



## International North America

### Client

U.S. Naval Facilities Engineering  
Command, Southern Division

### Location

Naval Air Station Pensacola,  
FL, USA

## Facilities and Environmental Management Services

### Project Description

On September 16, 2004, Hurricane Ivan exploded across the Florida panhandle. It wreaked havoc throughout the area, including Naval Air Station Pensacola, which is the primary project site under the U.S. Navy facilities/environmental management services contract held by a joint venture of CH2M HILL (the managing partner) and VT Griffin Services.

Although extensive precautions were taken beforehand to ready the base for the storm, Ivan left a wide swath of destruction from one end of the base to the other. Near the main gate, boats from the Bayou Grande Marina were piled up along the shore. Almost every building on base was damaged — roofs peeled off, structures knocked down, walls torn apart — and debris was strewn everywhere.

With the Gulf Power electrical feeds to the base out, and about half of the overhead power lines down, most of the major utility systems were also affected. All of the major substations on the base were without power. The wastewater treatment plant (WWTP) was submerged under 5 feet of water from the storm surge, and most of the electronic controls, pumps, and motors had received a "saltwater bath." Plus, the strong odor of gas in several locations made it necessary to shut down the gas distribution system.

Amid this damage, there was a bright spot. The water treatment plant and some of the wells can be powered by generator; so, water treatment capability was never lost. Although several lines were broken, water quality was unaffected, as confirmed by repeated sampling to ensure safety.

The next morning, after the worst had passed, the crew of 29 personnel who had remained on base during the night began assessing damage to the various systems and structures, brought additional generators online, started clearing roads, capped-off broken waterlines, and began fixing vehicles. Within a couple of days, with additional personnel, major substations were cleared of debris, equipment was cleaned and dried, structural surveys and safety inspections were well under way, and Gulf Power had restored power to the main substation.

Over the next two weeks, damage to the water treatment plant and distribution system was repaired. As the water receded from the WWTP, chemical feed equipment and main generators at the plant were discovered to be undamaged. So, chlorination was brought on-line and mobile sewage pumps were placed to provide interim pumping capability, bypassing damaged lift stations. Sufficient treatment capability was quickly restored to meet full permit discharge requirements, despite the need for significant repairs in years to come.

Our joint-venture team and other personnel worked long hours and developed solutions to restore services to the base, although many of their own homes had been damaged by the storm. Their dedication and their solutions for restoring base services in the aftermath of the hurricane exemplify CH2M HILL's principles of "client first" and innovation.