

Thompson Pumps Assists in Relieving Flooding From Hurricanes

Forecasters predicted that the 2004 Hurricane Season was to be an active one. Within the span of two months, Tropical Storm Bonnie and Hurricanes Charley, Frances, Ivan and Jeanne slammed Florida's Gulf and Atlantic coasts bringing heavy winds, large amounts of rain and storm surges that threatened coastal residences and businesses.

Damage caused by the hurricanes could be felt throughout the State of Florida. Some residents had to cope with losing homes, vehicles, loved ones, as well as communications and power for extended periods of time. Just as soon as one hurricane passed, news of another system forming in the Atlantic and its projected path, usually headed straight for Florida, caused residents to make further preparations. Residents living on either coast, along with residents in low-lying areas and mobile or manufactured homes were asked to evacuate as many as three times.

Resources were also at a minimum as each hurricane passed. Gas shortages were experienced throughout the state as residents topped off their fuel tanks in preparation of evacuation. Once gas was available, long lines of vehicles waiting for their turn at the pump was experienced. Staples such as milk, bread, eggs and coffee were also at a minimum. The lack of power experienced after each hurricane caused many supermarkets to throw away thousands of dollars of food. Plywood was also in short supply between the hurricanes. Residents were seen boarding their windows to protect their homes from heavy winds and airborne debris.

Flooding was another major issue experienced due to the aftermath of the hurricanes. Floodwaters from the heavy rains and rising rivers threatened homes and businesses. Rising waters also blocked roadways and swept debris throughout the area. Flooding was also responsible for the loss of public utilities in many areas – sewer systems, treatment plants, lift stations, power lines, power plants and more.

Thompson Pump's Emergency Response Team (ERT) went into action before the start of hurricane season in anticipation of the inevitable flooding. The ERT issued a company-wide alert to its branches and its nationwide distributor network that pumps would be required quickly. As each storm passed, and the location and the extent of the flooding became apparent, Thompson Pump's ERT mobilized the pumps and the necessary hose assemblies to remove the water.

The following are a few examples of Thompson Pumps used to battle hurricanes and storms:



Above and Below: A delivery van wades through flooding on this main access road in Ponce Inlet, FL after Hurricane Jeanne. Ponce Inlet is the last town in Volusia County on the north peninsula that separates the Atlantic Ocean from the Intercoastal Waterway. Thompson Pump's 4" Dry Prime Vacuum Assisted Trash Pump works on removing the water from the area, which included a local water treatment plant.





A Thompson 6" Dry Prime Compressor-Assisted Trash Pump dewatering a lake in the city of Debary, FL. The lake water was being directed into a nearby storm drain. About 15 pumps were situated along Debary's emergency lake control system. The pumps ran before Hurricane Charley passed in early August to lower lakes in anticipation of the heavy rains, and then ran non-stop for two months through Hurricanes Frances and Jeanne. The system, built a few years ago, is not designed to handle the unprecedented 40 inches of rain that fell. In order to address the issue, city officials determined that another emergency drainage system must be built. Thompson Pump provided 24-hour service and support for each of the units in Debary as they operated during the hurricanes.



"As they say, the show must go on," reported the superintendent of this application. During Hurricanes Charley, Frances and Jeanne, crews have been trying to build a new entrance ramp to Interstate 4 in the city of Lake Helen, FL. The Thompson 4" Dry Prime Compressor-Assisted Trash Pump has been on the jobsite throughout the hurricanes dewatering the site. Each new hurricane flooded the area and ruined any excavation progress that was previously made.



The City of Deland, FL experienced some of the worst flooding in Volusia County. The Thompson Hydraulic Power Unit pictured at left was powering a Thompson Hydraulic Submersible Pump Head that was inserted in a stormwater sewer system to alleviate the flooding. The stormwater system was well past capacity and caused the water to overflow in the immediate area. This flooding occurred on a street that led into a sewer treatment plant, with city offices in the same building. Public Works personnel were busy mobilizing pumps and other assistance to the flooded areas of Deland.



Deland Middle School experienced extensive flooding affecting much of the school grounds. The floodwaters collected on over half of the grounds. The majority of the flooding occurred where the portable classrooms were located. The buildings were raised with jacks and cinder blocks in order to keep the classrooms dry. Students and teachers were forced to move their classes into the gymnasiums and media centers in the main building. The flooding spilled over into the main street where buses and vehicles entered the school. Three Thompson 6" Wet Prime Heavy Duty Trash Pumps like the one pictured left, were on site to lessen the flooding. City officials used the city storm drain system to displace the floodwater.



Regional Utilities, Inc., is a regional provider of water and sewer services to Walton County, Florida, and operates 125 lift stations within the Gulf coast county. About 4 years ago, Hurricane Opal struck the Florida panhandle coast, and caused power outages and heavy damage to several of the Regional Utility lift stations. Back-up generators did not perform properly, mostly due to lightning strikes and damage to generator control panels.

Dewey Wilson, General Manager for Regional Utilities, decided he had seen enough. "We needed a better emergency back-up system as soon as possible", Mr. Wilson said.

Ten Thompson 6-inch High Pressure Solids Handling Dry Prime Pumps with Compressor-Assisted Priming Systems were installed at each of the ten master lift stations operated by Regional Utilities. The 6JSC's were chosen because they prime fast enough to prevent lift station overflows and could handle the estimated capacities for each of the lift stations.

"They were life savers," according to Mr. Wilson. "All ten pumps automatically started and kept sewage levels from rising high enough to escape the lift stations. I really can't say enough good things about them." Regional Utilities also had four portable pumps that they used for other lift stations. Those functioned as desired as well.



Two separate applications occurred in close proximity to each other in Port Orange, FL:



Left: A Thompson 8" Solids Handling High Pressure Jet Pump was lowering a nearby lake that was overflowing from Hurricanes Charley and Frances, and couldn't handle any more rain water from upcoming Hurricane Jeanne, or else it would threaten the homes across the street. The lake was discharged 500' down the block into a stormwater manhole using Thompson Pump Galvanized Pipe.



Right: A Thompson 6" Dry Prime Compressor-Assisted Heavy Duty Trash Pump with Thompson Pump's Silent Knight® sound attenuated canopy was installed on lift stations throughout the city. The pumps provided a back up to the lift station by bypassing the sewage in case power was unavailable during the upcoming storm.

