



The Sewerage & Water Board

OF NEW ORLEANS

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July 20, 2021

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

This report is delivered in accordance which 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.”*

From Friday, July 16 through Sunday, July 18, the National Weather Service issued a series flash flood warning and advisories for Orleans Parish in response to numerous heavy rain events across the region. The following is a preliminary report detailing the manpower, pumping and electrical power of the Sewerage and Water Board’s (SWBNO) facilities over the course of the weekend.

RAINFALL

On Friday, July 16, recorded rainfall over the course of four hours averaged around 1” across the city, with highest rainfall reaching 2.5 inches in the Carrollton and Lakeview areas. The rainfall intensity, however, reached 13 inches per hour at the height of the rain event, which is one of the highest-intensity rainfalls we have experienced in recent history. There were reports of localized street flooding throughout the metro area during the peak stages of the rain event.

The rain events on Saturday and Sunday were significantly less intense, with around 2 inches of rain falling on Saturday (primarily in the Carrollton/Riverbend corridor) and half an inch falling on Sunday. Both showers created some localized street flooding that receded as the pumping system successfully drained the city.

PUMPING AND POWER

Below is the status of SWBNO's pumping and power equipment at the outset of the rain events.

Drainage Pumps:

A total of 96 of 99 drainage pumps were available at the outset of the event.

- DPS 14: #4 Pump out of service for gear box repairs in the near term**
- DPS 6: I Pump out of service pending pump bearing repairs**
- DPS 15: #1 Pump offline due to repairs on the discharge piping located outside of the station**

The pumping system operated as anticipated, with no major pump issues to report.

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; nevertheless, there was localized street flooding due to the rain intensity for a brief period of time.

Power:

For the weekend events, Turbines 4, 5 and 6, the EMDs, and all frequency changers were available for use. Turbine 4, Turbine 5, and all frequency changers were utilized as needed and performed as expected during each heavy rainfall. Use of Turbine 6 and the EMD's were not required.

Pre-start testing and commissioning stage for Turbine 5 began the week of July 12. Turbine 5 generated approximately 14 megawatts of 25 Hz power feeding the various drainage pumps during the rain event on Friday and continued to operate well over the course of the weekend. Turbine 4 also performed well, generating around 8 megawatts of 25 Hz power each day. The addition of these turbines during hurricane season will add significant redundancy to the system.

With turbines 4 and 5 back online, Turbine 1 has been taken offline for vacuum system repairs and maintenance. It is expected to return to service in 2-3 weeks.

EMD #1 currently is offline while being retrofitted with a new control system and smart fan, which will reduce the noise generated by the machine while in use. Each of the EMDs will be taken offline for the same retrofit over the course of the coming months.

Unit	Frequency	Capacity in MW	Available
T1	25 Hz	Approx. 6 MW	0
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	12
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)	10
T6 (via Plant Frequency Changer)	Converts 60 to 25Hz	3.75 MW	3.75
		Total 25 Hz:	72.25 MW
T6	60 Hz	15 MW	15 (60 Hz)

*T3 has been decommissioned as of May 2021 and has been removed from the 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, and support personnel were onsite to help monitor and troubleshoot the various facilities as needed.