River Conditions for March 2019

Summary

As the area began the transition from winter into spring, precipitation has been below normal. March continued in the footsteps of February with the Midlands and Central Savannah River Area receiving below normal precipitation for the month. It was not as dry as February, but still below normal. Most of the area received between 2 and 3 inches of precipitation, although there were a few higher amounts across the northern Midlands. There were also lower amounts across the CSRA and southern Midlands. Most of the rain that did fall in March occurred within the first 1 to 2 weeks, with the remainder of the month rather dry.

Precipitation

The total precipitation at Columbia Metro Airport was 2.61 inches. The total precipitation at Augusta Bush Field was 2.23 inches. Precipitation records for Columbia began in 1878. Precipitation records for Augusta began in 1871.
Here are a few reports from NWS Coop Stations:

Lugoff (LUGS1) – 4.48 inches  
Cheraw Water Plant (CEWS1) – 4.21 inches  
Newberry WKDK (NWYS1) – 3.69 inches  
Barnwell 5 ENE (BNLS1) – 1.79 inches  
Lincolnton (LNCG1) – 1.50 inches  
Holly Hill 1 SW (HHLS1) – 1.43 inches

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

South Carolina:

SC-KR-14  Lugoff 2.2 NNW – 4.60 inches  
SC-RC-93  Chapin 5.0 ESE – 4.56 inches  
SC-LX-128 Irmo 1.3 SE – 4.29 inches  
SC-CF-5  Pageland 9.0 WNW – 4.24 inches  
SC-LN-4  Lancaster 2.0 NNW – 3.83 inches

Georgia:

GA-CU-7  Grovetown 3.4 NE – 2.57 inches  
GA-MD-1  Thomson 2.5 S – 2.49 inches  
GA-BK-9  S. Augusta 4.1 S – 2.39 inches  
GA-BK-1  Waynesboro 3.3 SW – 1.79 inches  
GA-CU-21 Martinez 3.0 NE – 1.59 inches
March 2019 Total Precipitation (inches)

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

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

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

<table>
<thead>
<tr>
<th>Station</th>
<th>Rainfall</th>
<th>Normal</th>
<th>Departure From Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augusta (AGS)</td>
<td>2.23</td>
<td>4.18</td>
<td>-1.95</td>
</tr>
<tr>
<td>Augusta (DNL)</td>
<td>1.80</td>
<td>4.31</td>
<td>-2.51</td>
</tr>
<tr>
<td>Columbia (CAE)</td>
<td>2.61</td>
<td>3.73</td>
<td>-1.12</td>
</tr>
<tr>
<td>Columbia (CUB)</td>
<td>1.86</td>
<td>3.88</td>
<td>-2.02</td>
</tr>
<tr>
<td>Orangeburg (CUB)</td>
<td>1.83</td>
<td>3.98</td>
<td>-2.15</td>
</tr>
</tbody>
</table>

**River/Flood Conditions**

Minor flooding occurred along the Saluda River, Congaree River and Great Pee Dee River during the first week of March. A slow moving frontal boundary lingered along the Appalachian Mountains on the 1\textsuperscript{st} and slowly pushed across the region through the 2\textsuperscript{nd}. A second cold front moved across the region on the afternoon of the 3\textsuperscript{rd}. These systems produced rainfall amounts between 1 and 2 inches across the Carolinas and Georgia.

Along the Congaree River, minor flooding occurred at Carolina Eastman and the Congaree NP-Gadsden. At Carolina Eastman, the river reached the flood stage of 115.0 feet on the morning of the 2\textsuperscript{nd}. The river crested at 115.2 feet on the morning of the 2\textsuperscript{nd}. The river rose again as additional runoff moved down the basin. The river reached flood stage once again just after midnight on the 3\textsuperscript{rd}. The river crested
at 118.20 feet on the morning of the 8\textsuperscript{th}. At the Congaree NP-Gadsden, the river reached the flood stage of 15.0 feet on the early morning of the 3\textsuperscript{rd}. The river crested at 16.99 feet on the morning of the 6\textsuperscript{th}. At Cheraw on the Great Pee Dee River, the river reached the flood stage of 30.0 feet on the early morning hours of the 3\textsuperscript{rd}. The river crested at 31.31 feet overnight on the 5\textsuperscript{th}. The Saluda River at Chappells reached the flood stage of 14.0 feet on the early morning hours of the 4\textsuperscript{th}. The river crested at 18.05 feet during the evening hours of the 4\textsuperscript{th}.

**Drought Conditions**

Drought has continued to increase in areal coverage and category over the past month. Rainfall has been well below normal for February and March across the Midlands and CSRA. Drought category D0 (Abnormally Dry) has developed along and south of I-20 across the area. A small portion of the southern Midlands and southern CSRA is in D1 (Moderate Drought). This covers southern Burke County in Georgia and southern portions of Barnwell, Bamberg and Orangeburg counties in South Carolina.

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

Residents in drought: 1,074,000
1,369,000 more in abnormally dry areas.

This is: 24%
of the state's population, 35% 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 as of April 02, 2013.

Learn more about the US Drought Monitor:

D0 - Abnormally Dry
- Decreased crop yields
- Poor growth of crops
- Some ingesting water deficits
- Potatoes or crops not fully matured

D1 - Moderate Drought
- Some drought to crops, pastures
- Some water shortages developing
- Voluntary water restrictions requested

D2 - Severe Drought
- Crop or pasture loss likely
- Full water shortages common
- Water restrictions imposed

D3 - Extreme Drought
- Major crop/pasture losses
- Widespread water shortages or restrictions

D4 - Exceptional Drought
- Severe drought and widespread crop/pasture losses
- Severe shortages of water creating water emergency
**Streamflow Conditions**

Monthly average stream flows during March across the Midlands and Central Savannah River Area ranged from Normal to Above Normal across the Broad River, Santee River, Savannah River, Catawba/Wateree River, Lynches River and Edisto River Basins. Even with the below normal rainfall, higher rainfall totals in the headwaters produced flows at or above normal for this time of year across the area.
Stream Flow Compared to Historical Stream Flow for the Month

Explanation - Percentile classes

<table>
<thead>
<tr>
<th>Low</th>
<th>&lt;10</th>
<th>10-24</th>
<th>25-75</th>
<th>76-90</th>
<th>&gt;90</th>
<th>High</th>
<th>Not-ranked</th>
</tr>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>Much below normal</td>
<td>Below normal</td>
<td>Normal</td>
<td>Above normal</td>
<td>Much above normal</td>
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</tbody>
</table>
Temperatures

March 2019 temperatures were just slightly below normal for the month. Temperatures averaged around 1 degree below normal across the region.

The monthly average temperature at Columbia (CAE) was 55.1 degrees. This value was 0.5 degrees below the normal of 55.6 degrees. The highest temperature during the month was 82 degrees reached on the 15th. The lowest temperature was 27 degrees that occurred on the 6th and 7th.

The average temperature for the month at Augusta (AGS) was 57.0 degrees. This value was 1.1 degrees above the normal of 55.9 degrees. The highest temperature during the month was 84 degrees reached on the 15th. The lowest temperature was 27 degrees that occurred on the 7th.

The average temperature for the month at Orangeburg (OGB) was 56.3 degrees. This value was 0.3 degrees below the normal of 56.6 degrees. The highest temperature during the month was 82 degrees reached on the 15th. The lowest temperature was 28 degrees that occurred on the 7th.
Hydrological Products

The following products were issued during March 2019.

DGT  Drought Statements  0
ESF  Hydrologic Outlooks  2
FFA  Flash Flood Watches  0
FFS  Flash Flood Statements  0
FFW  Flash Flood Warnings  0
FLS  Flood Statements  30
FLW  Flood Warnings  7
FLS  Areal Flood Advisories  0