Exceptional Commitment To Quality

Kleinfelder is an employee-owned engineering, science, and architecture consulting firm providing solutions to meet our world’s complex infrastructure and natural resource challenges.

At Kleinfelder our business is built on a track record of proven success and long-term relationships. Our breadth of expertise and range of services allow us to bring clients value across multiple aspects and phases of their diverse challenges.

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Levees

www.kleinfelder.com
An Employee Owned Company

Image on the front cover: Sacramento River Bank - Sacramento, CA

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Levees Overview
Levees are an integral part of a community’s infrastructure, providing a controlled path for rivers and streams while protecting the built environment from flooding. Kleinfelder is a leader in the design of new levees, the inspection, evaluation and remediation of existing levees, and in providing levee construction oversight and quality assurance services. We understand the unique nature and challenges of levee safety programs and assess risk for levee systems nationwide. Our projects are at the forefront of risk-based levee safety procedures, which are evolving across the country.

Expert Capabilities
Kleinfelder’s experience includes: levee inspections; investigations; identification of levee safety deficiencies, reliability, and risk analysis; and designs that address seepage and slope stability with cutoff walls, drainage trenches, drainage blankets, and secondary systems such as relief wells and fully-automated monitoring systems with data linkage to centralized locations.

National Levee Safety Program
Our experts are working closely with the U.S. Army Corps of Engineers (USACE), American Society of Civil Engineers (ASCE), American Council of Engineering Companies (ACEC), the State of California Department of Water Resources, and the National Committee on Levee Safety for the development of the National Levee Safety Program and National Levee Safety Guidance Documents. Our levee safety assessment abilities include the use of USACE methods of risk-based analysis in the evaluation of probable failure points (PFPs). The risk of failure is correlated with fragility curves to allow rational selection of risk-based design alternatives. Kleinfelder is experienced in the evaluation of and assistance with the implementation of interim risk reduction measures (IRRM) by screening-level risk assessment and assists our clients in identifying public safety risks associated with levee systems across the nation.

Capabilities
• Levee & Appurtenant Systems Inspection
• Flood Protection System Performance Evaluation & Risk Assessments
• GIS Data Collection & Storage
• Environmental Permitting Services
• Hydrologic & Hydraulic Analysis
• Geotechnical Characterization of Levee Systems
• Geotechnical, Civil, & Hydraulic Engineering Analysis
• Structural & Mechanical Engineering
• Levee Design including Rehabilitation & Intermediate Risk Reduction Measures
• Emergency Action Planning
• O&M Manuals & Emergency Response Plans
• Construction Management
• Quality Control & Quality Assurance Testing
• Levee Certification Documentation

Partial Client List
• Sacramento Area Flood Control Agency (SAFCA)
• State of California - Dept. of Water Resources, CA
• U.S. Army Corps of Engineers (USACE)
• City of Kent, WA
• Alameda County Flood Cont. and Water Cons. District, CA
• Clatsop Diking District, OR
• City of West Sacramento, CA
• San Joaquin Area Flood Control Agency (SJAFCA)
• U.S. Bureau of Reclamation (USBR)
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