

NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi
	MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS	
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		REPORT FOR: MONTH YEAR July 2004
		SIGNATURE <p style="text-align: center;">Alan E. Gerard, MIC In Charge of HSA</p>
		DATE August 9, 2004

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

Synopsis...

A variety of weather was reported during the month of July. Some areas suffered with below normal rainfall while other areas had above normal rainfall (especially portions of Northeast Louisiana). We had our typical hot and humid weather and also somewhat cooler and drier air caused by several cold fronts pushing through the HSA.

From the 1st to the 3rd, an upper level trough traversed across the area interacting with hot humid air in place. Heavy rainfall occurred on the 1st over portions of Northeast Louisiana, causing some flooding of low lying areas. Rainfall amounts during this time period ranged from around .10 inches over northern sections of the HSA in Mississippi to 3.50 inches over portions of Northeast Louisiana. Some heavier 24 hour rainfall reports were: 2.96 inches at Bastrop, LA (1st); 2.53 inches at St. Joseph, LA (1st) and 2.32 inches at Vidalia, LA (1st).

The HSA got a break from rainfall on the 4th and 5th; however, scattered showers and thunderstorms formed in the hot and humid air mass in place over the HSA from the 6th until the 10th. Rainfall amounts over this time period ranged from less than .10 inches to around 3.00 inches.

Surface high pressure began to build into the area on the 11th. Fair and very warm weather prevailed over the HSA from the 11th until the 14th with only scattered showers in extreme southern sections of the HSA on the 11th.

A strong eastern United States upper level trough began to develop, pushing a weak cold front into northern Mississippi on the 15th. On the 16th, the front began to push northeast as a warm front bringing scattered showers to southeast Arkansas, northern portions of Northeast Louisiana and Central Mississippi. As the upper level trough deepened, a strong cold front approached the area with heavy rainfall developing ahead of it over northern sections of Northeast Louisiana and Southeast Arkansas. Rainfall

amounts of 2 to 3 inches occurred in a couple hours over these areas. Some homes and streets in Morehouse Parish Louisiana were flooded. The cold front cleared the HSA by midday on the 18th. Rainfall totals from late on the 15th until early on the 18th ranged from less than .10 inches over northeastern portions of the HSA to over 4 inches over extreme northwest sections of the HSA. Some 2 day totals: 4.35 inches at Bastrop, LA; 3.94 inches at Crossett, AR; 4.12 inches at Oak Ridge, LA and 2.96 inches at Rayville, LA.

Surface high pressure built in behind the cold front bringing less humid and slightly cooler weather to the area from the 18th until the 22nd. The upper level ridge over the western U.S. and the unseasonably deep trough over the eastern U.S. were more typical of winter months than mid July. As the surface high began to break down on the 23rd, some widely scattered showers began to develop over the area. Rainfall amounts were less than .25 inches.

From late on the 23rd into the 24th, a frontal system began a slow push to the south into Arkansas. Some showers and thundershowers were kicked off in the strong southerly flow from the Gulf of Mexico over southern and central portions of Mississippi. By early on the 25th, the cold front had pressed into Southeast Arkansas, Northeast Louisiana and North Mississippi. Rainfall mostly .25 inches or less occurred in Southeast Arkansas. Heavy rainfall occurred early on the 26th over Southwest Mississippi and southern sections of Northeast Louisiana as the cold front aligned itself from Southwest Mississippi to Northeast Mississippi. The Mississippi River rain gage at Natchez reported 5.51 inches in less than 6 hours. The Cooperative observer at Vidalia, LA reported 6.10 inches. High pressure began to build into the area late on the 26th into the 27th as the cold front pushed off the Louisiana coast. Cooler temperatures and lower humidity greeted the HSA with the passage of the front. Rainfall amounts varied widely from no rainfall over portions of northeastern HSA to 2 to 6 inches over Northeast Louisiana.

On the 29th, a warm front pushed north through the HSA out of the Gulf of Mexico bringing with it hot and humid conditions. By the 30th, another cold front was pressing through Arkansas producing scattered showers and thunderstorms over western sections of the HSA where amounts were less than .50 inches. On the 31st, the weak front pushed through Mississippi. Rainfall amounts were generally less than 1 inch.

River and Soil Conditions...

After a wetter than normal June, soil moisture over the HSA was above normal at the beginning of the month. Above normal rainfall during the month of July over Southeast Arkansas and north and central sections of Northeast Louisiana produced above normal soil moisture conditions. Normal to much below normal rainfall elsewhere left soil moisture conditions at near normal levels for this time of year.

Evaporation and transpiration rates continue to be high, allowing soil moisture to deplete rather rapidly during dry periods. Several rainfall events produced flash flooding in Southeast Arkansas and portions of Northeast Louisiana during the month. River flooding was confined to the first week of the month. Most of the flooding was initiated by heavy rainfall in late June and early July. Minor flooding was limited to the middle and lower Big Black River, portions of the Pearl River, Tuscolameta Creek, Lower Yockanookany, and the Yalobusha River in Mississippi. In Louisiana, the Boeuf River exceeded flood stage due to heavy rainfall in the northern parishes of Northeast Louisiana. Most rivers in Northeast Louisiana experienced sharp, moderate rises early in the month. In Mississippi, the Pearl River at Jackson approached flood stage near the first few days of the month.

With above normal soil conditions and near normal rainfall patterns and high evaporation and transpiration rates projected over the next 60 to 90 days for central and northern sections of Northeast Louisiana and Southeast Arkansas, a slightly above normal flood potential should decrease rapidly to near normal by the mid August. With soil moisture conditions near normal and normal rainfall patterns for the next 60 to 90 days for the remainder of the HSA, flood potential should be near normal to slightly below normal.

Rainfall for the month of July...

RIVER BASIN RAINFALL DEPARTURE FROM NORMAL

Southeast Arkansas (Chicot & Ashley counties)	3.00 to 7.00 inches	Slightly below to well above normal.
Northeast Louisiana (Tensas, Boeuf, Bayou Macon & Lower Ouachita)	5.00 to 11.00 inches northern sections 4.00 to 6.50 inches central sections 1.50 to 10.50 inches southern section	Above to well above normal. Normal to well above normal. Well below to well above normal near the Mississippi River.
Lower Yazoo	2.00 to 4.50 inches	Well below to near normal.

Big Black	4.00 to 6.00 inches upper basin	Normal to above normal.
	2.00 to 4.00 inches middle basin	Well below normal to near normal.
	3.75 to 4.00 inches lower basin	Near normal.
Homochitto/ Bayou Pierre	4.00 to 6.50 inches	Normal to above normal.
Pearl(abv Jackson)	2.75 to 6.25 inches	Much below normal to above normal in the Tuscolameta Creek Basin.
Pearl(Blo Jackson)	3.00 to 7.50 inches	Below to much above normal
Pascagoula	4.00 to 7.25 inches over the Leaf basin.	Slightly below to above normal.
	4.50 to 5.00 inches over the Black Creek basin.	Near normal.
	3.25 to 6.00 inches over the Chickasawhay	Below to above normal.
Tombigbee tributaries in the JAN HSA	8.50 to 13.75 inches	Well above normal.

The heaviest rainfall amounts in the HSA for the month were: 10.74 inches at Bastrop, LA; 10.50 inches at Vidalia, LA; 8.47 inches at Oak Ridge, LA; 7.92 at Rayville, LA; 7.50 inches at Crystal Springs, MS; 7.36 inches at Crossett, AR and 7.27 inches at Bay Springs, MS.

At the Jackson WFO, the July monthly rainfall was 5.43 inches, which was 0.74 inches above normal. Total rainfall for the year was 35.48 inches, which was 0.22 inches above normal.

At Meridian Key Field, the July monthly rainfall was 6.01 inches, which was 0.56 inches above normal. Total rainfall for the year was 37.34 inches, which was 0.79 inches below normal.

At Greenwood-Leflore Airport, the July monthly rainfall was 2.65 inches, which was 1.54 inches below normal. Total rainfall for the year was 38.01 inches, which was 3.07 inches above normal.

Mississippi River...

After well above normal river stages during the month of June, the Mississippi River stages from Arkansas City to Natchez experienced a significant fall during the entire month of July.

The river stages were well above seasonal norms at the beginning of the month and remained above seasonal norms for most of the month. The river approached seasonal norms at Arkansas City and Greenville during the last several days of the month. The provisional high and low stages for July are listed below:

Location High Stage(ft) Date Low Stage(ft) Date

Arkansas City, AR	26.31	07/01/04	12.00	07/31/04
Greenville, MS	38.66	07/01/04	24.47	07/31/04
Vicksburg, MS	35.59	07/01/04	18.06	07/31/04
Natchez, MS	44.00	07/01/04	26.50	07/31/04

Total Flood Warning products issued: 04

Total Flood Statement products issued: 76

Daily Rainfall Products (RRA'S) issued 31

Daily River Forecast Products (RVS'S) issued: 31

Daily River Stage products (RVA'S) issued 31

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Service Hydrologist

Note: Provisional Stage and precipitation data was furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observers, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District

USGS Ruston District

USACE Mobile District

USACE Vicksburg District

USACE Mississippi Valley Division

USGS Mississippi District

SRH Climate, Weather and Water Division

LMRFC

Pearl River Valley Water Supply District

Hydrologic Information Center

Southern Region Climate Center

Pat Harrison Waterway District

Pearl River Basin Development District