



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

April 3, 2018

### **Weather Study**

# **METEOROLOGY**

DCA18FM017

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## **A. ACCIDENT**

Location: New Orleans, Louisiana  
Date: March 12, 2018  
Time: 0930 central daylight time (CDT)  
1430 universal coordinated time (UTC)  
Vessel: *UTV Natalie Jean*

## **B. METEOROLOGIST**

Don Eick  
Senior Meteorologist  
Operational Factors Division (AS-30)  
National Transportation Safety Board

## **C. DETAILS OF THE INVESTIGATION**

The National Transportation Safety Board's (NTSB) Senior Meteorologist was not on scene for this investigation and conducted the meteorology phase of the investigation from the Washington D.C. office, collecting data from official National Weather Service (NWS) sources including the Weather Prediction Center (WPC) and the National Center for Environmental Information (NCEI). All times are CDT based upon the 24-hour clock, where local time is -5 hours from UTC, and UTC=Z. Directions are referenced to true north and distances in nautical miles. Heights are in feet (ft) above mean sea level (msl) unless otherwise noted. Visibility is in statute miles and fractions of statute miles.

The accident site was located at latitude 29° 56' 8" N and longitude 89° 59'52" W in the lower Mississippi River, New Orleans, Louisiana.

## **D. WEATHER INFORMATION**

### **1.0 Synoptic Conditions**

The synoptic or large scale migratory weather systems influencing the area were documented using standard NWS charts issued by the National Center for Environmental Prediction (NCEP) located in College Park, Maryland. These are the base products used in describing weather features and in the creation of forecasts and warnings.

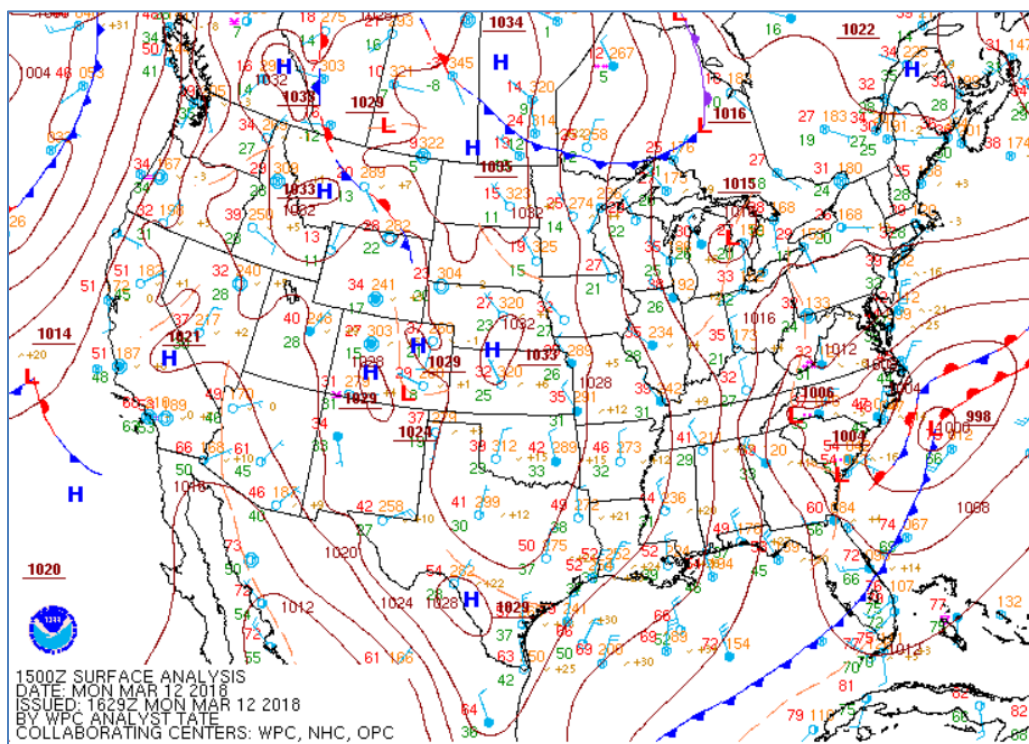
### **1.1 Surface Analysis Chart**

The NWS Surface Analysis Chart for 1000 CDT on March 12, 2018 is included as figure 1 and depicted a low-pressure system at 998-hectopascals (hPa)<sup>1</sup> off the North Carolina coast associated

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<sup>1</sup> Hectopascals (hPa) is the new standard term for reporting pressure and is interchangeable with the former term millibar (mb) with the same units. Standard sea level pressure is 1013.25-hPa.

with a cold front extending southwestward across Florida and into the Gulf of Mexico. The accident site was located on the cold air side of the front. To the north-northwest of the accident site, a cold-core high-pressure system at 1033-hPa was located over the Nebraska and Kansas border with a ridge of high pressure extending southward into Texas. A secondary high-pressure system was also located over southern Texas at 1029-hPa to the west of the accident site. The resultant pressure gradient resulted in generally northerly sustained winds of 10 to 15 knots over Louisiana.



**Figure 1 - NWS Surface Analysis Chart for 1000 CDT**

A review of the previous surface analysis charts during the period indicated the cold front moved through the New Orleans area about 2200 CDT on March 11, 2018.

Figure 2 is the southcentral high-resolution NWS Surface Analysis Chart for 1000 CDT with the approximate accident site marked by a red star. The station model for New Orleans International Airport (KMSY) indicated northerly wind at 15 knots, clear skies below 12,000 ft, a temperature of 52° Fahrenheit (F), dew point temperature of 39° F, and a sea level pressure of 1022.4-hPa.

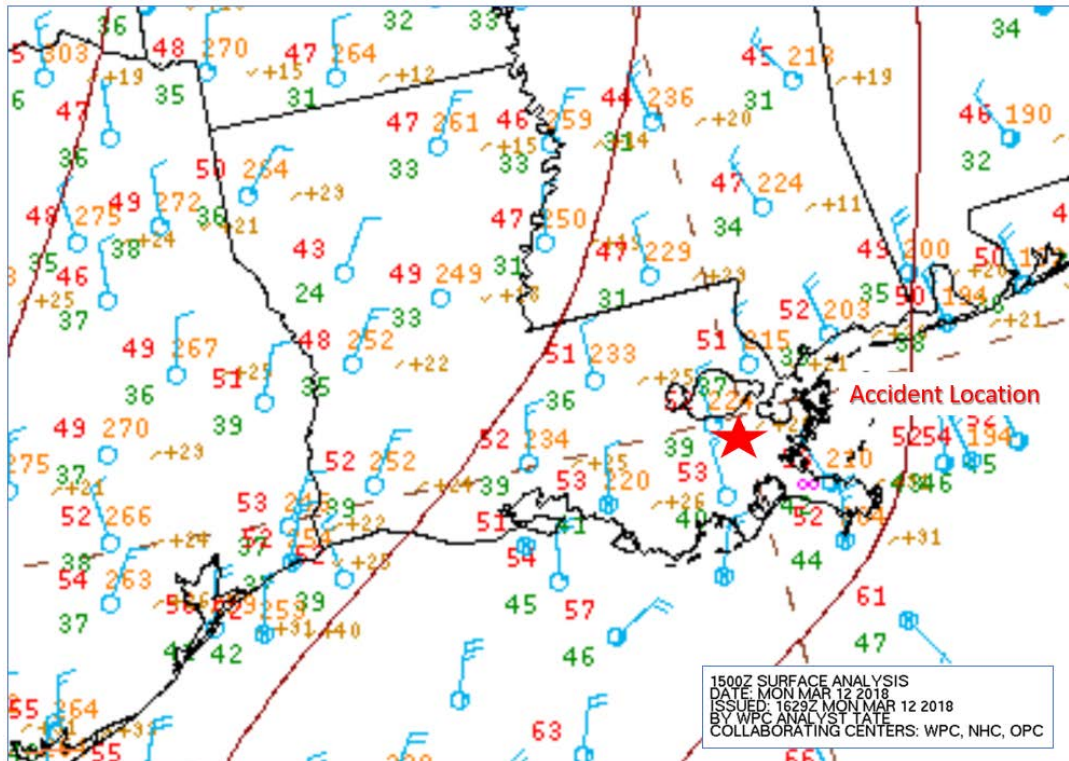


Figure 2 - southcentral section of the Surface Analysis Chart for 1000 CDT with station models

A review of the NWS National Composite Radar imagery for 0930 CDT depicted no meteorological echoes associated with precipitation over the region.

## 2.0 Observations

The closest weather observations surrounding the accident site in New Orleans, Louisiana were documented using standard Meteorological Aerodrome Reports (METARs), specials (SPECI) and buoy observations. Cloud heights are reported above ground level (agl) in this section, and the magnetic variation was 1° W across the region.

A depiction of the weather observations at the time of the accident at 0930 CDT is included as figure 3 from the NWS Marine Weather portal<sup>2</sup>. The image depicts the wind direction by a barb, maximum wind gust for that hour, and temperature.

Figure 4 is a graphic depiction of the weather conditions at 0930 CDT from the NWS Aviation Weather Center (AWC) METAR display and depicts the reporting locations by station identifier surrounding the accident site, wind, temperature, dew point, visibility, cloud cover, and pressure.

<sup>2</sup> <https://preview.weather.gov/edd/index.php?t=marine>

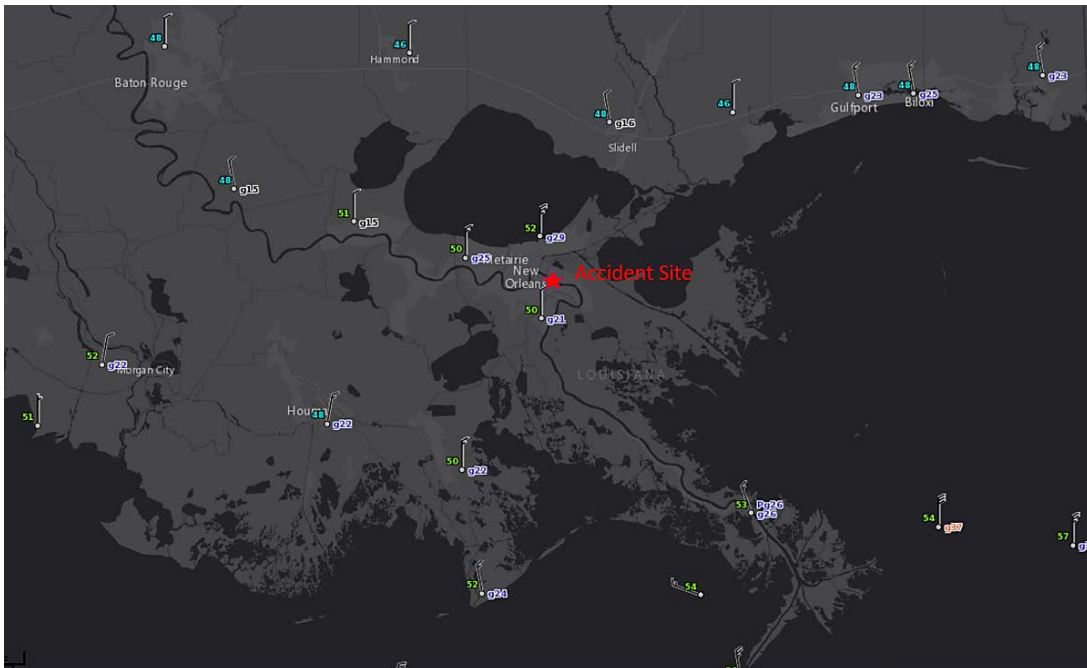


Figure 3 - Graphic depiction of the major reporting locations from the NWS Marine Portal for 0930 CDT

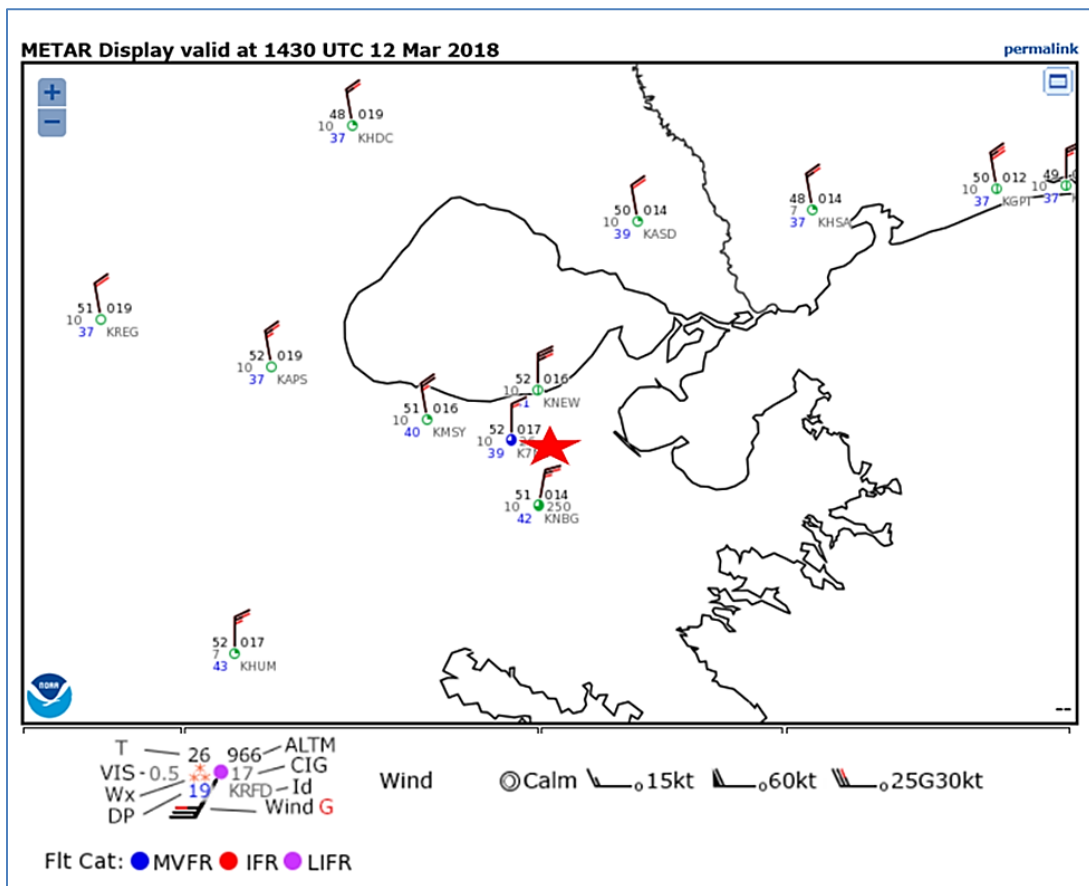


Figure 4 - Graphic depiction of the METAR display for 0930 CDT

## 2.1 New Orleans Downtown Heliport

The closest weather reporting location to the accident site was from the New Orleans Downtown Heliport (K7N0)<sup>3</sup>, located 4 ½ miles west of the accident site at an elevation of 30 feet. The following conditions were reported surrounding the time of the accident:

*K7N0 weather observation at 0912 CDT, automated, wind from 350° at 10 knots gusting to 16 knots, wind variable from 320° to 030°, visibility 10 miles or more, broken clouds at 2,600 ft agl, temperature 52° F (10.6° Celsius (C)), dew point 39° F (3.9° C), altimeter 30.17 inches of mercury (Hg).*

*K7N0 weather observation at 0956 CDT, automated, wind from 350° at 12 knots gusting to 22 knots, visibility 10 miles or more, a few clouds at 2,800 ft agl, temperature 53° F (11.7° C), dew point 37° F (2.8° C), altimeter 30.19 inches of Hg.*

A review of the conditions for the period from 2356 CDT on March 11, 2018 to 1156 CDT were as follows in table form. Cloud coverage (CLR, FEW, SCT, BKN, OVC) with cloud height in 100's of ft agl are on the far right column (example: OVC047 is overcast clouds at 4,700 ft agl). No precipitation was recorded during the period.

ID	Time (CDT)	T (°F)	Td (°F)	RH (%)	Wind (dir/kt)	Alt	Pres	VIS	Clouds
K7N0	2356	63	55	75	360° 8	29.99	1015.7	10	OVC047
K7N0	0056	62	50	65	010° 11G18	30.00	1015.7	10	OVC060
K7N0	0156	62	49	62	010° 8G15	30.01	1016.1	10	BKN070
K7N0	0256	60	49	67	020° 6G17	30.02	1016.5	10	BKN070
K7N0	0356	59	50	72	360° 6G16	30.03	1016.8	10	BKN036
K7N0	0456	56	46	69	010° 12G17	30.05	1017.6	10	BKN025
K7N0	0556	53	42	66	360° 12G19	30.09	1018.9	10	FEW025
K7N0	0656	52	41	66	360° 9G19	30.12	1019.8	10	BKN026
K7N0	0756	50	39	66	010° 15G20	30.14	1020.6	10	BKN026
K7N0	0856	51	39	63	360° 9G18	30.16	1021.4	10	SCT028
<b>K7N0</b>	<b>0912</b>	<b>52</b>	<b>39</b>	<b>62</b>	<b>350°10G16</b>	<b>30.17</b>	<b>NA</b>	<b>10</b>	<b>BKN026</b>
<b>K7N0</b>	<b>0956</b>	<b>53</b>	<b>37</b>	<b>54</b>	<b>350° 12G22</b>	<b>30.19</b>	<b>1022.2</b>	<b>10</b>	<b>FEW028</b>
K7N0	1056	54	37	53	010° 12G17	30.20	1022.6	10	CLR
K7N0	1156	55	36	48	010° 12G19	30.19	1022.5	10	CLR

## 2.2 Lakefront Airport

The next closest reporting location was from the New Orleans Lakefront Airport (KNEW) about 6 miles north of the accident site on the southern side of Lake Pontchartrain at an elevation of 7 ft. The airport had an Automated Surface Observation System (ASOS) system and was augmented by certified observers during the period. The following conditions were reported surround the accident, with only significant remarks decoded:

<sup>3</sup> The station is also referred to as the New Orleans Superdome as it adjacent to the Mercedes Benz Superdome in downtown New Orleans.



*KNEW weather observation at 0853 CDT, wind from 360° at 23 knots gusting to 32 knots, visibility 10 miles or more, a few clouds at 2,800 ft agl, temperature 52° F (11.1° C), dew point 41° F (5.0° C), altimeter 30.16 inches of Hg. Remarks; automated system with a precipitation discriminator, peak wind from 360° at 33 knots occurred at 0813 CDT, sea level pressure 1020.7-hPa.*

*KNEW weather observation at 0953 CDT, wind from 350° at 20 knots gusting to 28 knots, visibility 10 miles or more, skies clear below 12,000 ft, temperature 53° F (11.7° C), dew point 40° F (4.4° C), altimeter 30.19 inches of Hg. Remarks; automated system with a precipitation discriminator, peak wind from 360° at 33 knots occurred at 0928 CDT, sea level pressure 1021.4-hPa, 3-hour pressure tendency risen 1.5-hPa.*

A table of the conditions reported is as follows:

ID	Time (CDT)	T (°F)	Td (°F)	RH (%)	Wind (dir/kt)	Alt	Pres	VIS	Clouds
KNEW	2353	63	55	75	350° 15	29.98	1014.6	10	OVC049
KNEW	0053	62	52	69	360° 16	30.00	1015.0	10	OVC060
KNEW	0153	62	50	65	350° 16	30.01	1015.4	10	OVC070
KNEW	0253	60	52	75	010° 19G23	30.02	1015.7	8	SCT075
KNEW	0349	59	52	77	360° 20	30.03		7	OVC028
KNEW	0353	59	51	75	360° 23	30.03	1016.1	7	OVC028
KNEW	0421	58	50	75	360° 21G27	30.04		7	BKN033
KNEW	0453	56	46	69	360° 25	30.05	1017.0	8	BKN037
KNEW	0511	55	46	72	360° 25G33	30.06		8	OVC028
KNEW	0533	54	45	71	350° 24	30.08		8	SCT028
KNEW	0553	53	44	71	350° 19	30.09	1018.1	8	CLR
KNEW	0653	51	42	71	360° 23	30.11	1019.0	8	SCT024
KNEW	0729	51	42	71	350° 20	30.13		8	BKN027
KNEW	0753	51	41	68	360° 23G30	30.14	1019.9	9	BKN026
KNEW	0848	52	41	66	350° 24G32	30.16		10	SCT028
<b>KNEW</b>	<b>0853</b>	<b>52</b>	<b>41</b>	<b>66</b>	<b>360° 23G32</b>	<b>30.16</b>	<b>1020.7</b>	<b>10</b>	<b>FEW028</b>
<b>KNEW</b>	<b>0953</b>	<b>53</b>	<b>40</b>	<b>61</b>	<b>350° 20G28</b>	<b>30.19</b>	<b>1021.4</b>	<b>10</b>	<b>CLR</b>
KNEW	1053	55	39	55	350° 19G24	30.20	1021.9	10	CLR
KNEW	1153	57	38	49	010° 16G24	30.19	1021.6	10	CLR

### 2.3 New Orleans Naval Air Station Joint Reserve Base – Alvin Callender Field

New Orleans Naval Air Station Joint Reserve Base – Alvin Callender Field (KNBG) was located about 6 ½ miles south of the accident site on the western bank of the Mississippi at an elevation of 3 ft. The following conditions were reported surrounding the period:

*KNBG weather observation at 0855 CDT, wind from 010° at 14 knots gusting to 23 knots, visibility 10 miles or more, scattered clouds at 2,900 ft agl, broken clouds at 25,000 ft, temperature 51° F (10.6° C), dew point 42° F (5.6° C), altimeter 30.14 inches of Hg. Remarks; automated system with a precipitation discriminator, sea level pressure 1020.6-hPa.*



*KNBG weather observation at 0955 CDT, wind from 010° at 13 knots gusting to 22 knots, visibility 10 miles or more, scattered clouds at 2,900 ft agl, temperature 52° F (11.1° C), dew point 41° F (5.0° C), altimeter 30.16 inches of Hg. Remarks; automated system with a precipitation discriminator, peak wind from 010° at 26 knots occurred at 0917 CDT, sea level pressure 1021.1-hPa, 3-hour pressure tendency risen 2.3-hPa.*

A table of the conditions from KNBG is as follows:

ID	Time (CDT)	T (°F)	Td (°F)	RH (%)	Wind (dir/kt)	Alt	Pres	VIS	Clouds
KNBG	2355	62	58	86	360° 5	29.98	1015.0	10	OVC049
KNBG	0055	62	54	75	010° 9G17	29.98	1015.1	10	OVC055
KNBG	0155	61	52	72	360° 10G15	29.99	1015.3	10	OVC075
KNBG	0255	60	51	72	020° 7G16	30.00	1015.7	10	FEW036
KNBG	0355	57	52	83	360° 10G15	30.01	1016.0	5H	FEW035
KNBG	0455	56	51	84	360° 10G17	30.03	1016.6	10	SCT036
KNBG	0555	53	45	74	360° 10G22	30.06	1017.9	10	BKN250
KNBG	0655	51	44	77	010° 9G20	30.09	1018.8	10	BKN250
KNBG	0755	50	42	74	360° 9G20	30.12	1019.7	10	BKN029
<b>KNBG</b>	<b>0855</b>	<b>51</b>	<b>42</b>	<b>71</b>	<b>010° 14G23</b>	<b>30.14</b>	<b>1020.6</b>	<b>10</b>	<b>BKN250</b>
<b>KNBG</b>	<b>0955</b>	<b>52</b>	<b>41</b>	<b>66</b>	<b>010° 13G22</b>	<b>30.16</b>	<b>1021.1</b>	<b>10</b>	<b>SCT029</b>
KNBG	1055	54	41	61	010° 13G20	30.17	1021.6	10	FEW029
KNBG	1155	56	40	55	010° 15G24	30.17	1021.6	10	CLR

## 2.4 Louis Armstrong New Orleans International Airport

The Louis Armstrong New Orleans International Airport (KMSY) was located about 14 miles west of the accident site at an elevation of 4 ft and had an ASOS which was augmented by weather observers. The following conditions were reported surrounding the time of the accident:

*KMSY weather observation at 0853 CDT, wind from 350° at 18 knots gusting to 26 knots, visibility 10 miles or more, a few clouds at 2,600 ft agl, scattered clouds at 25,000 ft, temperature 51° F (10.6° C), dew point 40° F (4.4° C), altimeter 30.16 inches of Hg. Remarks; automated observation system with a precipitation discriminator, peak wind from 360° at 28 knots occurred at 0831 CDT, sea level pressure 1021.6-hPa, scattered variable broken cloud cover.*

*KMSY weather observation at 0953 CDT, wind from 360° at 16 knots gusting to 24 knots, visibility 10 miles or more, a few clouds at 3,000 ft agl, and a few clouds at 25,000 ft, temperature 52° F (11.1° C), dew point 39° F (3.9° C), altimeter 30.19 inches of Hg. Remarks; automated observation system with a precipitation discriminator, peak wind from 360° at 27 knots occurred at 0910 CDT, sea level pressure 1022.4-hPa, 3-hour pressure tendency risen 2.6-hPa.*

A table of the conditions from KMSY is as follows:

ID	Time (CDT)	T (°F)	Td (°F)	RH (%)	Wind (dir/kt)	Alt	Pres	VIS	Clouds
KMSY	2353	63	54	72	350° 9	29.99	1015.7	10	OVC049
KMSY	0053	62	53	72	360° 11G17	29.99	1015.8	10	OVC060
KMSY	0153	62	52	69	360° 8G18	30.00	1016.2	10	OVC070
KMSY	0253	60	51	72	360° 13G20	30.01	1016.6	10	FEW029
KMSY	0353	59	52	77	360° 13	30.02	1016.9	8	BKN034
KMSY	0451	57	50	80	240° 14G25	30.05	1017.8	8	BKN025
KMSY	0453	56	50	80	340° 14G25	30.05	1017.8	8	BKN025
KMSY	0520	54	44	69	360° 15G29	30.07		9	BKN039
KMSY	0553	53	42	66	350° 16G28	30.09	1019.1	10	FEW035
KMSY	0638	51	42	71	350° 14G25	30.10		9	BKN028
KMSY	0653	51	42	71	360° 14G25	30.11	1019.8	9	BKN028
KMSY	0753	51	42	71	360° 17G23	30.13	1020.6	9	BKN028
KMSY	0828	50	40	68	010° 17G25	30.15		10	BKN250
<b>KMSY</b>	<b>0853</b>	<b>51</b>	<b>40</b>	<b>65</b>	<b>350° 18G26</b>	<b>30.16</b>	<b>1021.6</b>	<b>10</b>	<b>SCT250</b>
<b>KBNG</b>	<b>0953</b>	<b>52</b>	<b>39</b>	<b>61</b>	<b>360° 16G24</b>	<b>30.19</b>	<b>1022.4</b>	<b>10</b>	<b>FEW030</b>
KBNG	1053	54	39	57	360° 13G21	30.19	1022.6	10	FEW030
KBNG	1153	57	40	53	340° 12G20	30.19	1022.4	10	FEW250

## 2.5 Lake and Coastal Observations

The NWS New Orleans/Baton Rouge, Louisiana (KLIX), Weather Forecast Office (WFO) responsible for the region issued a Lake and Coastal Observation reports for several locations over the region at 0805 CDT and 1005 CDT, which are included below.

*SXUS54 KLIX 121306*

*OSOLIX*

*Lake and Coastal Observations*

*National Weather Service New Orleans/Baton Rouge, LA*

*805 AM CDT Mon Mar 12 2018*

*Observations Received During The Last Hour*

*Lake Pontchartrain and Lake Maurepas Observations*

STATION	WIND DIR SPD	WIND PEAK	AIR TMP	DEW PT	WTR TMP	WTR LVL	BARO PRES	1-HR PRECIP
<i>Mid-Lake</i>								<i>0.00</i>
<i>Frenier</i>	360	23						
<i>Mandeville</i>	302	6						
<i>Rigolets</i>	321	10				0.74		0.01
<i>West End</i>	335	9			64	1.26		0.00
<b><i>Lakefront</i></b>						<b>1.33</b>		<b>0.00</b>
<b><i>New Canal</i></b>	<b>010</b>	<b>22 28</b>	<b>51</b>	<b>-</b>	<b>63</b>	<b>1.59</b>		
<i>Bayou Gauche</i>	006	3 7	50	-	64			

*Winds are reported in miles per hour.*

*SXUS54 KLIX 121506*

*OSOLIX*

*Lake and Coastal Observations*

*National Weather Service New Orleans/Baton Rouge, LA*

1005 AM CDT Mon Mar 12 2018

*Observations Received During The Last Hour*  
*Lake Pontchartrain and Lake Maurepas Observations*

STATION	WIND		AIR	DEW	WTR	WTR	BARO	1-HR	
	DIR	SPD	PEAK	TMP	PT	TMP	LVL	PRES	PRECIP
Mid-Lake									0.00
Frenier	337	12							
Mandeville	314	7							
Rigolets	333	11					0.60		0.00
West End	340	9				64	0.94		0.00
Lakefront							1.23		0.00
New Canal	359	20	26	51	-	63	1.51		
Bayou Gauche	001	2	7	53	-	64			

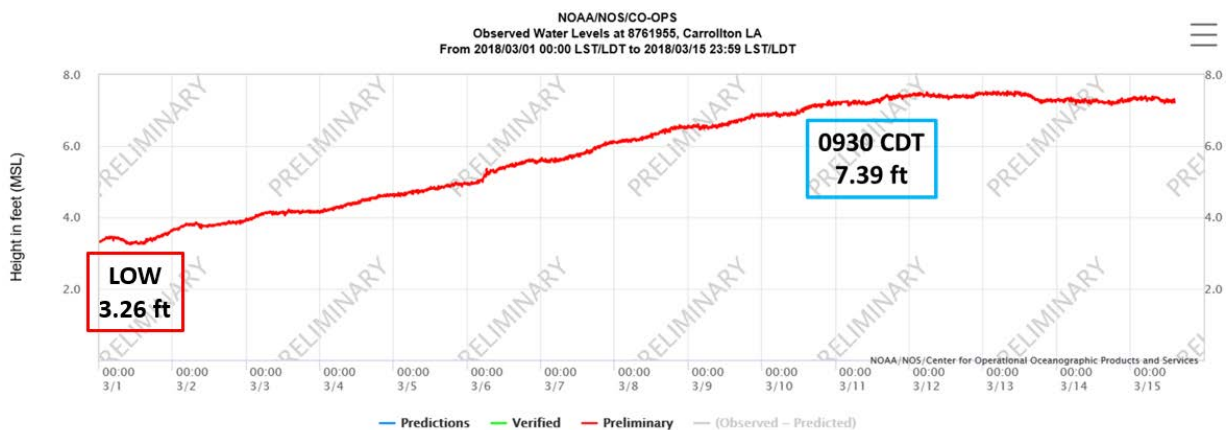
*Lake Borgne Observations*

*Winds are reported in miles per hour.*

### 3.0 Tidal Information

Observation from Station CARL1, buoy #8761955, in Carrollton, Louisiana approximately 8 miles west of the sinking provided a sea surface temperature of 54.7° F (12.7° C).

The tidal information from March 1 through March 15 is included in figure 5. For buoys the water depth is referenced to the hull's waterline. For fixed buoy platforms like the CARL1 the water level varies with tide, but is referenced to, or near the Mean Lower Low Water (MLLW). At 0930 CDT on March 12, the water level was 7.39 ft above MLLW. The lowest water level recorded during this period was observed on March 1<sup>st</sup> at 3.26 ft, with water levels increasing during the period and flood advisories and warnings being issued after March 8th. The station information indicated that the Water Level Maximum (MHHW) was 15.58 ft recorded on May 17, 2011, and the Water Level Minimum (MLLW) was -0.16 ft recorded on November 7, 2010.



**Figure 5 - Observed Water Level recorded at Carrollton, LA**

The NWS KLIX WFO issued the following coastal tide data at 0700 CDT:

*Southwest Pass, Mississippi River*

<i>Low</i>	<i>0436 CDT</i>	<i>Stage -0.2 ft</i>
<i>High</i>	<i>1937 CDT</i>	<i>Stage 1.0 ft</i>

#### **4.0 Marine Forecasts and Advisories**

The following advisories were issued by the NWS KLIX WFO during the period.

#### **4.1 New Orleans Area Forecast Discussion**

The NWS LIX WFO issued the following Area Forecast Discussion (AFD) describing the current weather conditions, a synopsis, forecast discussion, a review of the aviation, and marine forecast conditions, and a review of the NWS Weather Warning and Watches, and other advisories current for the area. The text of the AFD is as follows in plain language.

*FXUS64 KLIX 121438  
AFDLIX*

*Area Forecast Discussion  
National Weather Service New Orleans LA  
938 AM CDT Mon Mar 12 2018*

*.SOUNDING DISCUSSION..*

*Significant cooling and drying noted in this morning's sounding compared to yesterday. This is no surprise given the frontal passage yesterday. Low level winds have shifted to the north and precipitable water is down to 0.28 inches from 1.33 at the same time yesterday. Subsidence inversion resulting from high pressure building into the area is evident around 925mb. Some strengthening of winds aloft compared to 00z. This could lead to continued gusty conditions as daytime heating helps mix some of those stronger winds down to the surface.*

*.PREV DISCUSSION... /issued 338 AM CDT Mon Mar 12 2018/*

*SYNOPSIS...*

*Yesterday's cold front was well into the central Gulf of Mexico at 2 am with any remaining precipitation quickly departing the coastal waters. A ridge of high pressure extended from the Canadian Prairie Provinces to Kansas. The cloud cover associated with the cold front was quickly departing the area, but some cold advection clouds were approaching from the north. Temperatures at 2 am ranged from the mid 50s across far northern portions of the area to the lower 60s across portions of the area south of Lake Pontchartrain.*

*SHORT TERM...*

*With another strong surface low developing along the Atlantic Coast, the surface high pressure over the Plains States really doesn't have much of anywhere to go over the next 3 days. It will slowly sag southeast and be centered over southern Mississippi by Wednesday night. This means dry weather through midweek. Some questions on how much sunshine we see today. Current GFS BUFR sounding for McComb indicates that they should lose clouds by mid-morning, and expect this to be the case for most or all of the CWA today. See little indication of clouds or fog anywhere over southeast Louisiana or southern Mississippi beyond this morning through midweek.*

*Main forecast issue will be temperatures and dew points. Model soundings and individual station guidance indicate that dew points will be 5-8 degrees drier than what blended guidance provides. Will trend toward the lower end of the guidance package on dew points through midweek. Blended guidance also not doing well on overnight lows, especially in the normal cold air drainage portions of the area. Once again, will trend toward lower end of those numbers. No freezing temperatures are expected, but there will be several mornings where some patchy frost can't be ruled out in the normally colder, well protected, locations. High temperature guidance actually pretty close, and won't make significant change. 35*

#### **LONG TERM...**

*Beyond Thursday, medium range models begin to struggle with forecast scenario to our west. Both models show an upper trough extending from the Canadian Prairie Provinces to off the northern California coast. The difference is that the ECMWF brings a healthy impulse out of that trough into the Great Plains by Friday evening, which the GFS does not. Both finally start moving the trough out of the Rockies by next Sunday night. Current forecast package will trend toward the GFS solution, which has more continuity than does the ECMWF solution. This will keep the rain chances rather low Friday into the weekend. It should be noted that if the ECMWF has the better handle on things, this would likely necessitate raising POPs considerably for next weekend.*

*After a chilly start Thursday morning, temperatures moderate to near normal for Thursday and Thursday night, then above normal for the weekend. High temperatures in the upper 70s and lower 80s are expected for the weekend into Monday, with lows upper 50s to mid 60s. GFS/ECMWF temperature guidance fairly consistent and accepted. 35*

#### **AVIATION...**

*A broken cloud deck yielding MVFR ceilings located north of the forecast area across central and south central Mississippi and moving southward may provide for a period of MVFR ceilings at the TAF sites early this morning. Otherwise, VFR category conditions are expected for the terminals during the TAF forecast period after 14 or 15Z. Breezy north winds at times...especially at KNEW and KMSY...will gradually diminish during the day.*

#### **MARINE...**

*Strong offshore flow and hazardous seas will continue today across the coastal waters in the wake of a cold front before beginning to ease tonight into Tuesday as high pressure settles into the region. A Small Craft Advisory is in effect for the coastal waters through 7 pm CDT today. Offshore winds are expected to increase somewhat again Tuesday night and early Wednesday as high pressure is reinforced across the area. Otherwise, light offshore flow by late Wednesday and Wednesday night will quickly shift to onshore during the day Thursday as high pressure shifts to the east of the area. The onshore flow will continue through the end of the week and increase in magnitude to moderate levels at times. 11*

#### **DECISION SUPPORT...**

**Activities: Monitoring river flooding on Pearl, Mississippi and Atchafalaya Rivers.**

#### **.PRELIMINARY POINT TEMPS/POPS...**

MCB 60 35 63 33 / 0 0 0 0  
BTR 61 38 65 36 / 0 0 0 0  
ASD 62 39 65 37 / 0 0 0 0  
MSY 61 45 64 43 / 0 0 0 0  
GPT 62 40 64 38 / 0 0 0 0  
PQL 62 37 64 35 / 0 0 0 0

*.LIX WATCHES/WARNINGS/ADVISORIES...*

*LA...None.*

*GM...Small Craft Advisory until 7 PM CDT this evening for GMZ532-534-536-538-550-552-555-557-570-572-575-577. Small Craft Advisory until noon CDT today for GMZ530.*

*MS...None.*

*GM...Small Craft Advisory until 7 PM CDT this evening for GMZ534-536-538-550-552-555-557-570-572-575-577.*

## **4.2 Flood Warnings and Advisories**

The NWS KLIX WFO issued a Flood Statement at 0821 CDT on March 11, 2018 and indicated that a Flood Warning was in effect for the Mississippi River for the New Orleans area and was as follows:

*WGUS84 KLIX 120121*

*FLSLIX*

*Flood Statement*

*National Weather Service New Orleans/Baton Rouge, LA*

*821 PM CDT Sun Mar 11 2018*

*...The flood warning continues for the following river in Louisiana...*

*Mississippi River At Red River Landing affecting East Baton Rouge...Pointe Coupee and West Feliciana Parishes*

*Mississippi River At Baton Rouge affecting East Baton Rouge and West Baton Rouge Parishes*

*Mississippi River At Donaldsonville affecting Ascension Parish*

*Mississippi River At Reserve affecting St. Charles...St. James and St. John The Baptist Parishes*

***Mississippi River At New Orleans affecting Jefferson...Orleans... Plaquemines and St. Bernard Parishes***

*PRECAUTIONARY/PREPAREDNESS ACTIONS...*

*Forecast crests are based upon rainfall that has occurred along with anticipated rain for the next 24 hours. Adjustments to the forecasts will be made if additional heavy rainfall occurs.*

*Do not drive cars through flooded areas. Remember, two feet of rushing water can carry away most vehicles including pickups. Turn around and don't drown!*

*A follow up product will be issued later. Stay tuned to NOAA Weather Radio, local tv and radio stations...or your cable provider, for the latest information. The latest graphical hydrologic information can also be found at Weather.Gov.*

*821 PM CDT Sun Mar 11 2018*

***The Flood Warning continues for***

***The Mississippi River At New Orleans.***

***\* from Tuesday morning to Tuesday March 27.***

***\* At 7:00 PM Sunday the stage was 16.5 feet.***

***\* Flood stage is 17.0 feet.***

*\* Forecast...The river is expected to rise to near flood stage by early Tuesday morning March 13th and then remain near that level for several days thereafter.*  
*\* Impact...At 17.0 feet...The river level will continue making navigation and docking difficult.*  
*The city is protected to a project height of 20 feet.*

### 4.3 River Forecast

The NWS KLIX WFO issued the following River Forecast for the Lower Mississippi during the period:

*FGUS54 KLIX 111552*

*RVDLIX*

*LAC005-033-037-047-051-057-063-071-075-077-087-089-091-093-095-103-105-109-117-121-125-MS045-047-059-109-113-147-157-121552-*

*Daily River and Lake Summary*

*National Weather Service New Orleans/Baton Rouge, LA*

*1052 AM CDT Sun Mar 11 2018*

*.B LIX 0311 DC201803111050 DH12/HG/DRD+1/HGIF/DRD+2/HGIF/*

*.B1 DRD+3/HGIF/DRD+4/HGIF/DRD+5/HGIF*

*:*

*:River Forecast Point Sites*

*:These Forecasts include 24-hour rainfall observed rainfall*

*:ending at 6 AM and forecast rainfall through 6AM tomorrow.*

*:*

STATION	FLOOD 6AM	24-HR	6AM
ID NAME	STAGE	STAGE CHANGE	FORECASTS
			Mon Tue Wed Thu Fri

*:Lower Mississippi River*

*RRLL1:Red River Land 48 58.9 0.6 59.3/ 59.7/ 59.9/ 60.1/ 60.3/*

*BTRL1:Baton Rouge 35 41.5 0.7 42.0/ 42.4/ 42.6/ 42.7/ 42.9/*

*DONL1:Donaldsonville 27 30.5 0.6 31.0/ 31.2/ 31.4/ 31.5/ 31.5/*

*RRVL1:Reserve 22 23.2 0.4 23.6/ 24.0/ 24.0/ 24.0/ 24.0/*

*NORL1:New Orleans 17 16.3 0.3 16.6/ 17.0/ 17.0/ 17.0/ 17.0/*

*FGUS54 KLIX 121626*

*RVDLIX*

*LAC005-033-037-047-051-057-063-071-075-077-087-089-091-093-095-103-105-109-117-121-125-MS045-047-059-109-113-147-157-131626-*

*Daily River and Lake Summary*

*National Weather Service New Orleans/Baton Rouge, LA*

*1126 AM CDT Mon Mar 12 2018*

*.B LIX 0312 DC201803121125 DH12/HG/DRD+1/HGIF/DRD+2/HGIF/*

*.B1 DRD+3/HGIF/DRD+4/HGIF/DRD+5/HGIF*

*:*

*:River Forecast Point Sites*

*:These Forecasts include 24-hour rainfall observed rainfall*

*:ending at 6 AM and forecast rainfall through 6AM tomorrow.*

*:*

STATION	FLOOD 6AM	24-HR	6AM
ID NAME	STAGE	STAGE CHANGE	FORECASTS
			Tue Wed Thu Fri Sat

*:Lower Mississippi River*

*RRLL1:Red River Land 48 59.6 0.7 60.1/ 60.4/ 60.6/ 60.8/ 60.9/*



<i>BTRL1:Baton Rouge</i>	35	42.2	0.7	42.8/ 43.0/ 43.3/ 43.4/ 43.5/
<i>DONL1:Donaldsonville</i>	27	<i>M</i>	<i>M</i>	31.1/ 31.2/ 31.4/ 31.5/ 31.6/
<i>RRVL1:Reserve</i>	22	23.6	0.4	24.0/ 24.0/ 24.0/ 24.0/ 24.0/
<i>NORL1:New Orleans</i>	17	<b>16.5</b>	<b>0.2</b>	<b>17.0/ 17.0/ 17.0/ 17.0/ 17.0/</b>

## 5.0 Astronomical Conditions

The United States Naval Observatory website provided the following astronomical conditions for March 12, 2018 for New Orleans, Orleans Parish, Louisiana:

<i>SUN</i>	
<i>Begin civil twilight</i>	<i>0650 CDT</i>
<i>Sunrise</i>	<i>0714 CDT</i>
<i>Accident</i>	<i>0930 CDT</i>
<i>Sun transit</i>	<i>1310 CDT</i>
<i>Sunset</i>	<i>1907 CDT</i>
<i>End civil twilight</i>	<i>1931 CDT</i>

At the time of the accident the Sun was about 28° above the horizon and at an azimuth of 112°.

Submitted by:

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Don Eick  
Senior Meteorologist

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