

Thompson Pump Prevents Watershed Flooding and Allows Spillway Repairs in Bear Creek, NC



Two Thompson Pump Vacuum-Assisted Dry Prime Trash Pumps are installed on the earthen dam in order to lower the water level of Bear Creek Lake.

Bear Creek Lake is part of a large watershed system located in Wayne County, North Carolina. The watershed system is made of watercourses, dams and bodies of water that drain into each other. It was created in the 1960s to prevent flooding along Bear Creek northeast of Goldsboro, NC.

Flooding and heavy rains caused by Hurricane Floyd in 1999 eroded the emergency spillway, damaged earthen dams, and clogged underground pipes that were essential to the draining process of the watershed. Since then, federal money issues, litigation disputes between the county government and residents along Bear Lake,

and heavy rains have diffused any efforts to repair the watershed system. Recently, heavy rains have again pelted Wayne County, causing the lake's level to rise dramatically and threaten lakefront property. County officials needed to act quickly, to avoid further deterioration of the watershed.

Roland Gray, chairman of Wayne County Drainage District #1, was in charge of the watershed pumping operations. His actions were under close scrutiny from the Environmental Protection Agency, the Wayne County Soil Conservation Group and the North Carolina Forestry Service, looking for options to protect the watershed, Mr. Gray immediately contacted the local representative at Thompson Pump's Goldsboro, NC Branch.

After visiting Bear Creek Lake, the Thompson Pump representative proposed the installation of a 12" Vacuum-Assisted Dry Prime Trash Pump and 60' of suction hose with a strainer mounted to a floatation device to prevent the suction strainer from being buried in the ground. The Vacuum-Assisted Pump was selected due to its high amount of flow and air handling capability. The discharge side comprised of 100' of Thompson Galvanized Pipe and was directed onto the other side of the dam where the watershed was operating properly.



The suction side of the pump systems comprised of Thompson Pump's Galvanized Pipe with a strainer that was attached to floatation devices to keep the strainer from burying itself into the lake's floor.

Thompson Pump crews were able to install the entire system within hours of the initial contact from Mr. Gray. The county already owned an 18" pump system, which was going to be installed by the Forestry Service, alongside the Thompson Pump system, to increase the reduction of Bear Creek Lake.

After two more days of heavy rains and mechanical problems resulting in down times from the county owned 18" pump, Roland Gray again contacted the Thompson Pump Goldsboro Branch for another system to replace their 18" pump system. Thompson Pump crews began assembling another system, which comprised of another 12" Vacuum-Assisted Dry Prime Trash Pump, with 80' of suction hose with a strainer, and 90' of Thompson Galvanized Pipe. The system was again installed within hours of the call from Mr. Gray.

Patricia Gabriel, district conservationist with the federal and soil agency reported in a newspaper article regarding the conditions at Bear Lake, "The water was 18-inches below the emergency spillway. It was about three-and-a-half feet from the top of the dam. If the water had gone over the spillway, it could have caused a lot of damage," she said, "but it didn't get up that high."



With both systems producing an average total of 12,500-gallons per minute, the watershed level began lowering within the pumps initial continuous 16-hour run period. This allowed crews to repair the damaged emergency spillway, earthen dams, and underground pipes which comprised the watershed system.

The two Vacuum-Assisted Dry Prime Trash Pumps were discharging into the other side of the dam where the watershed system was operational.