

Tulane grad designs Lake Pontchartrain super pumps

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Dan Grandal, a 1993 Tulane engineering graduate, surveys the work at the 17th Street Canal Pumping Station at the edge of Lake Pontchartrain. Grandal is the lead designer for the Permanent Canal Closures and Pumps project for the 17th Street and Orleans and London avenue canals pumping stations. (Photo by Paula Burch-Celentano)

A. Baldwin Wood, an 1899 Tulane graduate, is a legend for his invention of the Wood Screw Pump, which has been used for more than a hundred years to drain rainwater from the canals that crisscross New Orleans.

Now Dan Grandal, a 1993 Tulane graduate, is about to make his own engineering mark for work on the \$690 million Permanent Canal Closures and Pumps (PCCP) project.

"This project is key to resiliency and part of the larger effort to save Louisiana's coast."

Dan Grandal, Tulane graduate and designer of the Permanent Canal Closures and Pumps

The PCCP project includes pump stations at the edge of Lake Pontchartrain in three locations — 17th Street, Orleans Avenue and London Avenue. (The 17th Street and London Avenue canals were sites of catastrophic levee failures during Hurricane Katrina.)

“The PCCP project helps reduce flooding risk to our New Orleans community,” Grandal said. “This project is key to resiliency and part of the larger effort to save Louisiana’s coast.”

The three pumping stations combined are “one of the largest storm water pumping systems in the world,” Grandal said. He is design director for Stantec Consulting Services, a private firm contracted to design the project, which includes pumps, bypass floodgates, floodwalls, electric generators, a fuel facility and a hurricane-safe house for operators.

“We are doing the same thing that Wood started, keeping floodwater out of the city with giant pumps,” said Grandal.

The pumps are indeed gigantic — five stories tall. When working at their peak capacity, the pumps can drain enough water to fill an Olympic-size swimming pool in 4 seconds and the Mercedes-Benz Superdome in 89 minutes.

PCCP is the last phase of the \$14.6 billion U.S. Army Corps of Engineers Hurricane Storm Damage and Risk Reduction System. It’s being built under the auspices of the Louisiana Coastal Protection and Restoration Authority. Once fully functional (it’s 90 percent complete and in the testing phase for the next few months), the project will be turned over to its owner/operator, the New Orleans Sewerage and Water Board.

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