The Sewerage & Water Board

OF NEW ORLEANS

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September 6, 2023

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 Monday, September 4, 2023 the National Weather Service issued a series of flood advisories associated with strong storm system that moved through Orleans Parish in the afternoon. The status of SWBNO's pumping and power equipment before and during the events is detailed below.

STORM IMPACTS

This storm produced a high intensity, short duration rain and thunderstorm event, with impacts seen primarily on the Westbank of New Orleans, west of the Intracoastal Canal.

Notable rain accumulations, intensities, and peak hourly accumulation over the course of the day are presented below.

Location	Neighborhood	Rain Intensity (in/hr)	Peak Hourly Accumulation (in)	Total Rainfall (in)
DPS-07	City Park	5.6	3.7	7.6
DPS-02	Mid City	4.3	2.3	6.2

DPS-06	Lakeview	4.4	2.2	5.7
City-wide Average		2.0	1.3	2.7

These total rainfall amounts were not typical of a normal rainfall event, and are representative of a 25-year design storm (per NOAA Atlas 14, Volume 9, Version 2). Localized flooding was observed across the most impacted areas of town, which receded within a few hours.

Notably, the Interstate I-10 underpass near the I-610/West End Blvd intersection accumulated sufficient standing water to require the intersection to be closed for approximately 30 minutes, between approximately 1:50pm and 2:20pm, according to DOTD traffic cameras as reported by local news outlets. Drainage of this underpass is served by two SWBNO-managed stations – Pontchartrain Underpass Station (UPS) and DPS I-10 – as well as one drainage station managed by the Louisiana Department of Transportation and Development. These stations are unmanned, with pumps set to run automatically.

PUMPING AND POWER

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

Drainage Pumps:

A total of 93 of 99 drainage pumps were available at the outset of each event:

DPS 6: **I pump out of service; return to service Q3 2023**

DPS 10: **No. 1 pump out of service; return to service December 2023**

DPS 13: **No. 4 pump designated emergency use only; return to service TBD**

DPS 16: **No. 2 pump out of service; repairs underway by contractor; return to service date Q3 2023**

DPS 17: **Pumps A and D out of service due to motor issues; return to service TBD**

Immediately upon reports of flooding in the I-10 underpass, SWBNO operations staff were dispatched to the location to investigate DPS I-10 and Pontchartrain UPS. When SWBNO staff arrived at the location around 2:45pm, standing water within the I-10 underpass had receded and traffic flow had resumed. It was observed that one of three pumps at Pontchartrain UPS were running; at DPS I-10, it was observed

that only one constant duty pumps was in operation and none of the larger drainage pumps were operating.

It was determined that the automatic pumps at DPS 1-10 did not turn on due to a malfunction with the instrumentation system that measures water levels in the station suction basin to automatically control the pump operation. This issue was subsequently resolved on Tuesday, September 5.

Two of the three pumps at Pontchartrain UPS were observed to be tripping offline. Operations staff reset the pumps to maintain pumping operations. Subsequent investigation identified that the pumps tripped due to electrical issues with the motors, and new electrical components have been ordered for replacement.

Except as noted in the Power section below, no other major pump-related issues were encountered during the rain event.

Underpass Stations:

In addition to the Interstate I-10 underpass, the Canal Blvd underpass (near 5600 Canal Blvd) and the Carrollton Ave Underpass were submerged and unpassable for several hours until the underpass pumps were able to remove the accumulated water.

Power:

Turbines 4 (25-hz), 5 (25-hz), and 6 (60-hz), and three frequency changers were available for this event. Four of the five EMDs were available.

Carrollton Frequency Changer #1 tripped during operation and was offline for approximately 10 minutes between 3:25pm and 3:35pm. As a result, two pumps were offline at DPS 6 (one for 20 minutes, another for 50 minutes). Water levels in the canals leading to this station increased during this time period, and began to drop around 4:30pm.

By 7pm, water levels in the drainage canals had returned to normal conditions.

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	18.5
T5**	25 Hz	20 MW	17.5
Carrollton Frequency Changers 1&2	Converts 60 to 25Hz	8.5 MW	6 (CFC #2 out of service)
Station D Frequency Changers 3&4	Converts 60 to 25Hz	12 MW	12 MW
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 (troubleshooting for EMD #2 completed and repairs underway)
T6 (via Plant Frequency Changer)	Converts 60 to 25Hz	3.75 MW	0 MW (RTS to be determined)
		Total 25 Hz:	**66.5 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.