

Tropical Cyclone Report
Tropical Depression Five
(AL052010)
10-11 August 2010

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Tropical Depression Five was a short-lived tropical cyclone that formed in the eastern Gulf of Mexico and dissipated before its remnants moved inland, bringing rainfall to portions of the central Gulf Coast.

The depression originated from a broad area of low pressure associated with a decaying frontal trough that moved from the western Atlantic across the Florida peninsula on 8-9 August. Late on 9 August, a surface low formed offshore of the southwest coast of Florida. The low was initially characterized by a broad circulation and had disorganized convection as it moved slowly southwestward. On 10 August the low turned westward and then west-northwestward and later that day the circulation became better defined. By 1800 UTC that day the convection became sufficiently organized to classify the system as a tropical depression, when it was centered about 105 n mi west of Naples, Florida. The “best track” chart of the tropical cyclone’s path is given in Figure 1 and the best track positions and intensities for the depression are listed in Table 1¹. After genesis, the depression moved slowly west-northwestward, and the convection diminished shortly after 0000 UTC 11 August, likely due to vertical wind shear and mid-level dry air associated with a nearby upper-level low. By 0600 UTC that day, the center became ill defined, and the depression degenerated into a broad remnant low about 125 n mi west of Naples. The remnant low accelerated northwestward on 11 August and the circulation became a little better defined as it approached the coast of southeastern Louisiana on 12 August. While the low produced a broad area of 20 to 25 kt winds around the periphery of the circulation, the convection never gained enough organization to reclassify the system as a tropical cyclone. Late on 12 August the low moved slowly northward across the Chandeleur Islands off the coast of southeastern Louisiana and then turned northeastward and made landfall along the coast of Mississippi around 0600 UTC the next day. The remnant low then moved in an anticyclonic loop across portions of Mississippi, Alabama, western Georgia, and the Florida panhandle before re-entering the northern Gulf of Mexico on 16 August. The next day the remnant low turned northwestward and again made landfall along the coast of Mississippi. The low continued northwestward before dissipating over southwestern Mississippi by 0600 UTC 18 August.

Rainfall totals associated with the remnants of the depression were generally 1 to 3 inches across much of southern Louisiana, Mississippi and Alabama, with maximum amounts of 3 to 5 inches in portions of southern Mississippi and southwestern Alabama and 5 to 8 inches in the New Orleans area (Table 2, Figure 2). Widespread street flooding occurred in New Orleans and Jefferson Parish, and a few buildings had flooding on the ground floor in

¹ A digital record of the best track can be found online at <ftp://ftp.nhc.noaa.gov/atcf>. Data for the current year’s storms are located in the *btk* directory, while previous years’ data are located in the *archive* directory.

Jefferson Parish. Street flooding also occurred on 15 August in Mobile, Alabama, causing some property damage. The remnants of the depression were also associated with rainfall totals of over 10 inches in southwestern Mississippi and east-central Louisiana after the final landfall.

The genesis of the depression was relatively well anticipated. The precursor system was first mentioned in the Tropical Weather Outlook issued at 1800 UTC 8 August, 48 h prior to genesis, and given a low (< 30%) chance of development. The probability of development reached the medium category (30-50%) 24 h later but only reached the high category 6 h before genesis occurred.

There were no direct casualties associated with the depression or its remnants. However, two adults drowned on 12 August after suffering heart attacks while caught in rip currents off Anna Maria Island, Florida, south of Tampa and well east of the low center.

Due to the forecast track and the anticipation of the depression reaching tropical storm intensity, tropical storm watches and warnings were issued for portions of Louisiana, Mississippi, and Florida (Table 3).

Table 1. Best track for Tropical Depression Five, 10-11 August 2010.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
10 / 0600	25.7	83.0	1008	25	low
10 / 1200	25.7	83.3	1008	25	"
10 / 1800	25.9	83.7	1008	30	tropical depression
11 / 0000	26.1	84.1	1008	30	"
11 / 0600	26.5	85.0	1008	30	remnant low
11 / 1200	27.1	86.1	1008	25	"
11 / 1800	28.0	87.5	1009	25	"
12 / 0000	29.0	88.4	1009	25	"
12 / 0600	29.4	88.8	1008	25	"
12 / 1200	29.7	89.0	1008	25	"
12 / 1800	29.8	89.0	1008	25	"
13 / 0000	30.0	88.9	1007	25	"
13 / 0600	30.4	88.8	1007	25	"
13 / 1200	30.8	88.6	1008	25	"
13 / 1800	31.4	88.0	1008	25	"
14 / 0000	32.0	87.3	1009	20	"
14 / 0600	32.5	86.5	1010	15	"
14 / 1200	32.8	85.9	1011	15	"
14 / 1800	33.0	85.4	1012	15	"
15 / 0000	32.8	85.0	1012	15	"
15 / 0600	32.5	84.9	1013	15	"
15 / 1200	32.0	85.0	1013	15	"
15 / 1800	31.5	85.1	1013	20	"
16 / 0000	30.8	85.3	1011	20	"
16 / 0600	30.0	85.6	1010	20	"
16 / 1200	29.3	86.0	1009	20	"
16 / 1800	29.3	86.8	1008	25	"
17 / 0000	29.6	87.7	1007	25	"
17 / 0600	30.0	88.6	1008	25	"
17 / 1200	30.7	89.4	1008	25	"
17 / 1800	31.3	90.3	1009	20	"
18 / 0000	31.7	91.0	1010	15	"
18 / 0600					dissipated
11 / 0000	26.1	84.1	1008	30	maximum wind and minimum pressure

Table 2. Selected rainfall observations for Tropical Depression Five, 10-11 August 2010.

Location	Minimum Sea Level Pressure		Maximum Surface Wind Speed			Storm surge (ft)	Storm tide (ft)	Total rain (in)
	Date/time (UTC)	Press. (mb)	Date/time (UTC)	Sustained (kt)	Gust (kt)			
New Orleans, LA (NOE1) 29.97 N 90.08 W								8.00
Robert, LA (ROBL1) 30.50 N 90.34 W								5.90
New Orleans Audubon Park (NEWL1) 29.97 N 90.08 W								5.55
New Orleans Lakefront Airport, LA (KNEW) 30.04 N 90.03 W								3.17
Ocean Springs, MS (OCSM6) 30.40 N 88.80 W								3.13
Terrytown, LA (TERL1) 29.90 N 90.03 W								3.10
Belle Chase, LA (KNBG) 29.82 N 90.03 W								2.05
Pascagoula, MS (KPQL) 30.36 N 88.55 W								1.78
Tylertown, MS (TYRM6) 31.11 N 90.14 W								1.69
Bootheville, LA (KBVE) 29.33 N 89.40 W								1.60
New Orleans, LA (KMSY) 29.98 N 90.25 W								1.47
Slidell, LA (KASD) 30.35 N 89.82 W								1.34
Gulfport, MS (KGPT) 30.40 N 89.07 W								1.25
Mccomb, MS (KMCB) 31.18 N 90.47 W								1.19

Table 3. Watch and warning summary for Tropical Depression Five, 10-11 August 2010.

Date/Time (UTC)	Action	Location
10/2330	Tropical Storm Warning issued	Destin, Florida to Intracoastal City, Louisiana, including Lake Pontchartrain and New Orleans
11/2100	All warnings discontinued	

Figure 1. Best track positions for Tropical Depression Five, 10-11 August 2010.

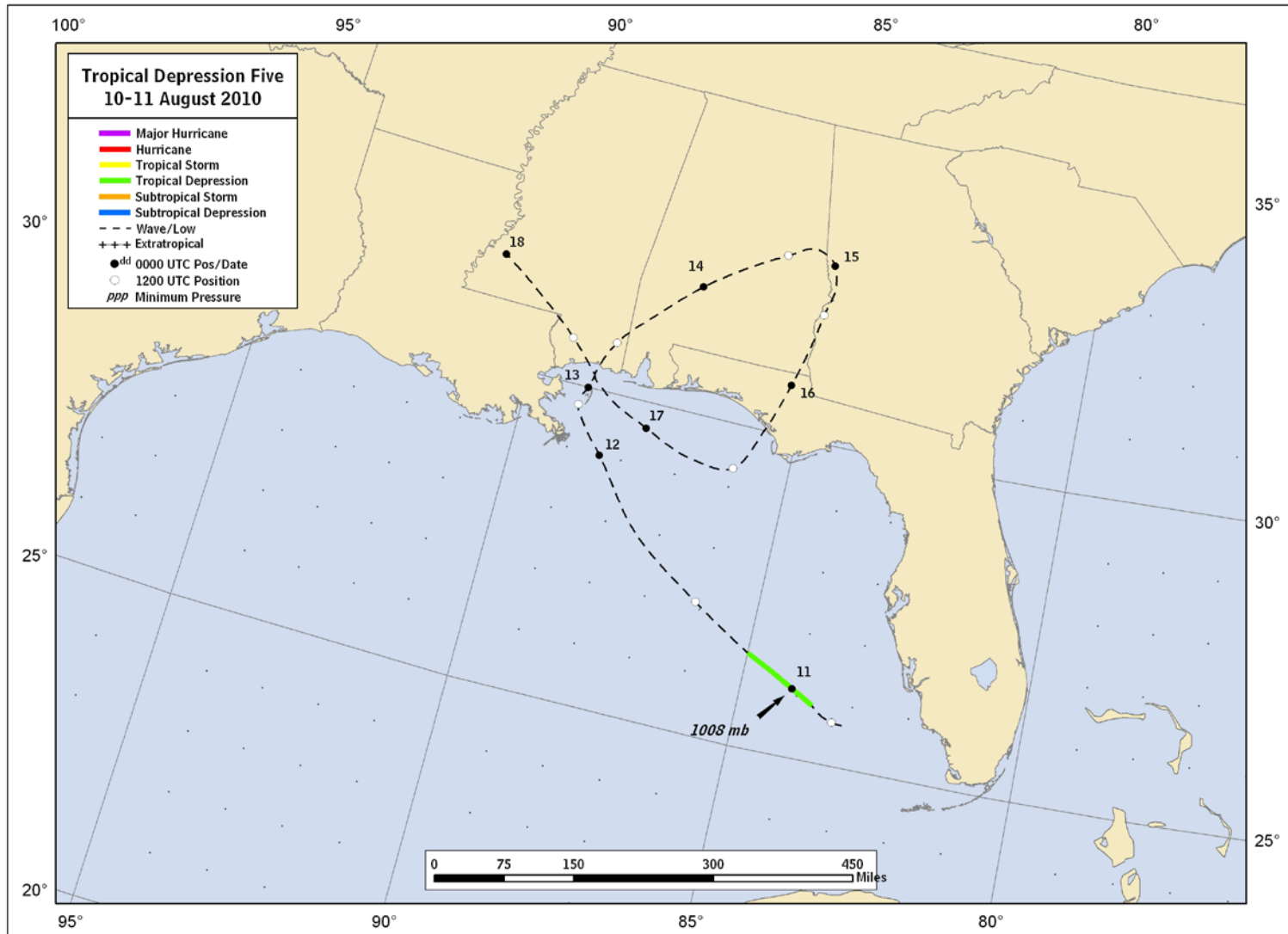


Figure 2. Rainfall totals (in.) associated with Tropical Depression Five and its remnants. Image courtesy of David Roth of the NWS Hydrometeorological Prediction Center in Camp Springs, MD.

