NWS Form E-5 U.S. DEPARTMENT OF COMMERCE **(04-2006) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION** **(PRES. BY NWS Instruction 10-924) NATIONAL WEATHER SERVICE** **MONTHLY REPORT OF HYDROLOGIC CONDITIONS**	HYDROLOGIC SERVICE AREA (HSA) **NWFO New Orleans/Baton Rouge, LA**
	REPORT FOR: MONTH YEAR **DECEMBER 2009**
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283	SIGNATURE **Kenneth Graham, Meteorologist-In-Charge**
	DATE **January 15, 2010**

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

☐ An X inside this box indicates that no flooding occurred within this hydrologic service area.

…Record Rains Occurred in December across Southeastern Louisiana and Southern Mississippi…

As the weather reflected a moderate *El Niño* pattern, multiple storm systems developed over the Gulf of Mexico throughout December and tracked across southeastern Louisiana, southwestern Mississippi and coastal Mississippi. Rainfall data showed Louisiana averaged 10.39 inches statewide, the 5th wettest December on record. Extensive flooding developed across the region, particularly over southeastern Louisiana.

At the start of December, a cold front, and its associated low pressure area, moved across southern Louisiana and stalled in the Gulf of Mexico. This system tracked across the region on December 2nd, with significant rainfalls. By December 4th, another low pressure system had developed in an extremely cold airmass. Snow and sleet developed, with snow totals up to 3 inches in spots across the Florida Parishes, mainly north of Interstate 10 and Interstate 12. Areal rainfall averaged from around 2.0 inches to 3.33 inches over coastal Mississippi.

By December 9th, a couple of strong cold fronts had produced significant rains and induced flooding. After a brief period of fair weather, a low pressure system developed in the Gulf of Mexico around December 12th. This system tracked northeast across southeastern Louisiana into coastal Mississippi. Heavy rainfall and flooding developed across the region. As the week ended on December 13th, New Orleans International Airport and Audubon Park in New Orleans had already set records for December with 13.50 inches and 13.90 inches of rain, respectively. Areal rainfall averages ranged from over 5.50 inches for coastal Mississippi and southeast Louisiana to 7.49 inches for east-central Louisiana.

More records were set by December 20th. The weather week opened with a stationary front positioned over coastal Louisiana. This front produced copious rainfall over southeastern Louisiana and coastal Mississippi. The next day, a cold front

swept through the region, bringing more rains. New Orleans International Airport measured 5.71 inches on December 15th. After a brief period of fair weather, another Gulf storm swept across coastal Louisiana around December 18th. By the end of the week, month-to-date rainfall for December 2009 at New Orleans International Airport (Louis Armstrong) was 24.92 inches, which more than doubled the record December rains at the site (10.77 inches recorded in December 1967). This total broke the record for any single month at Louis Armstrong (21.18 inches recorded in May 1995). Areal rainfall totals ranged from around 4.50 inches for coastal Mississippi and east-central Louisiana to 6.52 inches over southeast Louisiana.

The week of December 21st opened with high pressure over the region. By December 23rd, a cold front brought heavy rain and severe weather. Areal rainfall averages were generally less than 0.80 inch for the week. Behind this system, high pressure dominated the weather until December 30th. Then, another low pressure system developed and tracked across the southeastern Louisiana, bringing more rain. Areal rainfall totals through December 31st ranged from 0.68 over southeast Louisiana to around 1.68 inches over east-central Louisiana.

Flooding…
The Atchafalaya River rose above the flood stage at Morgan City on October 20th and crested on November 21st. Minor flooding continued into January 2010.

With the heavy rainfall during the week ending December 13th, minor flooding developed on the Tickfaw River near Liverpool and Killian; on the Tangipahoa River near Robert; on the Tchefuncte River near Covington; on the Bogue Falaya River at downtown Covington; on the Lower Pearl River near Bogalusa; on the West Hobolochitto River near McNeil, MS; on the East Hobolochitto Creek near Caesar, MS; on the Wolf River near Gulfport, MS; on the Biloxi River near Lyman, MS; and on the Tchoutacabouffa River near D'Iberville, MS. Heavy rains continued from December 13th into December 14th and led to more extensive flooding.

Repeated storm events dumped copious rainfall over the region during the week ending December 20th. Flooding started on the Amite River near Denham Springs and Bayou Manchac Point; on the Tchefuncte near Folsom; on the Bogue Chitto River near Tylertown, MS, Franklinton, and Bush; on the Lower Pearl River at Pearl River; and on the Pascagoula River near Graham Ferry, MS.

Several sites that had dropped below flood stage were pushed back above their flood stages. Flooding redeveloped on the Tickfaw River near Liverpool; on the Tchefuncte River near Covington; on the Bogue Falaya River at downtown Covington; on the East Hobolochitto River near Caesar, MS; on the West Hobolochitto River near McNeil, MS; on the Wolf River near Gulfport, MS; on the Biloxi River near Lyman, MS; and on the Tchoutacabouffa River near D'Iberville, MS.

With the heavy rains during that week, flooding reached moderate levels on the Tangipahoa River at Robert; on the Bogue Chitto River at Tylertown, MS; on the Lower Pearl River at Bogalusa; and on the East Hobolochitto Creek at Caesar, MS. Major flooding occurred at Pearl River on the Pearl River. Most flooding had ended across the region by December 23rd. Flooding continued on the Lower Pearl River at Bogalusa and Pearl River into January 2010.

The low pressure systems that developed over the region during the last week of December caused flooding to redevelop by December 28th on the Pascagoula River near Graham Ferry, MS. Flooding ended by December 29th.

Monthly Reports by Agricultural Region Areal Average Departure from Normal

Southwest Mississippi (3 Sites)	9.51	+3.45
South Central Mississippi (2 Sites)	12.47	+6.83
Coastal Mississippi	16.50	+11.52
Central Louisiana (3 Sites)	13.88	+8.49
East Central Louisiana	16.81	+11.60
South Central Louisiana (6 Sites)	13.89	+8.88
Southeast Louisiana	17.07	+12.41

Extreme Rainfall for the Month (Inches and Departure from Normal)

New Orleans International Airport	25.92	+20.85	Metairie, LA	23.23
New Orleans (Audubon),	22.93	+18.28	Terrytown, LA	21.77
Slidell, LA	21.24	+16.55	New Orleans (Lakefront)	20.87

Drought…

Soils conditions remained normal throughout December across southeastern Louisiana and southern Mississippi.

Revised 2/4/2010