

# Dam & Levee Services

OVERVIEW



 **GeoComp**  
A Sercel Business

[geocomp.com](http://geocomp.com)

# Our Capabilities

Dams and levees play a critical role in protecting communities, infrastructure, and ecosystems. Geocomp helps clients mitigate risk, maintain structural integrity, and meet regulatory requirements with advanced monitoring, testing, and engineering solutions. With our real-time, web-based monitoring technology, risk assessment expertise, and geotechnical insights, we help clients detect issues early, prevent failures, and extend the lifespan of critical infrastructure.

## Dam and Levee Services

Geocomp supports dam projects with a comprehensive suite of specialized services that enhance safety, compliance, and operational efficiency:

**Real-Time Monitoring:** Our *iSiteCentral*® platform delivers near real-time alerts and performance data, allowing clients to detect movement early and take preventive action to protect critical dam infrastructure and surrounding communities.

**Data Management:** We centralize geotechnical data and automate custom reporting, providing clients with seamless access to accurate, actionable insights through *iSiteCentral*®, improving data-driven decision making and added efficiency to regulatory reporting.

**Failure Analysis & Rehabilitation:** By leveraging cutting-edge technology and advanced data modeling, we help clients identify potential failure risks, so they can implement targeted repairs and help extend the life of their dam and levee assets.

**Geostructural Evaluation & Monitoring Support:** By identifying underground vulnerabilities and potential failure risks, Geocomp helps clients develop proactive risk management programs for ongoing surveillance, inspection, and performance monitoring—helping provide long-term stability and regulatory compliance.



Katrina Levee failure



Charleroi Lock



Smithland Hydroelectric Dam

## Technology Solutions

Geocomp provides innovative technology with cutting-edge capabilities tailored to the success of your dam projects:

**Geotechnical Instrumentation** - Geocomp's team of field technicians design, install, and integrate advanced geotechnical instruments to monitor critical parameters like settlement, pore pressure, and strain on the dam, providing early detection and warnings.

**iSiteCentral®** - With our in-house development of iSiteCentral®, a web-based data collection, management, and reporting system, Geocomp can deliver data to assist in early warning deformation and seepage of dams and levees.

**InSAR Satellite Mapping** - InSAR (Interferometric Synthetic Aperture Radar) satellite-based remote sensing, measures movement and provides remote detection of problems that might lead to structural failure.



Dam sensors within iSiteCentral dashboard

## Reliable. Trusted. Value-driven. Innovative.

For more than 40 years, Geocomp has been a trusted partner in providing clients with innovative geotechnical solutions.

**Numerical Modeling** - We offer advanced numerical modeling to simulate dam behavior under various loading and environmental conditions to assess the stress-strain structural stability and identify potential problems.

**Geotechnical Testing** - We provide laboratory and field testing services to evaluate soil, rock, and geo-material properties. Specialized tests will assess shear strength, permeability, and consolidation relevant to dam design and maintenance.

### EXAMPLE PROJECTS

Bomba Dam (Italy)

Buffalo Creek Dam Failure (WV)

Hickory Log Creek Dam (GA)

iLevee Flood Protection (LA)

Kentucky Lock and Dam (KY)

Lowell Reservoir Dam (MA)

New Orleans Levee System (LA)

Oostersheld Storm Surge (Holland)

Palo Verde Reservoir (AZ)

Santa Clara Water District (CA)

Smithland Dam (OH)

Willow Island Dam (OH)

BF Sisk Dam (CA)

Brumadinho Dam (Brazil)

Oroville Dam (CA)

Florida Power & Light (FL)

Richland Creek Dam (GA)

Monte Pallano (Italy)

Clemson Dams (SC)

IMC Dam Failure (FL)

Kansas Power & Light Dam (KS)

# Experience you can trust

For more than 40 years, Geocomp has helped clients navigate complex geotechnical challenges with tailored, technology-driven solutions. We partner closely with clients to understand their specific needs and deliver practical, cost-effective strategies that enhance safety, efficiency, and project success. By leveraging advanced technologies and deep industry expertise, we provide data-driven insights and real-time solutions that empower clients to make informed decisions and achieve their goals with confidence.

## Katrina Levee Early Warning System

The State of Louisiana's Coastal Protection and Restoration Agency (CPRA) implemented the innovative Intelligent Flood Protection Monitoring, Warning, and Response System (iLevee) in the New Orleans area to monitor flood protection systems and provide early warnings of potential failures. Geocomp served as the Program Manager for the \$3 million, 2-year project, which integrated sensor data, visual observations, maintenance information, and publicly available data into a GIS-based system. Using risk assessment tools and probability analysis, Geocomp identified high-risk levee segments and prioritized monitoring to maximize risk reduction. We also piloted a program to deploy distributed fiber for sensing (DFOS) to detect strain and temperature changes within the levee.



## B.F. Sisk Dam

Geocomp was selected for this project due to our innovative solutions and expertise in geotechnical engineering, particularly in dam safety and instrumentation. We developed a Trigger Action Response Plan, conducted a historical 4-year baseline study using past satellite InSAR data, and provided near real-time slope stability monitoring with multiple alarming systems. Additionally, we developed a ground-based radar monitoring system for early warnings, and a centralized data management system using iSiteCentral® for automated reporting. Our 24/7 alert responsiveness allowed the contractor to safely advance the project ahead of schedule, saving on labor and equipment costs.



Geocomp provides cutting-edge solutions leveraging the latest technological advancements to help clients achieve their goals.  
To learn more visit [geocomp.com](http://geocomp.com)

  
A Sercel Business

