River Conditions for August 2019

Summary

August continued with the typically warm and humid conditions that traditionally occur in South Carolina. However, rainfall varied widely across the Midlands and Central Savannah River Area. Some portions of the state received several inches of rain while others received less than 2 inches for the month. Temperatures were slightly above normal for the month. Most of the area received between 3 and 5 inches for the month. Areas of drought remained across the Midlands and Central Savannah River Area, especially across the eastern Midlands and southern CSRA.

Precipitation

The total precipitation at Columbia Metro Airport was 1.40 inches. The total precipitation at Augusta Bush Field was 12.92 inches. It was the wettest August on record at Augusta. Precipitation records for Columbia began in 1878. Precipitation records for Augusta began in 1871.
Here are a few reports from NWS Coop Stations:

Newberry WKDK (NWYS1) – 12.54 inches *3rd wettest on record (1893-2019)
Lake Greenwood (CHPS1) – 10.29 inches
Saluda Water Plant (SADS1) – 8.64 inches

Holly Hill 1 SW (HHLS1) – 0.96 inches
Lugoff 2 NE (LUGS1) – 2.45 inches
Orangeburg 2 (ORBS1) – 2.55 inches

Here are a few reports from the CoCoRaHS (Community, Collaborative, Rain, Hail and Snow Network) observers:

South Carolina:
SC-NW-13 Newberry 1.0 N – 11.75 inches
SC-MC-5 McCormick 2.3 W – 10.18 inches
SC-AK-71 N. Augusta 3.5 ENE – 9.15 inches

SC-RC-71 Forest Acres 0.7 NE – 1.16 inches
SC-LX-137 Lexington 5.3 E – 1.36 inches
SC-OR-41 Elloree 2.2 WSW – 1.58 inches

Georgia:
GA-CU-3 Evans 2.1 NNW – 10.30 inches
GA-BK-9 S. Augusta 4.1 S – 8.30 inches

GA-BK-10 Waynesboro 5.3 SE – 3.06 inches
GA-CU-11 Grovetown 2.0 SSW – 4.81 inches
(Please see the precipitation maps below).

August 2019 Total Precipitation (inches)

Source: Advanced Hydrologic Prediction Service, NWS
August 2019 Precipitation Departure from Normal (inches)

Source: Advanced Hydrologic Prediction Service, NWS
August 2019 Percent of Normal Precipitation

Source: Advanced Hydrologic Prediction Service, NWS
August 2019 precipitation at observation sites was as follows:

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<tr>
<th>Station</th>
<th>Rainfall</th>
<th>Normal</th>
<th>Departure From Normal</th>
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<tr>
<td>Augusta (AGS)</td>
<td>12.92</td>
<td>4.32</td>
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<td>Augusta (DNL)</td>
<td>9.75</td>
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<td>Columbia (CAE)</td>
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<td>Orangeburg (OGB)</td>
<td>M</td>
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**River/Flood Conditions**

Rainfall was well above normal across the northern and central portions of the CSRA. The remainder of the Midlands and CSRA had near to below average rainfall for the month.

Only one river forecast point approached flood stage during August. The river forecast point at Modoc along Stevens Creek crested at 18.4 feet on the morning of the 21st. Action Stage is 17.0 feet and Flood Stage is 19.0 feet. A cluster of persistent showers and thunderstorms produced heavy rainfall during the evening and overnight hours of the 20th into the 21st across the basin. Rainfall amounts ranged from 3 to 5 inches. A CoCoRaHS site in McCormick County reported 5.15 inches of rain and a RAWS site in McCormick County reported 4.05 inches of rain.
There was one locally heavy rainfall event that produced some minor flooding in the Columbia Metropolitan Area. During the afternoon of the 22nd, slow moving thunderstorms produced locally heavy rainfall over downtown Columbia. Rainfall amounts up to 1.50 inches fell in just over 1 hour. The stream gage along Rocky Branch near Whaley and Main Streets crested at 7.2 feet. Flood stage is 7.2 feet.

Attached are 5 minute rainfall readings and rainfall totals from the City of Columbia rain gage network. The first graph is from the site at MLK Park. This is located in the headwaters of the Rocky Branch Basin. The second graph is from a site located at the intersection of Whaley Street and Main Street in downtown Columbia. This gage is located near the stream gage along Rocky Branch. Also included are the hydrographs provided by the City of Columbia for locations along Rocky Branch.
*Image/Data courtesy of the City of Columbia

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*Image/Data courtesy of the City of Columbia
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Drought Conditions

Rainfall varied greatly across the Midlands and Central Savannah River Area during the month of August. This produced areas with no drought along with areas of D0 (Abnormally Dry) across much of the eastern half of the South Carolina and portions of the Upstate. It also produced an area of D1 (Moderate Drought) across portions of the eastern Midlands to the southern CSRA.

(Please see the maps below).
Drought in South Carolina

Residents in drought: 820,000
2,053,000 more in abnormally dry areas.
This is: 18% of the state's population,
40% more in abnormally dry areas.

The U.S. Drought Monitor (USDM) is a map that shows the location and intensity of drought across the country. The data is updated each Tuesday and released on Thursday. This map shows the drought conditions on September 3, 2019.

Learn more about the US Drought Monitor
Streamflow Conditions

Monthly average stream flows for August across the Midlands and Central Savannah River Area began to show some deterioration from July’s lack of rainfall. Average stream flows for August ranged from Much Above Normal to Much Below Normal across the region. Above Normal conditions were noted along the Santee River Basin below Lake Marion and Stevens Creek. Normal conditions were noted along the Savannah River Basin, Saluda River Basin, Broad River Basin, Wateree River Basin and the Pee Dee River Basin. Below Normal conditions were observed along the Edisto River Basin. Much Below Normal conditions were noted along some of the streams around the Columbia Metropolitan area, such as Gills Creek and Smith Branch.
Stream Flow Compared to Historical Stream Flow for the Month

August 2019

Explanation - Percentile classes

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<th>Low</th>
<th>&lt;10</th>
<th>10-24</th>
<th>25-75</th>
<th>76-90</th>
<th>&gt;90</th>
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<th>Not-ranked</th>
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<td>Normal</td>
<td>Above normal</td>
<td>Much above normal</td>
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Temperatures

August 2019 temperatures were above normal for the month.

The monthly average temperature at Columbia (CAE) was 82.3 degrees. This value was 1.5 degrees above the normal of 80.8 degrees. The highest temperature during the month was 101 degrees reached on the 14th. The lowest temperature was 58 degrees that occurred on the 30th.

The average temperature for the month at Augusta (AGS) was 82.6 degrees. This value was 2.1 degrees above the normal of 80.5 degrees. The highest temperature during the month was 101 degrees reached on the 14th. The lowest temperature was 60 degrees that occurred on the 30th.

The average temperature for the month at Orangeburg (OGB) was 81.9 degrees. This value was 1.7 degrees above the normal of 80.2 degrees. The highest temperature during the month was 98 degrees reached on the 9th, 10th, and 14th. The lowest temperature was 60 degrees that occurred on the 30th.
Hydrological Products

The following products were issued during August 2019.

DGT  Drought Statements  0
ESF  Hydrologic Outlooks  0
FFA  Flash Flood Watches  0
FFS  Flash Flood Statements  1
FFW  Flash Flood Warnings  1
FLS  Flood Statements  0
FLW  Flood Warnings  0
FLS  Areal Flood Advisories  24