater modeling and other technical skills, but also the capacity to lead stakeholders to develop collaborative approaches to multi-benefit projects.



## **FEATURED PROJECT: UPPER SAND CREEK DETENTION BASIN, CONTRA COSTA FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

GEI has worked on engineering of stormwater detention facilities and open channel and pipe systems for stormwater conveyance. One example is the Upper Sand Creek Detention Basin, which encompasses approximately 50 acres along the south margin of Lone Tree Valley in Antioch, for the Contra Costa Flood Control and Water Conservation District. This detention basin was formed by construction of a dam across Sand Creek and excavation within the reservoir to create the needed storage capacity. The basin is a "normally dry" reservoir that will attenuate peak runoff by containing (except for the limited release through the low-level outlet) flows in Sand Creek up to a 100-year storm event. For storms greater than a 100-year design storm event, flood flows will pass over an emergency spillway and follow a controlled route to enter the creek downstream of the basin. In addition to its primary flood protection objective, the basin is compatible with recreational and environmental purposes. GEI served as the Engineer of Record on the project.



# Civil Design

Our civil design services support diverse client sectors including state and municipal water agencies; electric utilities, developers, industrial and institutional owners, and others. Project types vary, such as water conveyance, including dams, and dam related structures, levees, canals, pipelines, pumping stations, and wastewater systems. We use proven methods of coordination and collaboration with strict management of quality, value, schedule and cost. Our engineering and design services range from planning and permitting through preliminary and detailed design to construction and commissioning.



## **FEATURED PROJECT: GUADALUPE DAM DESIGN SANTA CLARA VALLEY WATER DISTRICT**

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GEI is the engineering planning and design consultant for Guadalupe Dam. This high hazard potential dam has inadequate seismic stability under the anticipated Maximum Credible Earthquake, and the reservoir is operated with restrictions on the water storage level behind the dam as interim risk reduction measures until the deficiencies are remediated.

GEI is completing the final retrofit design and preparing plans, specifications, construction documents and cost estimates for the final design. The design includes a downstream earthfill buttress from an on site local borrow source, a new sloping intake and tunneled outlet, and an enlarged new spillway.

# Environmental

Today's environmental regulations are complex and ever-changing. Project owners and operators need expert assistance to navigate through the labyrinth of regulatory compliance requirements. GEI has the qualified staff and expertise to help your project get permitted and built to specifications while staying on budget and schedule. Environmental services offered by our team include CEQA/NEPA compliance, cultural resources, biological resources and monitoring, environmental permitting, ecological restoration, water quality/hydrology, air quality/noise/climate change, environmental management and policy, and visual simulations and 3D modeling.



## **FEATURED PROJECT: NATOMAS LEVEE IMPROVEMENT PROGRAM SACRAMENTO AREA FLOOD CONTROL AGENCY (SAFCA)**

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The project, located in Sacramento and Sutter counties, is a multi-phased effort led by SAFCA to bring the entire 42-mile Natomas Basin perimeter levee system into compliance with applicable Federal and State standards for levees protecting urban areas. The GEI regulatory team has provided permitting services since 2006, including permit strategy support and preparation of more than 60 permit applications and supporting documentation to comply with CWA, Federal and State ESA, and other regulations. SAFCA's portion of the project is permitted and constructed, and SAFCA has retained GEI to lead environmental compliance for its other major flood-risk reduction projects requiring permits under aggressive project schedules.



# Construction Management

GEI's project teams are made up of engineers, scientists and construction managers from a variety of backgrounds. From constructability reviews, schedule, procurement, documentation, financial reviews, inspection, oversight, and final reporting, GEI can manage all facets of a construction project. GEI engineers and construction managers have performed construction oversight for thousands of sites, including dams, levees, pump stations, pipelines, canals, tunnels, wells, and utility work. Previous clients have included utility companies, municipalities, water districts, and state and federal agencies. GEI's environmental professionals enhance our abilities by providing biological and cultural monitoring services.



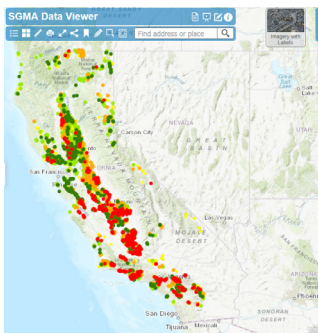
## **FEATURED PROJECT: EL DORADO FOREBAY DAM MODIFICATION EL DORADO IRRIGATION DISTRICT (EID)**

GEI is providing Construction Management, Inspection, and Engineering Services during Construction of the dam modification to the EID's El Dorado Forebay Dam.

GEI's Construction Management role includes contract administration, construction observation and reporting, Request for Information and Submittal review and responses, schedule review and monitoring, progress payment processing, project meetings, correspondence, change order negotiation and processing, monthly reporting, issue and dispute resolution, and assistance with potential and formal claims defense. GEI's expert Construction Management team has assisted EID with addressing and resolving several unique challenges on the project.

# Information Management

Proper management of information facilitates sound decision making, saving time and money, and improving the outcome of projects and programs. The GEI team is experienced in crafting solutions to complex information management needs. Whatever your information management needs, GEI's team of system architects, engineers, programmers, database administrators, GIS analysts, web designers, and information technology specialists will deliver innovative information management solutions for your engineering and scientific challenges, while protecting your investment in data collection and management in a secure way.



## **FEATURED PROJECT: SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA )PORTAL FOR THE STATE OF CALIFORNIA CALIFORNIA DEPARTMENT OF WATER RESOURCES**

To facilitate implementation, administration, and management of the SGMA in California, a web-based data management system – SGMA Portal – was designed and deployed by GEI for submitting, loading, storing, retrieving, displaying, analyzing, exporting, and reporting groundwater data. The portal supports notifications, GIS datasets, groundwater well information, groundwater levels, groundwater quality, pumping and well test data, lithologic and well construction data, water use data, land surface elevation data, streamflow data, and precipitation data. After the system launched, the GEI team provided technical support and system maintenance services such as troubleshooting issues reported from local agency users, answering questions on the features and functions of the system, improving and modifying the database and interface, and documenting the system architecture.



# Grant Funding Assistance

Successful grant writing is an important and fundamental part of GEI's core business in supporting our clients. Without funding, it is often difficult for owners to improve their facilities and operations. We have helped our clients with grant applications that have resulted in over \$1 billion in awards from state and federal funding sources.

GEI has assisted irrigation and water districts, regional water management groups, municipalities, NGO's, and others, in developing water management plans, successfully obtaining funding, and implementing projects identified in those plans. We are knowledgeable of the process and requirements for most state and federal grant programs and have helped a wide range of clients in preparing and administering grants to conduct feasibility studies, develop their plans, and implement capital facilities programs.

**GEI'S GRANT FUNDING SUCCESS FOR CLIENT PROJECT IMPLEMENTATION**

TYPE OF PROGRAM	GRANTS AWARDED	GRANT FUNDS AWARDED (USD)
Integrated Regional Water Management	25	\$130,631,653
Conjunctive Use	13	\$332,838,676
Water Use Efficiency	62	\$46,855,433
Groundwater Management	27	\$30,588,229
Flood Control	24	\$150,927,144
Water Storage Investment Program	2	\$302,306,000
Other	11	\$19,073,304
<b>Total</b>	<b>164</b>	<b>\$1,013,220,136</b>

## What Our Clients Say About Us

"I wanted to take a moment to thank you for all of the excellent work which GEI so dutifully carried out and which allowed us to meet all of the goals we had envisioned when we had set out to undertake this project..."

*Neal Conatser  
Capital Planning & Project Manager, County of Marin*

"The project team has been providing environmental and permitting compliance services to SAFCA since 2006 on many different projects. We continue to be quite satisfied with their performance."

*John Bassett  
Director of Engineering, Sacramento Area Flood Control Agency*

"GEI's depth of experience, hard work and collaborative spirit were instrumental in meeting our accelerated schedule for completion. Going from pre-feasibility to completion of a 2-mile long setback levee in just two years is a remarkable achievement for all involved... GEI has been an exceptional partner during the design, construction and implementation of this milestone project... We're proud to be able to offer our citizens with increased flood protection and are confident that these improvements have increased the safety and economic benefits of our community."

*Paul Brunner, P.E.  
Executive Director, Three Rivers Levee Improvement Authority.*





#### **WEST REGION LOCATIONS**

##### **Bakersfield**

5001 California Avenue  
Suite 120  
Bakersfield, CA 93309  
661.716.3010 phone

##### **Los Angeles**

99 S. Lake Avenue  
Suite 300  
Pasadena, CA 91101  
818.552.6400 phone

##### **Sacramento**

2868 Prospect Park Drive  
Suite 400  
Rancho Cordova, CA 95670  
916.631.4500 phone

##### **San Diego**

5901 Priestly Drive,  
Suite 301  
Carlsbad, CA 92008  
760.795.1960 phone

##### **Oakland**

180 Grand Avenue  
Suite 1410  
Oakland, CA 94612  
510.350.2900 phone

##### **Portland**

6915 SW Macadam Avenue  
Suite 130  
Portland, OR 97219  
503.697.1478 phone

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**GEOTECHNICAL**  
**ENVIRONMENTAL**  
**WATER RESOURCES**  
**CIVIL DESIGN**  
**CONSTRUCTION SERVICES**