Proactive by Design.
Our Company Commitment.
GZA is proactive by design. We are passionate about partnering with clients to meet the water-related challenges of climate change, resiliency, sustainability and building where the water meets the land.

Water constitutes 70 percent of the Earth’s surface and 65 percent of the human body. It is the highway for 90 percent of all commerce, and the water’s edge is home to 80 percent of the world’s population. Water matters. During the last 30 years, we have successfully completed hundreds of water-related projects throughout the United States. As a full-service engineering and applied science consulting firm, we bring to each project not only our water expertise, but also our combined experience in geotechnical and civil engineering, ecological, environmental science and construction management.

PROJECT SPOTLIGHT

Post-Fukushima Flood Studies U.S. Nuclear Power Plants

The Challenge

After the devastating earthquake and tsunami at Fukushima, Japan, the NRC required all U.S. nuclear power plants re-evaluate their flood vulnerability, with the evaluations to be completed within three years. GZA was retained to characterize flood hazards at 35 percent of U.S. nuclear power plants.

Our Solution

GZA introduced state-of-the-art technologies such as region-specific meteorology studies, probabilistic analysis of flooding due to storm surge, and hydrodynamic computer modeling for analysis and visualization of river, storm surge and waves, and local precipitation flooding.

The Result

GZA’s studies assessed the flood hazard of most U.S. major river watersheds, the Gulf of Mexico and the U.S. East Coast. Twenty-three power plants were evaluated in three years, meeting NRC’s schedule. The results are being used to assess the vulnerability of these critical facilities and to create flood mitigation measures and response plans.
GZA’s water services staff includes planners; civil, geotechnical and structural engineers; ocean and coastal engineers; hydrologists and geohydrologists; oceanographers; meteorologists; ecologists; and natural resource specialists. We focus on four primary practice areas:

**Marine and Waterfront Engineering**

We provide engineering and environmental expertise in the design, permitting and construction of marine and waterfront facilities. Our services include site investigation, condition surveys, waterfront structure design, permit preparation and construction management. We also provide complete coastal engineering services, including hydrodynamic modeling of waves, storm surge and beach processes, coastal resiliency and estuary management. Clients include port authorities, industry, power generation and transmission, marine and heavy construction, developers, marinas, and local, state and federal government agencies.

**Dams and Leveses**

GZA excels in the assessment, design and construction of new dams and leveses, and the rehabilitation and decommissioning of aging facilities. Projects have included public and privately-owned dams, dikes and levees, and hydraulic, flood and drainage control structures for power plants, municipal, industrial and mining facilities. With more than 1,000 dam projects successfully completed, GZA has earned a national reputation in this practice area.

**Water Resources**

Our engineers and scientists offer integrated, multidisciplinary expertise and experience in the investigation, planning and protection of water resources. We specialize in water supply investigations (surface and groundwater), sustainability, watershed management, diagnostic evaluations and the restoration of rivers and ponds, stormwater management and infrastructure design, permit support, environmental resource management, and construction support services. We also provide complete hydrodynamic modeling of groundwater aquifers, rivers, coastal processes, sediment transport and estuaries. Our laboratory, New England Bioassay, is one of the leading ecological and whole effluent toxicity testing laboratories in the United States.

**Climate Change and Hazard Planning**

Addressing the challenges of natural hazards and climate change requires a broad spectrum of skills and experience. GZA’s climate change team includes specialists in planning, meteorology, hydrodynamic flood modeling, hazard mitigation, vulnerability assessment, benefit-cost analyses, resiliency and river, ocean and coastal engineering. As a nationally-recognized leader in natural hazard assessment, mitigation and climate change adaptation, we have been responsible for assessing the hazard vulnerability of some of the most critical infrastructure in the United States.

When water matters, choose the company with national experience. Choose GZA.

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Water Services

- Marine and Waterfront Structures
- Dams and Levees
- Water Resources
- Climate Change and Hazard Planning