

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA) <b>Columbia, SC</b>
		REPORT FOR: MONTH                      YEAR <b>Nov.                      2019</b>
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		SIGNATURE <b>Leonard Vaughan</b>
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		DATE <b>11/09/2019</b>

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

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

# River Conditions for November 2019

## Summary

The month of November was one of the cooler months over the past 2 years. Temperatures averaged 2 to 4 degrees below normal for the month. It was the 3<sup>rd</sup> coldest November on record at the NWS Coop site at Bamberg. Records for Bamberg began in 1951. It was the 4<sup>th</sup> coldest November on record at the NWS Coop site at the University of South Carolina. Records for USC began in 1954. It was the 5<sup>th</sup> coldest November on record at the NWS Coop site at the Orangeburg Water Plant. Records for Orangeburg began in 1953. Rainfall was near normal across the region with totals from 3 to 5 inches. This continued to improve the drought conditions across the Midlands and Central Savannah River Area.

## Precipitation

The total precipitation at Columbia Metro Airport was 3.00 inches. The total precipitation at Augusta Bush Field was 2.62 inches. Precipitation records for Columbia began in 1878. Precipitation records for Augusta began in 1871.

Here are a few reports from NWS Coop Stations:

Waynesboro (WYNG1) – 4.82 inches  
Manning (MANS1) – 4.45 inches  
Edgefield (EDFS1) – 4.25 inches  
Newberry WKDK (NWYS1) – 4.10 inches  
North 5 E (NRTS1) – 3.92

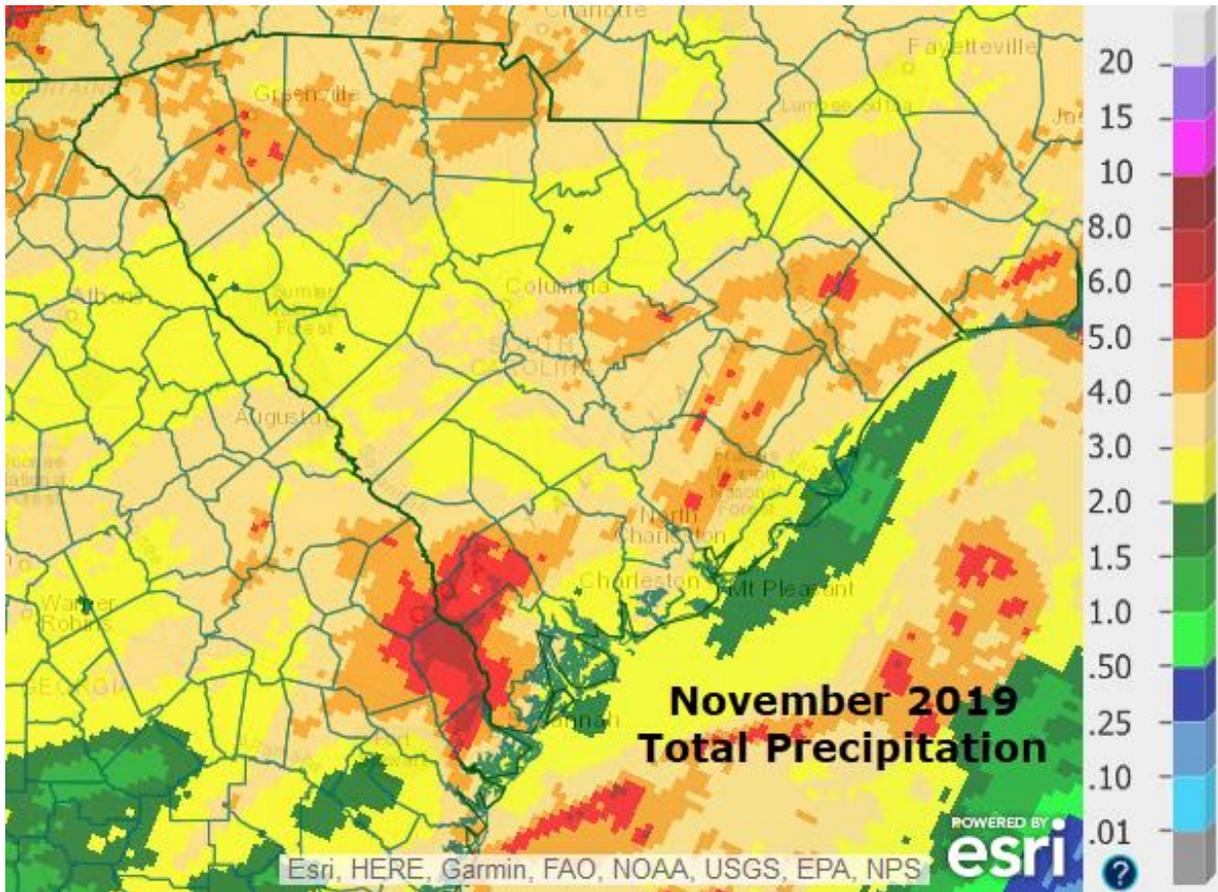
Here are a few reports from the CoCoRaHS (Community, Collaborative, Rain, Hail and Snow Network) observers:

South Carolina/Georgia:

SC-SM-20 Sumter 3.6 SSW.....4.87 inches  
SC-LN-10 Indian Land 4.7 S.....4.62 inches  
SC-LX-122 Pelion 4.7 W.....3.72 inches  
SC-MC-5 McCormick 2.3 W.....3.59 inches

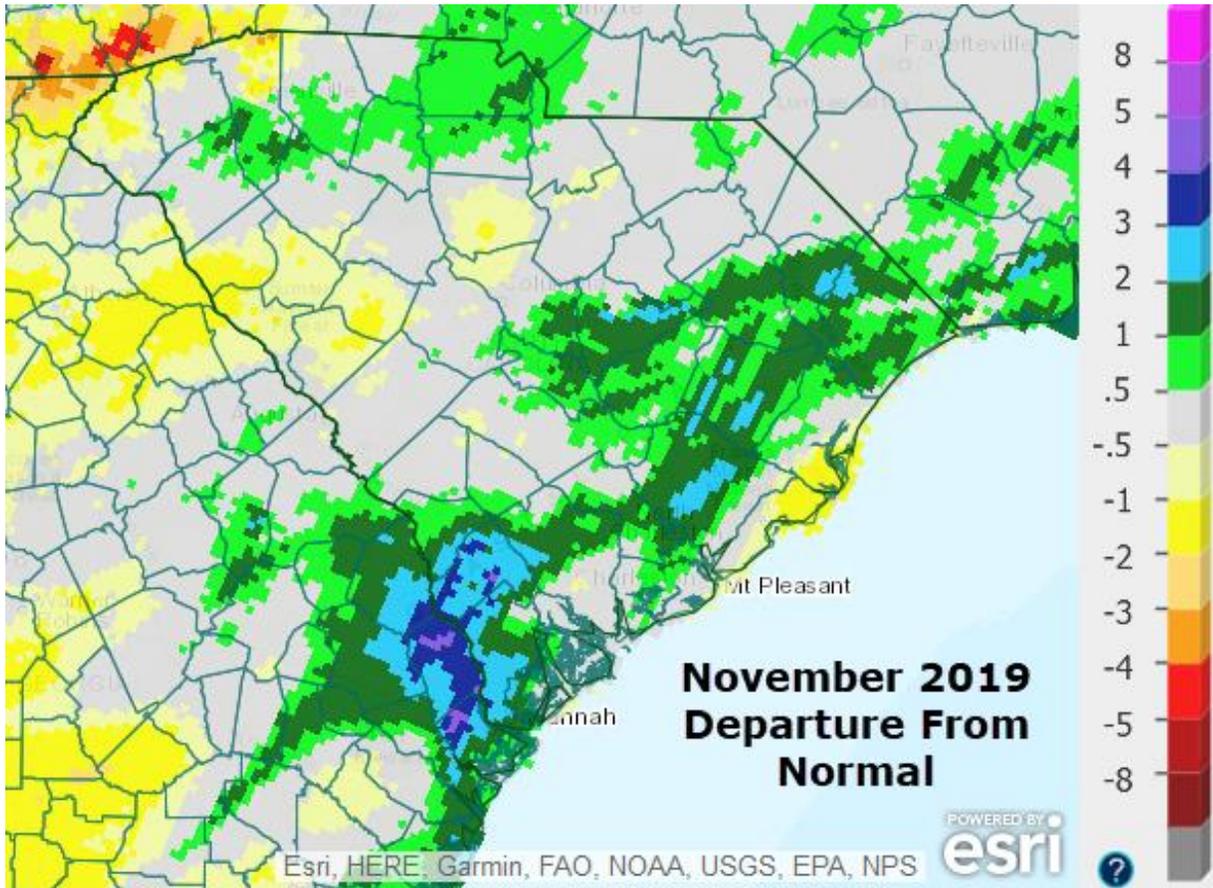
GA-CU-3 Evans 2.1 NNW.....4.20 inches  
GA-MD-1 Thomson 2.5 S.....3.74 inches  
GA-CU-6 Martinez 0.9 NW.....3.69 inches  
GA-BK-9 S. Augusta 4.1 S.....2.37 inches

(Please see the precipitation maps below).



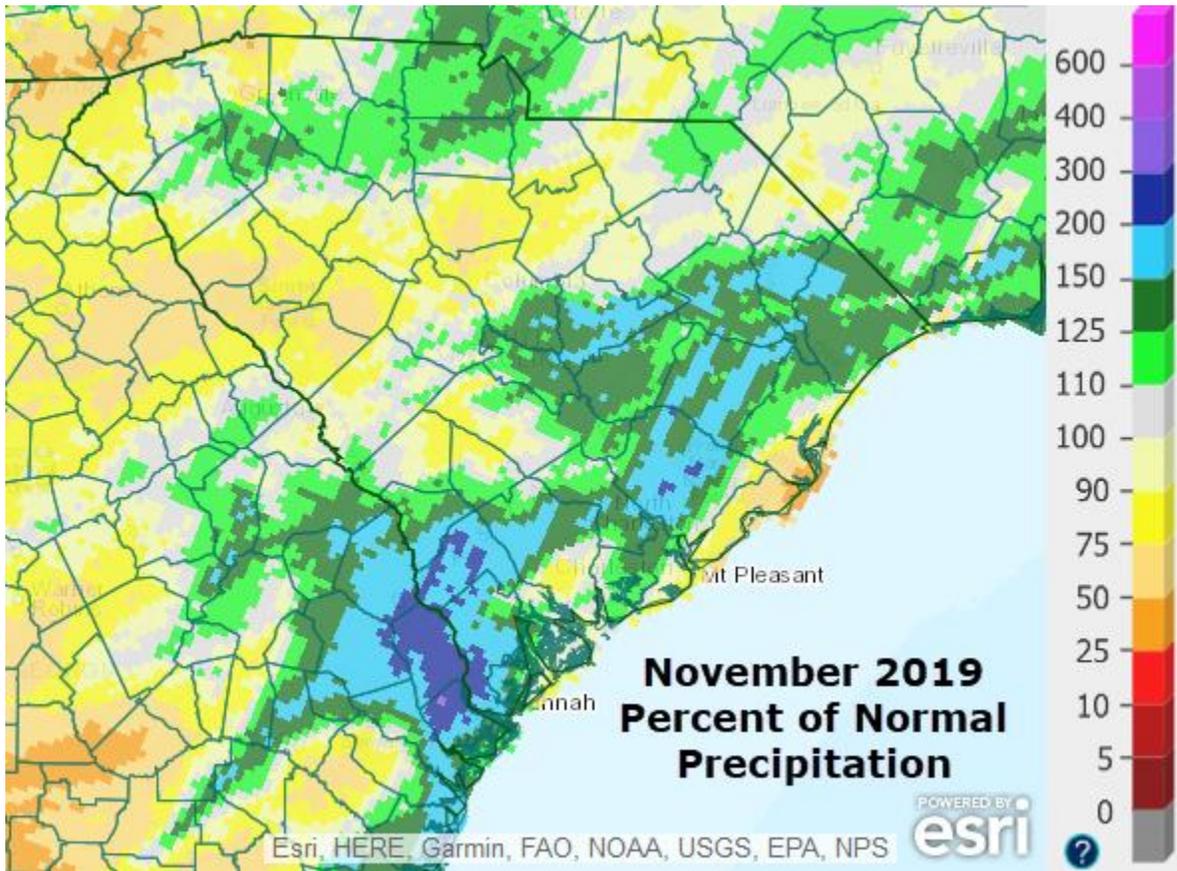
## November 2019 Total Precipitation (inches)

Source: Advanced Hydrologic Prediction Service, NWS



## November 2019 Precipitation Departure from Normal (inches)

Source: Advanced Hydrologic Prediction Service, NWS



## November 2019 Percent of Normal Precipitation

Source: Advanced Hydrologic Prediction Service, NWS

November 2019 precipitation at observation sites was as follows:

Station	Rainfall	Normal	Departure From Normal
Augusta (AGS)	2.62	2.82	-0.20
Augusta (DNL)	3.06	3.17	-0.11
Columbia (CAE)	3.00	2.74	+0.26
Columbia (CUB)	2.98	2.99	-0.01
Orangeburg (OGB)	2.41	2.92	-0.51

### **River/Flood Conditions**

Rainfall was near normal to slightly above normal across the headwaters and much of the main stems of the rivers. However, there was not enough rainfall to produce any high water flows on any of the rivers across the Midlands or Central Savannah River Area.

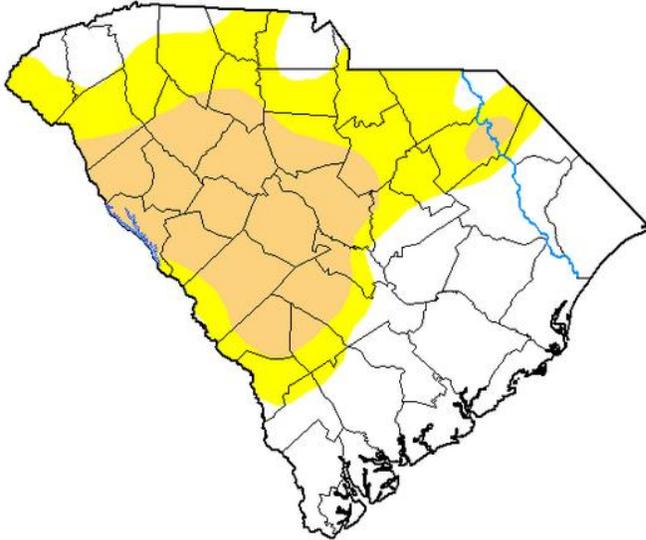
## **Drought Conditions**

Rainfall has been much more consistent since the middle of October through November. Conditions have improved across all of the Midlands and Central Savannah River. By the end of November, only D0 (Abnormally Dry) and D1 (Moderate Drought) conditions remained across much of the Midlands and CSRA. The driest conditions continued to extend from Newberry, Saluda, Edgefield and McCormick Counties eastward into the central Midlands. Only the extreme eastern Midlands had no drought issues.

(Please see the maps below).

# U.S. Drought Monitor South Carolina

**November 26, 2019**  
(Released Wednesday, Nov. 27, 2019)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	44.62	55.38	27.45	0.00	0.00	0.00
<b>Last Week</b> <i>11-19-2019</i>	36.64	63.36	36.42	0.00	0.00	0.00
<b>3 Months Ago</b> <i>08-27-2019</i>	24.78	75.22	17.59	0.65	0.00	0.00
<b>Start of Calendar Year</b> <i>01-01-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> <i>10-01-2019</i>	22.06	77.94	48.67	20.47	1.77	0.00
<b>One Year Ago</b> <i>11-27-2018</i>	87.01	12.99	2.58	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>*

Author:

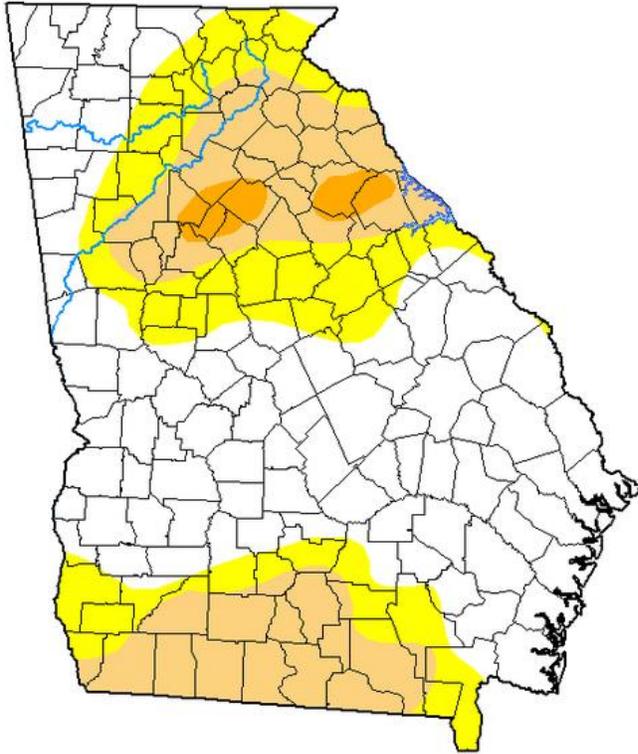
Brad Rippey  
U.S. Department of Agriculture



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

**U.S. Drought Monitor**  
**Georgia**

**November 26, 2019**  
(Released Wednesday, Nov. 27, 2019)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	55.92	44.08	23.08	2.20	0.00	0.00
<b>Last Week</b> 11-19-2019	53.60	46.40	25.66	1.81	0.00	0.00
<b>3 Months Ago</b> 08-27-2019	67.78	32.22	6.97	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2019	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 10-01-2019	0.00	100.00	61.58	28.35	4.49	0.00
<b>One Year Ago</b> 11-27-2018	89.00	11.00	2.29	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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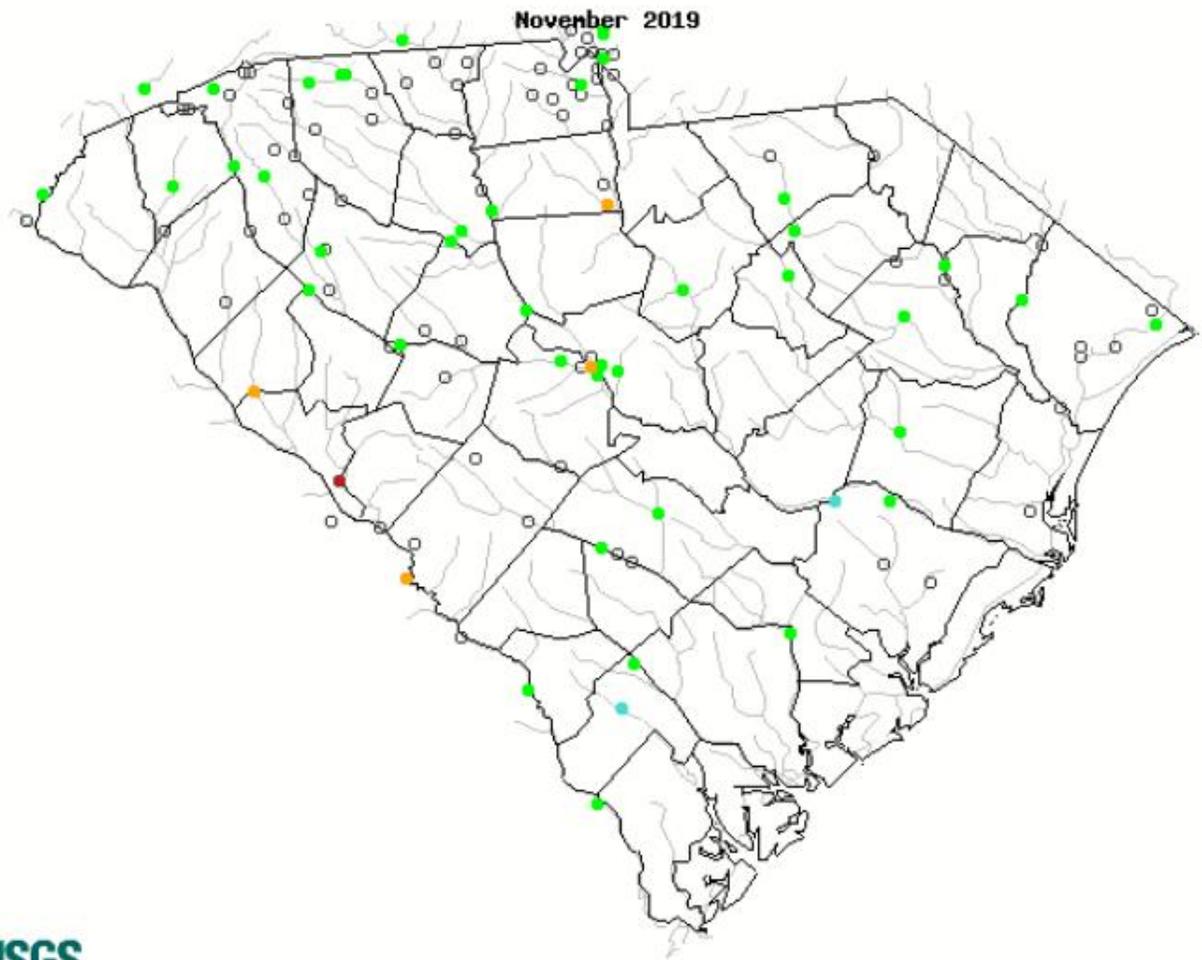
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## Streamflow Conditions

Monthly average stream flows for November across the Midlands and Central Savannah River Area show improved flow conditions across much of the area. Streamflows continue to be lower along the Savannah River. Average stream flows for November ranged from Above Normal to Much Below Normal across the region. Above Normal conditions were noted along the Santee River just downstream from Lake Marion. Normal conditions were noted along sections of the Broad River, Saluda River, Wateree River, Lynches River Basin and the

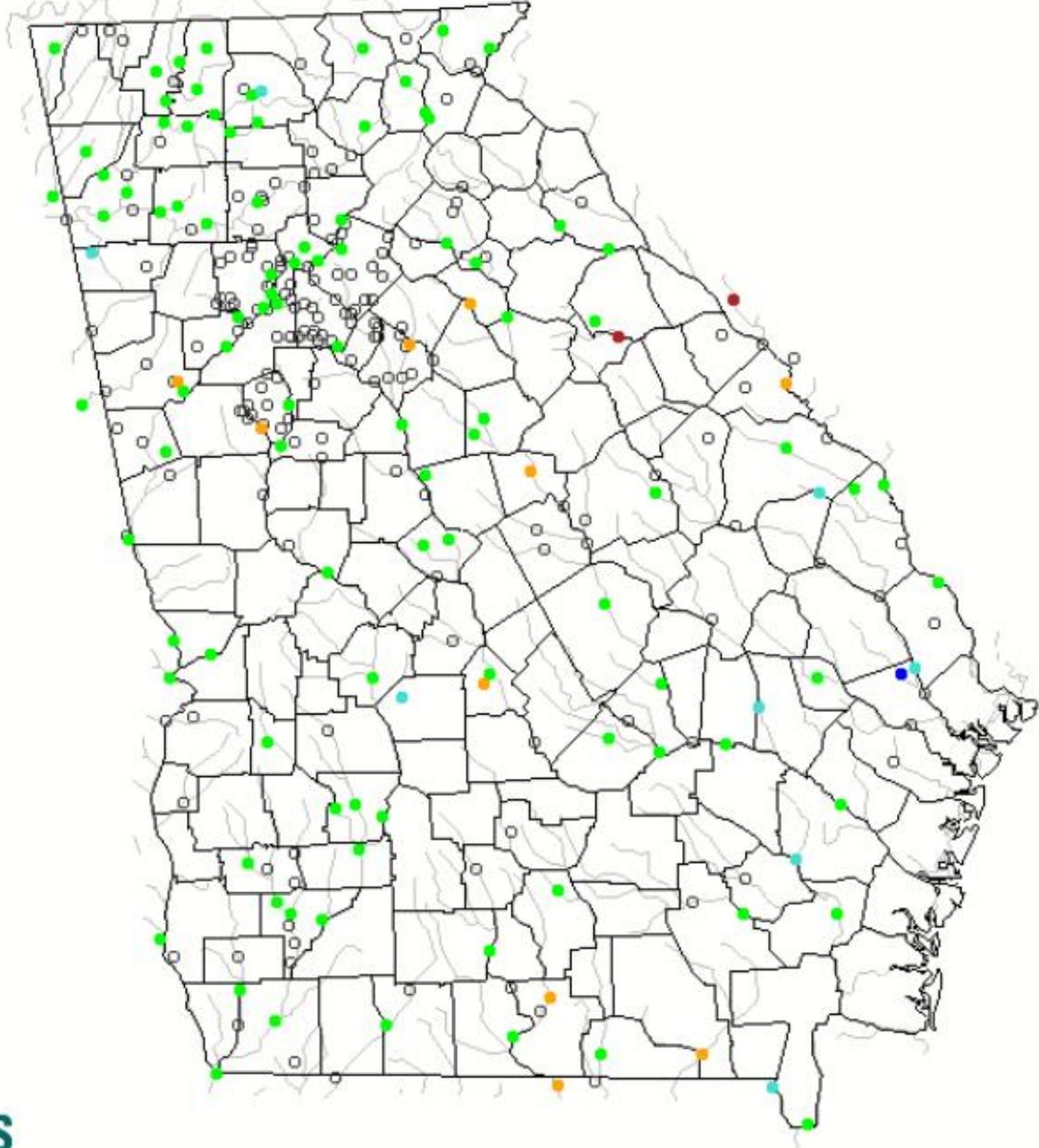
Edisto Basin. Below Normal conditions were noted along the Savannah River Basin. Much Below Normal conditions were observed along Stevens Creek at Modoc.

**Stream Flow Compared to Historical Stream Flow for the Month**



Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

November 2019



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

## **Temperatures**

November 2019 temperatures were above normal for the month.

The monthly average temperature at Columbia (CAE) was 51.3 degrees. This value was 3.5 degrees below the normal of 54.8 degrees. The highest temperature during the month was 78 degrees reached on the 5<sup>th</sup>. The lowest temperature was 28 degrees that occurred on the 13<sup>th</sup>.

The average temperature for the month at Augusta (AGS) was 52.9 degrees. This value was 2.3 degrees below the normal of 55.2 degrees. The highest temperature during the month was 79 degrees reached on the 5<sup>th</sup>. The lowest temperature was 28 degrees that occurred on the 13<sup>th</sup>.

The average temperature for the month at Orangeburg (OGB) was 52.0 degrees. This value was 4.2 degrees below the normal of 56.2 degrees. The highest temperature during the month was 79 degrees reached on the 5<sup>th</sup>. The lowest temperature was 28 degrees that occurred on the 13<sup>th</sup>.

## Hydrological Products

The following products were issued during November 2019.

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