| NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924) | U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION<br>NATIONAL WEATHER SERVICE | HYDROLOGIC SERVICE AREA (HSA)<br>**NEW ORLEANS/BATON ROUGE, LA** |
|---|---|---|
| **MONTHLY REPORT OF HYDROLOGIC CONDITIONS** | | REPORT FOR:<br>MONTH: **OCTOBER** YEAR: **2013** |
| TO: Hydrometeorological Information Center, W/OH2<br>NOAA / National Weather Service<br>1325 East West Highway, Room 7230<br>Silver Spring, MD 20910-3283 | | SIGNATURE<br>KENNETH GRAHAM<br>METEOROLOGIST-IN-CHARGE<br>DATE<br>**NOVEMBER 15, 2013** |

*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)*

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

***…Periods of High Pressure were broken by Bouts of Heavy Rain in October …***

Scattered showers over southeastern Louisiana and southern Mississippi during the first three days of October foreshadowed the development of Tropical Storm Karen in the Gulf of Mexico near the Yucatan Peninsula early on October 3rd. By October 5th, "Karen" was downgraded to a Tropical Depression, as it moved towards coastal Louisiana. Significant rain developed when the feeder bands moved over Louisiana and Mississippi. In addition, the passage of a cold front produced thunderstorms on October 6th, as Tropical Storm Karen disintegrated to an open trough over the Gulf of Mexico. The greatest rain totals measured were 2.81 inches at Boothville, LA; 2.73 inches at Lutcher, LA; 2.72 inches at Pascagoula, MS; and 2.21 inches at Long Beach, MS. Through October 6th, areal average rainfall totals ranged from around 0.5 inch up to 1.42 inches over southeastern Louisiana where the heaviest rains occurred.

A series of weather systems punctuated periods of cooler temperatures and drier weather. A weak cold front moved across the Lower Mississippi River Valley on October 12th. For the week that ended October 13th, areal rainfall totals ranged from around 0.15 inch up to around 0.75 inch.

A more efficient rainmaker crossed Louisiana and Mississippi by October 17th and then stalled along the Gulf Coast. Behind that front, came another system that interacted with the stalled frontal boundary. As a result of these two weather systems, southeastern Louisiana and southern Mississippi experienced widespread rainfall by October 20th. Areal average rainfall totals for the week that ended October 20th, ranged from 0.66 inch up to 1.08 inch, with the heaviest rainfall over east-central and southeast Louisiana.

Typical fall weather became established over the region during the following week. The periods of high pressure were broken by weak frontal boundaries that produced only patchy, sparse rainfall through October 27th. Areal rainfall totals were less than 0.5 inch.

After more spotty light rain on October 28th, a stronger frontal boundary crossed the region on October 31st and November 1st. That front induced bouts of hazardous weather, along with widespread rain. In this region, the heaviest rainfall associated with this system occurred over parts of southwestern Mississippi and central Louisiana, where rain amounts over 2.00 inches occurred. In Louisiana, New Roads measured 2.00 inches on October 31st and one site in Baton Rouge had 1.26 inches. The rain amounts tapered off to around 0.4 inch over east-central and southeast Louisiana. Most the rainfall with this system was measured on November 1st, as the front pushed southeast toward the coast.

| Monthly Reports by Agricultural Region | Areal Average | Departure from Normal |
|---|---|---|
| Southwest Mississippi (1 Site) | 1.56 | N/A |
| South Central Mississippi (1 Site) | 1.38 | -2.37 |
| Coastal Mississippi | 1.79 | -1.87 |
| Central Louisiana (2 Sites) | 3.98 | +0.07 |
| East Central Louisiana | 1.87 | -1.73 |
| South Central Louisiana (7 Sites) | 2.41 | -1.45 |
| Southeast Louisiana | 2.90 | -0.45 |

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

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|---|---|---|---|---|---|
| Thibodaux, LA | 4.21 | +0.50 | Baker, LA | 0.02 | -4.17 |

**Drought…**

The copious rainfall of September allowed soil conditions to rapidly improve by the start of October. Tropical Storm Karen weakened before approaching land, but produced more significant rainfall over the region. At the start of October, Abnormally Dry (D0) conditions lingered along the Mississippi River and over the Atchafalaya River Basin, while all other regions had normal soil moisture contents. Soil moisture improved further by mid-October. Normal soil moisture conditions became established over the entire region and persisted through the end of October.