



# **The Sewerage & Water Board**

## **OF NEW ORLEANS**

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May 13, 2019

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.”*

A severe thunderstorm warning and related flood warnings were issued by the National Weather Service at approximately 5:15 a.m. on Sunday, May 12.

The following is a report detailing the manpower, pumping and electrical power of the Sewerage and Water Board’s (SWBNO) facilities at the time of those warnings. Significant street flooding occurred as a result of heavy rainfall. Rain fell at a rate of more than 2 inches an hour from 5:15 to 6:15 a.m., outpacing the city’s drainage capability. More than 5 inches fell in some areas over the course of the storm. This flooding occurred despite SWBNO generating 46 megawatts (MW) of power throughout the event (far more than was available during the August 2017 flood events). Pumps also responded appropriately throughout the event.

A notable operational challenge was the loss of Entergy-produced power at 5:12 a.m., which affected one pump (D pump) at Drainage Pumping Station (DPS) #7.

That pump was back in service by 6:08 a.m., using station generator power. At DPS #2, D pump tripped off line at 7:21 a.m. due to high heat readings, but it was immediately replaced with another available pump (C pump) and no loss of service resulted from the outage.

Additionally, an electrical breaker at Station D tripped at 8:29 a.m., after the heaviest rain had passed, causing one pump at DPS stations #2, 3 and 4 each to lose power. The breaker was back online at 8:38 a.m., and the pumps were available shortly thereafter.

**PUMPING**

New Orleans’ drainage system had 115 out of its 120 drainage pumps available at the onset of the event. Other than the above minor interruptions in service, all pumps operated as expected and continue to be available for service. Five (5) pumps were out of service for maintenance or refurbishment.

Station	Location	Total Pumps	Designed Capacity (cfs)	Total Pumps Out	Station Operational Capacity
1	Broadmoor	11	6,825	1	99%
6	17 <sup>th</sup> Street Canal	15	9,580	1	99%
4	Gentilly	6	3,720	1	73%
14	N.O. East	4	1,200	1	75%
20	N.O. East	2	500	1	50%

## POWER

Notably, SWBNO generated 46.005MW of power during the course of this event through the use of turbines and frequency changers. All operated as expected.

UNIT	FREQUENCY	CAPACITY IN MEGAWATTS (MW)	AVAILABLE MW
Turbine 1	25 Hz	~6 MW	6
Turbine 3	25 Hz	~7 MW*	7
Turbine 4	25 Hz	20 MW	20
Turbine 5	25 Hz	20 MW**	12
Turbine 6	60 Hz	15 MW***	15
Carrollton Freq. Changer (1&2)	Converts 60 to 25 Hz	8.5 MW	8.5
Station D Freq. Changer (3&4)	Converts 60 to 25 Hz	12 MW	12
Five EMDS	25 Hz	12.5 MW	12.5
<b>TOTAL AVAILABLE</b>	<b>25 Hz</b>	<b>86 MW</b>	<b>78 MW</b>
<b>TOTAL AVAILABLE</b>	<b>60 Hz</b>	<b>15 MW</b>	<b>15 MW</b>

\*Turbine 3 does not operate at its original capacity.

\*\* Turbine 5 underwent repairs last month and recently underwent a full-scale test of its capabilities. It was tested again during this rain event and was able to produce 12.1 MW of 25 Hz power. SWBNO continues to work with General Electric to determine what additional adjustments to make to restore its energy production to full capacity.

\*\*\* Turbine 6 generates 60 Hz electricity, which can be converted to 3.75 MW of 25 Hz electricity through a frequency changer.

## **MANPOWER**

Of New Orleans' 24 drainage pumping stations, some are staffed, some run remotely and some are staffed as circumstances dictate. Per SWBNO rain event protocol, additional staff was on call for the duration of the event.