

<b>NWS FORM E-5</b> (11-88) (PRES. by NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) <b>WFO Jackson, Mississippi</b>
		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 <b>June             2004</b>
		SIGNATURE <p style="text-align: center;"><b>Alan E. Gerard, MIC</b> In Charge of HSA</p>
		DATE <b>July 8, 2004</b>

*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...**

An abnormally wet June was noted over all of Mississippi, Northeast Louisiana, and Southeast Arkansas. Based on preliminary data, June may go down on the record books as the wettest June on record for the entire state of Mississippi while Louisiana may have had the 3<sup>rd</sup> wettest month on record according to the Southern Region Climatic Data Center in Baton Rouge, LA.

From the 1<sup>st</sup> to the 4<sup>th</sup>, a series of weak upper-level disturbances and weak surface fronts pushed into the area. A squall line formed in southern Mississippi and southern portions of Northeast Louisiana bringing with it some severe weather and heavy rainfall. Rainfall amounts across the Hydrologic Service Area (HSA) ranged from .25 inches in northern Mississippi to near 5.00 inches across Northeast Louisiana and South Mississippi. Some heavier 24 hour rainfall totals during the period: 4.06 inches at Collins, MS (1<sup>st</sup>); 3.65 inches at Hattiesburg, MS (1<sup>st</sup>); 2.92 inches at Prentiss, MS (1<sup>st</sup>); 2.69 inches at Bastrop, LA (3<sup>rd</sup>); 2.42 inches at Sumrall, MS (1<sup>st</sup>).

The driest period of the month occurred from the 5<sup>th</sup> until the 13<sup>th</sup>. The most significant event during this period occurred as an upper level low moved across the HSA from the 6<sup>th</sup> until late on the 7<sup>th</sup>. The most widespread rainfall occurred in Mississippi east of Interstate 55. Some scattered rainfall occurred over West Mississippi and portions of Northeast Louisiana. Rainfall amounts ranged from less than .25 inches to around 1.50 inches. An upper-level ridge dominated the HSA's weather conditions from the 8<sup>th</sup> until it began to break down on the 13<sup>th</sup>. Only widely scattered showers and thunderstorms occurred over extreme southern sections of the HSA.

As the high pressure ridge shifted to the east, an upper-level low pressure formed over Southeast Texas on the 14<sup>th</sup>. At the surface, a tropical disturbance moved into Southeast Louisiana bringing abundant moisture and instability to the area. Rainfall occurred over most of the HSA from the 14<sup>th</sup> until the 17<sup>th</sup>. Some heavy rainfall developed early on the 14<sup>th</sup> over East Central Mississippi, where 2 to 4 inches occurred from near Conehatta, MS to Collinsville, MS. Rainfall over this period ranged from .50 inches to around 5.00 inches in Southeast Mississippi.

From the 17<sup>th</sup> until the 21<sup>st</sup>, drier weather prevailed over the area. On the 17<sup>th</sup>, a weak cold front pushed slowly south out of Arkansas as an upper-level high pressure ridge developed along the coast; however, by the 21<sup>st</sup>, the cold front had pressed the Gulf Coast and began to slow. Rainfall amounts during the period were generally light with the exception of Northeast Louisiana and Southeast Arkansas where the front slowed somewhat as it pushed through the area. Rainfall ranged from no rainfall over the northeast HSA to 1.75 inches over portions of Northeast Louisiana and Southeast Arkansas.

The most significant rainfall of the month occurred from the 22<sup>nd</sup> until the end of the month. Flow around an upper-level low located over Central Canada pushed upper-level disturbances and associated surface fronts southward into the HSA. The heaviest rainfall of the month occurred between the 25<sup>th</sup> and 28<sup>th</sup> of the month as a strong upper-level low pushed southeast across the area. Some heavier 24 hour rainfall amounts: 5.47 inches at Elliot, MS (25<sup>th</sup>); 4.48 inches at Elliot, MS (27<sup>th</sup>); 3.20 inches at Dermott, AR (28<sup>th</sup>); 2.85 inches at Canton, MS (30<sup>th</sup>) and Prentiss, MS (25<sup>th</sup>). Rainfall totals from the 22<sup>nd</sup> until the end of the month ranged from 2 inches in Central Mississippi to 6 inches over Southeast Arkansas to over 13 inches in North Central Mississippi.

**River and Soil Conditions...**

After a wetter than normal May, soil moisture over the HSA was at or just above normal at the beginning of the month. Above to well above normal rainfall during the month of June produced above normal soil moisture conditions.

Luckily, the evaporation and transpiration rates are high this time year to help deplete this surplus of soil moisture in a rather short period of time. Even though numerous flash flooding events were reported, river flooding was limited to the Big Black River Basin, the Yalobusha River, Tuscolameta Creek, the Yockanookany River, and a small portion of the Lower Pearl. Moderate flooding along the Big Black Basin caused significant damage to crops planted near the river. Most other rivers in the HSA experienced significant rises. Most rivers crested between half and three-quarters flood stage.

With above to well above normal soil conditions and near normal rainfall patterns and high evaporation and transpiration rates projected over the next 60 to 90 days, an above flood potential should decrease to near normal by the mid to late July across the HSA.

**Rainfall for the month of June...**

RIVER BASIN	RAINFALL	DEPARTURE FROM NORMAL
Southeast Arkansas (Chicot & Ashley counties)	9.00 to 11.00 inches	Well above normal.

Northeast Louisiana (Tensas, Boeuf, Bayou Macon & Lower Ouachita)	9.00 to 15.00 inches northern sections	Well above normal.
	11.00 to 12.00 inches central sections	Well above normal.
	11.00 to 12.00 inches southern section	Well above normal.
Lower Yazoo	7.00 to 19.00 inches	Well above normal.
Big Black	10.00 to 12.00 inches upper basin	Well above normal.
	6.00 to 10.00 inches middle basin	Well above normal.
	9.00 to 11.00 inches lower basin	Well above normal.
Homochitto/ Bayou Pierre	8.50 to 10.00 inches	Well above normal.
Pearl(abv Jackson)	5.50 to 10.50 inches	Normal to well above normal.
Pearl(Blo Jackson)	8.00 to 12.75 inches	Well above normal.
Pascagoula	3.50 to 12.50 inches over the Leaf basin.	Well above normal
	9.00 to 9.50 inches over the Black Creek basin.	Well above normal.
	6.50 to 13.50 inches over the Chickasawhay	Well 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: 18.68 inches at Elliot, MS; 15.70 inches at Hattiesburg; 14.50 inches at Bastrop, MS; 13.74 at Sondheimer, LA; 13.68 inches at Tibbee, MS; 13.44 inches at Pat

Harrison Waterway's Archusa Waterpark, MS; 12.67 inches at Prentiss, MS; 12.63 inches at Laurel, MS; 11.64 inches at Lexington, MS; 11.50 inches at Collins, MS; 11.43 inches at Winona, MS and 11.33 inches at Crawford, MS.

At the Jackson WFO, the June monthly rainfall was 5.96 inches, which was 2.14 inches above normal. Total rainfall for the year was 30.05 inches, which was 0.52 inches below normal.

At Meridian Key Field, the June monthly rainfall was 10.98 inches, which was 6.99 inches above normal. Total rainfall for the year was 31.33 inches, which was 1.35 inches below normal.

At Greenwood-Leflore Airport, the June monthly rainfall was 9.24 inches, which was 4.74 inches above normal. Total rainfall for the year was 35.36 inches, which was 4.64 inches above normal.

### Mississippi River...

The Mississippi River experienced a significant rise during the 1<sup>st</sup> half of June, cresting around mid month from Arkansas City to Natchez. Even though the river remained from 4 to 6 feet below flood stage, agricultural land near the river, generally inside the levee system, was flooded.

The river continued to fall during the week after the river crested; however, the river experienced a secondary rise which crested several days before the end of the month.

The river stages were near seasonal norms at the beginning of the month; however, river stages quickly rose above seasonal norms and continued above seasonal norms for the remainder of the month. The provisional high and low stages for June are listed below:

Location	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	30.89	06/14/04	22.21	06/01/04
Greenville, MS	42.67	06/14/04	33.06	06/01/04
Vicksburg, MS	36.89	06/15/04	26.29	06/01/04
Natchez, MS	43.96	06/17/04	32.8	06/01/04

Total Flood Warning products issued: 10  
Total Flood Statement products issued: 61  
Daily Rainfall Products (RRA'S) issued 30  
Daily River Forecast Products (RVS'S) issued: 30  
Daily River Stage products (RVA'S) issued 30

Marty V. Pope

## 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  
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Pearl River Valley Water Supply District  
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Pat Harrison Waterway District  
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