



The Sewerage & Water Board

OF NEW ORLEANS

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www.swbno.org

September 6, 2022

Dear Mayor Cantrell, Honorable Members of the New Orleans City Council, and Orleans Parish Delegation:

This report is delivered in accordance with Revised Statute 33:4091, Section F, which states: *“In addition to the other requirements of this Section, the board shall send a report, by electronic mail, to the members of the Orleans Parish legislative delegation and the members of the governing authority of Orleans Parish detailing the pumping and electrical power of its facilities and the available manpower no later than twenty-four hours prior to a hurricane entering the Gulf of Mexico as determined by the National Weather Service and no later than forty eight hours after a flood watch or warning or thunderstorm watch or warning is issued by the National Weather Service for any area of Orleans Parish.”*

On Saturday, September 3, the National Weather Service issued a flash flood warning and a series of flood advisories associated with storms that moved through Orleans Parish between approximately 10:00 a.m. and 6:00 p.m. The status of SWBNO’s pumping and power equipment before and during the event is detailed below.

STORM IMPACTS

This storm system produced incredibly intense bursts of rainfall in several areas around the city. The highest rainfall intensities reached 4.8”/hour at Drainage Pumping Station 1 in Broadmoor, and 5.4”/hour in Algiers. Total rainfall was highest in Broadmoor (2.5”) and Lower Coast Algiers (3.5”); the Lakeview/City Park neighborhoods both also saw over 2” during the course of the afternoon.

PUMPING AND POWER

SWBNO Operations utilized Turbine No. 5 and the frequency converters at DPS 17 and Carrollton Station for a total of 18.3 MW of 25Hz generated power during the event. Turbine No. 5 performed well, and peaked at 11.53MW, which was enough to power the pumps needed to drain the city.

Turbine No. 4 was in service until around 11:06 am, when it tripped offline. Operations experienced mechanical issues in the process of bringing Turbine No. 4 back online. Turbine 5 and the frequency changers were utilized during the storm event to provide the necessary 25 Hz power. The Operations team has pulled data from the Turbine No. 4 and will conduct an after-action analysis to identify if any new parameters are necessary for maximizing reliability in the future. Turbine No. 4 is back in service and available for use.

Drainage Pumps:

A total of 94 of 99 drainage pumps were available at the outset of each event:

DPS 6:	I pump out of service, awaiting shaft replacement; return to service Q1 2023
DPS 10:	No. 1 pump out of service due to electrical issue. Parts have been ordered and estimated RTS end of Sept 2022
DPS 11:	E pump repaired and undergoing testing; RTS next week
DPS 13:	No. 4 pump designated emergency use only; in-depth inspection underway
DPS 16:	No. 2 pump out of service; investigation underway, RTS TBD

Operators experienced a vacuum-related issue at Drainage Pumping Station 2 during the rain event that caused the pumps at that station to be offline for about 40 minutes. The mechanical issue was corrected, and the pumps were utilized as necessary for the remainder of the afternoon. SWBNO did not receive any reports of significant street flooding in the DPS 2 basin as a result of the temporary interruption in service.

Underpass Stations:

All 27 underpass station pumps (UPS) were available and ready for use during the event. There were no reported issues with the underpass pumps.

Power:

Turbines 4, 5 and 6 have been utilized frequently during rain events over the past month and generally have performed well. As detailed above, T5 was the primary source of power for this event. Frequency changers and three out of five EMDs were also available for use. Frequency changer #3 at Station D remains offline for some additional repairs after scheduled cleaning and maintenance; return to service is scheduled by the end of the month. EMD #1 is offline due to computer programming issues and is undergoing testing. EMD #5 is temporarily offline for scheduled VFD fan upgrades. The remainder of the power assets were utilized as needed and performed as expected during the rainfall event.

Unit*	Frequency	Capacity in MW	Available
T4	25 Hz	20 MW	18
T5**	25 Hz	20 MW	17.5
Carrollton Frequency Changers 1&2	Converts 60 to 25Hz	8.5 MW	8.5
Station D Frequency Changers 3&4	Converts 60 to 25Hz	12 MW	6 (#3 offline for scheduled maintenance)
West Bank Power Complex (Algiers Water Treatment Plant)	Converts 60 to 25Hz	2.5 MW	2.5
Five EMDs	25Hz	12.5 MW (total) 2.5 MW (each)	7.5
T6 (via Plant Frequency Changer)	Converts 60 to 25Hz	3.75 MW	3.75
		Total 25 Hz:	60 MW
T6	60 Hz	22 MW	22 MW

*T3 has been decommissioned as of May 2021, and T1 has been decommissioned as of June 2022. Both units have been removed from this table.

** T5 was tested up to 17.5MW during the pre-start and commissioning stage.

STAFFING

Of New Orleans' 24 drainage pumping stations, some are staffed, some run remotely, and some are staffed as circumstances dictate. For this event, all stations were staffed appropriately.