The Sewerage & Water Board

OF NEW ORLEANS

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March 25, 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.*"

On Tuesday, March 23 and Wednesday, March 24, the National Weather Service issued a series of flood advisories and flash flood warnings for Orleans Parish. The following is a preliminary report detailing the manpower, pumping and electrical power of the Sewerage and Water Board's (SWBNO) facilities throughout the event.

RAINFALL

Rainfall totals for this 48-hour event were forecast to reach between 6-8" in the metro area. SWBNO's rain logs indicate total rainfall between 5-6" in many areas of the city over a 24-hour period on March 23, and rainfall of less than 2" over a 24-hour period on March 24. While the total amount of rainfall over these periods of time caused some localized ponding in streets, the drainage system kept pace with the demand, and we did not see widespread flooding.

SWBNO prepared for the high volume of rain by lowering the outfall canal levels around the city, making room for pumped stormwater, and testing all available power equipment prior to the arrival of rain.

PUMPING AND POWER

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

Drainage Pumps:

In sum, 96 of 99 drainage pumps were available. The three pumps out of service are undergoing electrical repairs and should return to service in the near future. Two smaller constant duty pumps, typically used during dry weather, were offline for repairs.

DPS 7:	**#1 Constant Duty Pump out of service for motor repairs**
DPS 5:	**#1 Constant Duty Pump out of service for pump repairs**
DPS 14:	**#4 Pump out of service for gear box repairs**
DPS Grant :	**#6 Pump out of service pending electrical repairs**
DPS 6:	**I Pump out of service pending electrical repairs**

At 7:00 a.m. on Wednesday, March 24, Pump D at Drainage Pumping Station 12 tripped offline. The station operator reset the pump and it was restarted at 7:47 a.m. When the trip occurred, the pressure on the discharge side of the pump was higher than the suction side of the pump, which resulted in the pump spinning backwards and sending water into the box culvert. With the culvert full, water could not drain from the street until the pump restarted. The rainfall intensity was low at the time, and the impact of the incident was minimal.

Logs show that the pump also tripped twice briefly at 5:10 p.m. on March 23 and 2:45 a.m. on March 24, respectively. Each time, the station operator restarted the pump in less than 35 minutes and without incident or significant impact. Crews are inspecting the pump's vacuum system and identifying the cause of the trips.

As always, SWBNO will conduct a thorough after-action report to identify and diagnose any additional operational successes or challenges during the event.

Underpass Stations:

All 27 underpass station pumps (UPS) were available and ready for use during the event.

Power:

For this event, Turbines 1 and 6 were available for use, along with all 5 EMDs.

This will continue to be the status of power until early May, when Turbine 4 will come back online. Turbine 5 is expected to be back online by early June. The addition of those turbines prior to hurricane season will add significant redundancy to the system.

The EMDs and all frequency changers were tested, available, and prepped for use prior to the start of the event. During the event, the EMDs performed well and provided additional power. Turbines 1 and 6 also remained online and performed as expected for the duration of the event.

Unit	**Frequency**	**Capacity in MW**	**Available**
T1	25 Hz	Approx. 6 MW	6
T3	25 Hz	Approx. 6 MW	0
T4	25 Hz	20 MW	0
T5	25 Hz	20 MW	0
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
Five EMDs	25Hz	12.5 MW (total) 2.5 MW (each)	12.5
		Total 25 Hz:	**38 MW**
T6	60 Hz	15 MW	**15 (60 Hz)**

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 with additional staff on site to monitor EMD performance.