

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) <b>Columbia, SC</b>
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR <b>June                      2019</b>
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE <b>Leonard Vaughan</b>  DATE <b>07/11/2019</b>
<i>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).</i>		

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

## River Conditions for June 2019

### Summary

June was a welcome return to more typical summer weather across the Midlands and Central Savannah River Area. After the hot and dry May, temperatures returned to more season levels along with many areas seeing normal to above normal rainfall. Most of the region received between 3 to 6 inches of rain for the month. Only the northern Midlands and Pee Dee received below normal rainfall totals for the month as amounts from 2 to 4 inches fell. Along with the rainfall, some minor to moderate river flooding occurred during the first two weeks of the month. With the arrival of steadier rainfall events, the drought conditions across South Carolina and east-central Georgia improved. The driest conditions remain across the northern Midlands and Pee Dee regions of the state.

### Precipitation

The total precipitation at Columbia Metro Airport was 8.03 inches. It was the 13<sup>th</sup> wettest June on record for Columbia. The total precipitation at Augusta Bush Field was 6.45 inches. Precipitation

records for Columbia began in 1878. Precipitation records for Augusta began in 1871.

Here are a few reports from NWS Coop Stations:

Wagener 1 SW (WGRS1) – 11.82 inches

Aiken 2 E (AKIS1) – 10.19 inches

Barnwell (BNLS1) – 9.47 inches

Chesterfield 3 E (CTFS1) – 2.75 inches

Cheraw Water Plant (CEWS1) – 2.86 inches

Saluda Water Plant (SADS1) – 4.20 inches

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

South Carolina:

SC-AK-67 Aiken 7.6 SSE – 12.68 inches

SC-LX-108 Lexington 5.6 SW – 12.18 inches

SC-RC-88 Irmo 3.2 NE – 9.49 inches

SC-LN-20 Lancaster 11.0 ENE – 2.74 inches

SC-CF-5 Pageland 9.0 WNW – 2.95 inches

SC-FR-6 Winnsboro 12.5 ENE – 3.22 inches

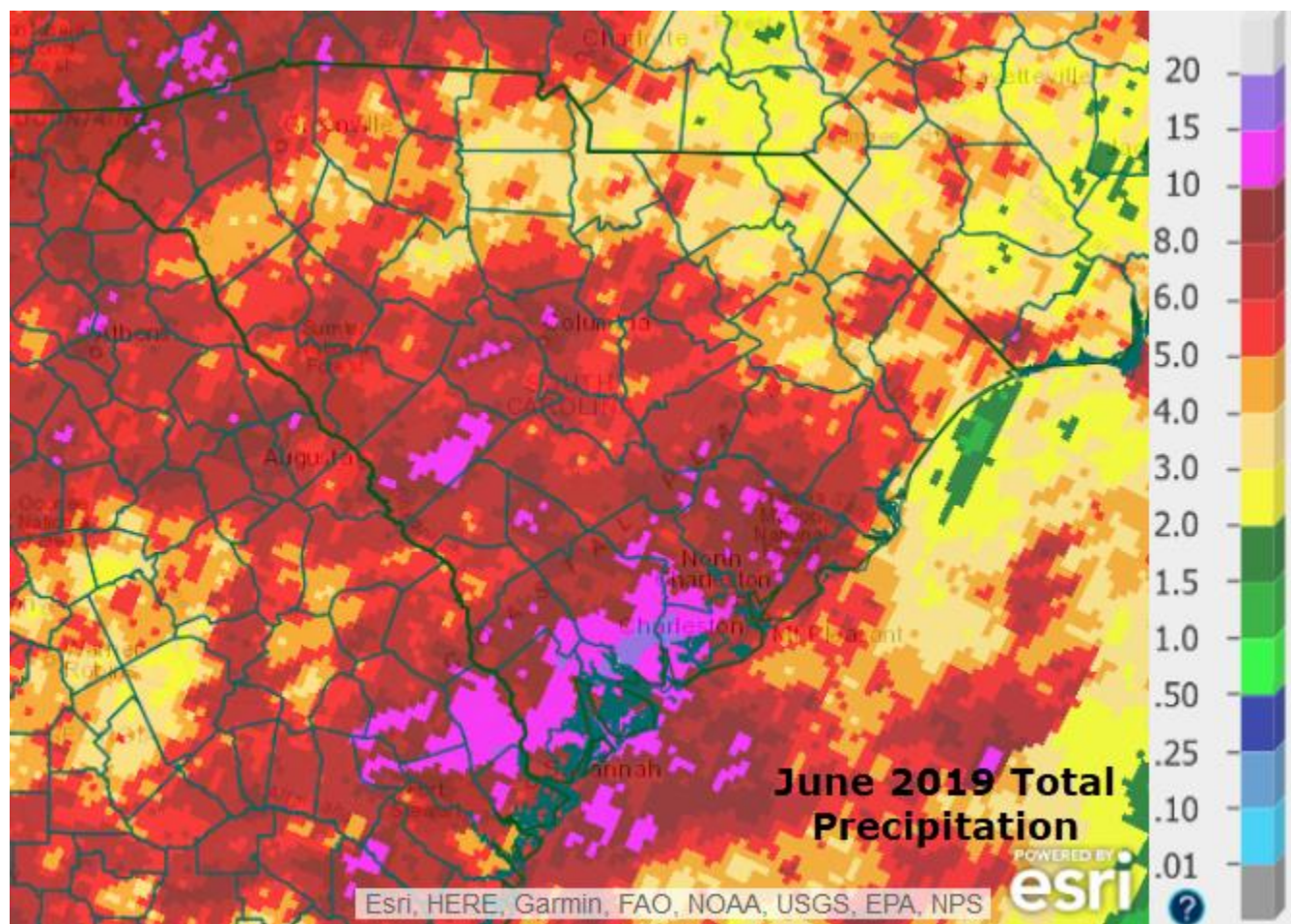
Georgia:

GA-MD-5 Thomson 2.6 S – 9.91 inches

GA-CU-6 Martinez 0.9 NW – 7.55 inches

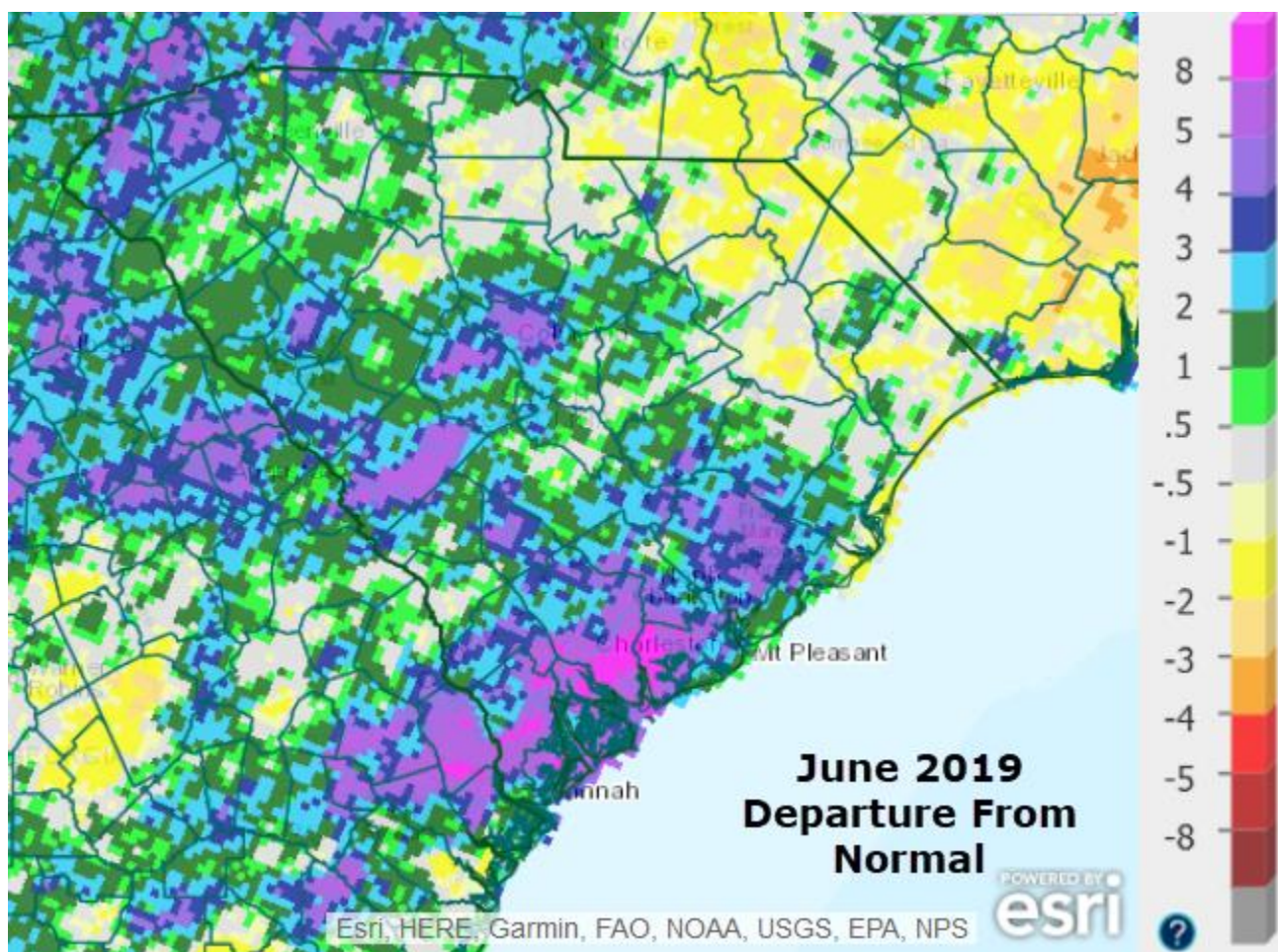
GA-BK-9 S. Augusta 4.1 S – 6.62 inches  
GA-LC-2 Tignall 10.2 NE – 6.39 inches  
GA-RC-9 W. Augusta 0.9 NW – 5.11 inches

(Please see the precipitation maps below).



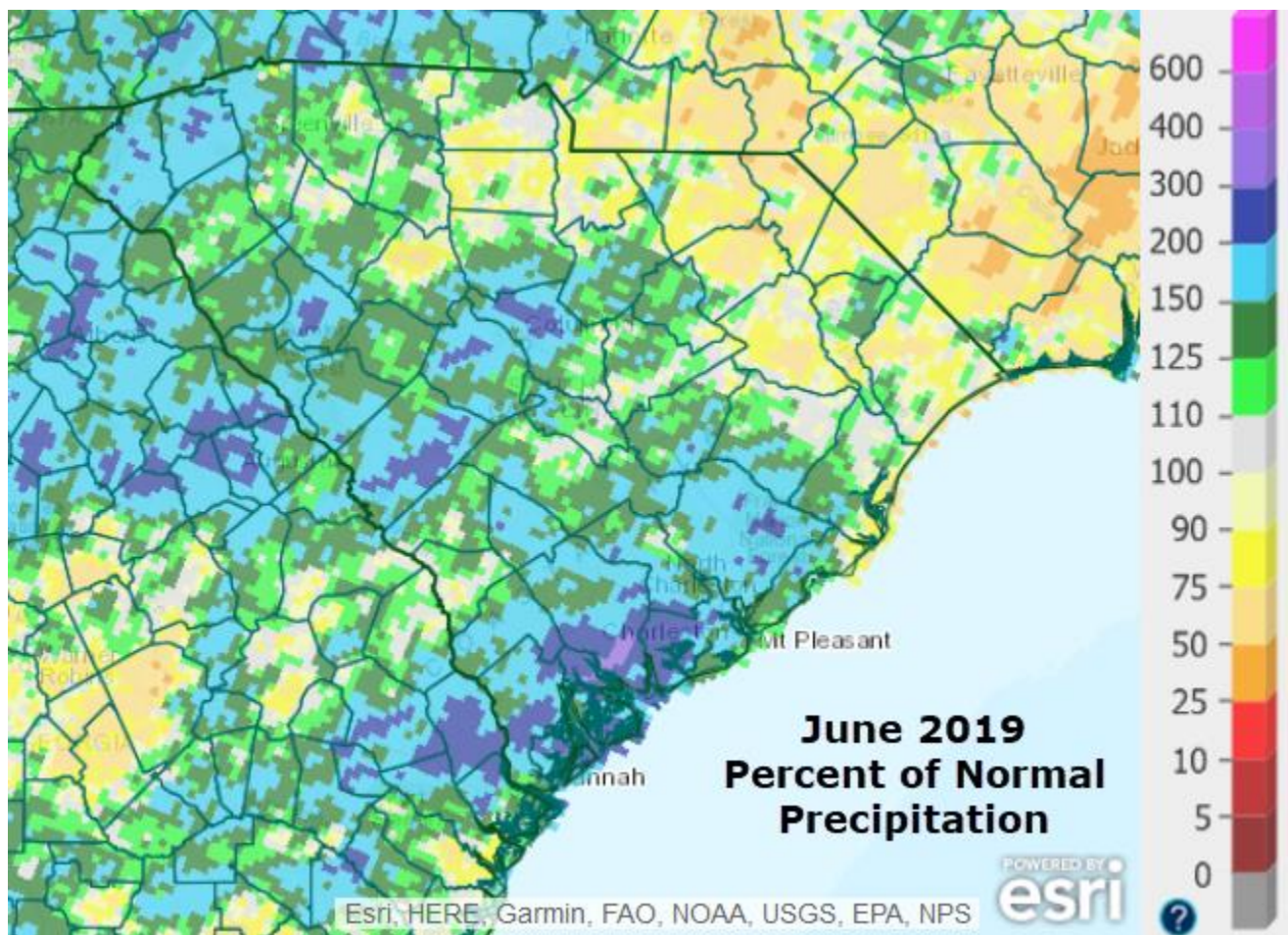
## June 2019 Total Precipitation (inches)

Source: Advanced Hydrologic Prediction Service, NWS



## June 2019 Precipitation Departure from Normal (inches)

Source: Advanced Hydrologic Prediction Service, NWS



## June 2019 Percent of Normal Precipitation

Source: Advanced Hydrologic Prediction Service, NWS

June 2019 precipitation at observation sites was as follows:

Station	Rainfall	Normal	Departure From Normal
Augusta (AGS)	6.45	4.72	+1.73
Augusta (DNL)	5.43	4.29	+1.14
Columbia (CAE)	8.03	4.69	+3.34
Columbia (CUB)	8.19	4.91	+3.28
Orangeburg (OGB)	3.84	5.12	-1.28

### **River/Flood Conditions**

Above normal rainfall occurred in many of the river basins, especially upstream in North Carolina and the foothills of South Carolina. This produced minor flooding along the Congaree River and moderate flooding along the Wateree River at Lake Wateree. The Water River at Lake Wateree crested at 102.53 feet just before midnight on June 10<sup>th</sup>. Flood stage is 100.0 Feet. The Congaree River at Carolina Eastman crested at 116.31 feet just before midnight on June 10<sup>th</sup>. Flood stage is 115.0 feet. The Congaree River at the Congaree National Park-Gadsden crested at 15.44 feet on the morning of June 11<sup>th</sup>. Flood stage is 15.0 feet. The Wateree River at Camden crested at 27.01 feet on the morning of the 12<sup>th</sup>. Flood stage is 27.0 feet.

The flooding along the Congaree River impacted the Congaree National Park by flooding many of the trails, backcountry camping areas and paddling along Cedar Creek.



## Congaree National Park

June 11 · 🌐

"How high is the water, Ranger?" The Congaree River is currently at 15.31ft high and rising; Cedar Creek is at 7.07ft high and rising. Flooding conditions are present in the park. Flooding will likely affect all of the trails in the Congaree Floodplain. Backcountry camping & paddling are not recommended at this time.

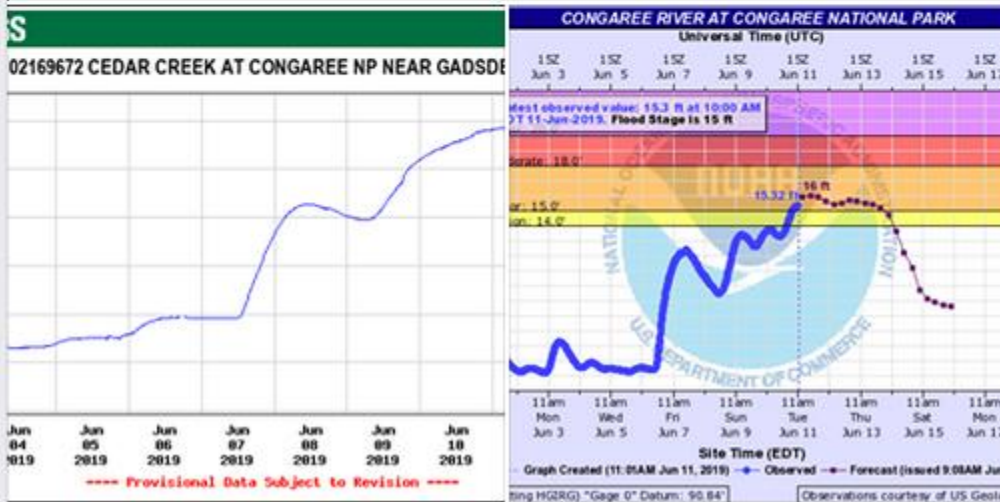
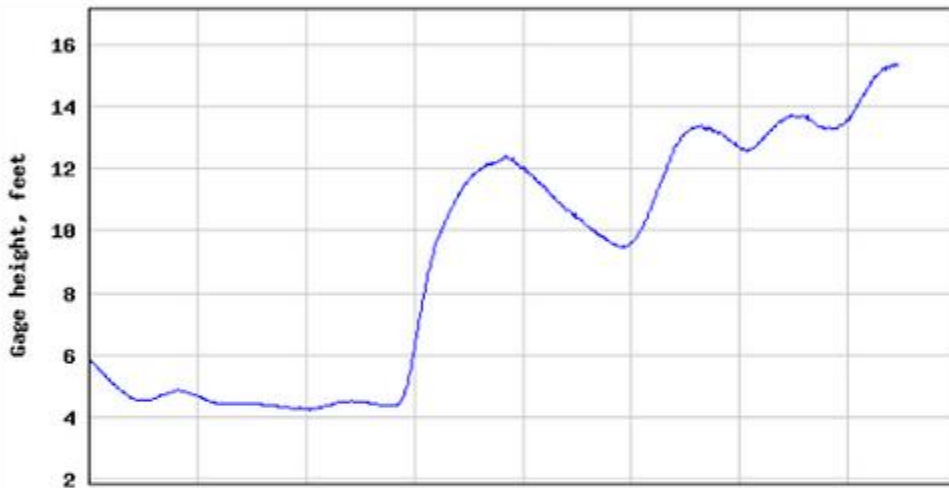


Image courtesy of the Congaree National Park Facebook Page.

## **Drought Conditions**

By the end of May into early June, most of the state was under some form of drought. The only area free of drought was along the North Carolina border from the mountains to the northern Midlands. D1 conditions, Moderate Drought, had developed across an area along and south of I-20. D2 conditions, Moderate Drought, had developed along the Lowcountry and into eastern Georgia. However, by the middle of June conditions began to improve. Areas of D0, Abnormally Dry, continued across much of the central Midlands and Central Savannah River Area. Areas of D1, Moderate Drought, were mainly confined to the eastern Midlands eastward to the coast. By the end of June, only a small area of the Pee Dee/Grand Strand remained in D1 Drought along with just a few pockets of D0 conditions across the northern Midlands, Pee Dee and Lowcountry.

(Please see the maps below).

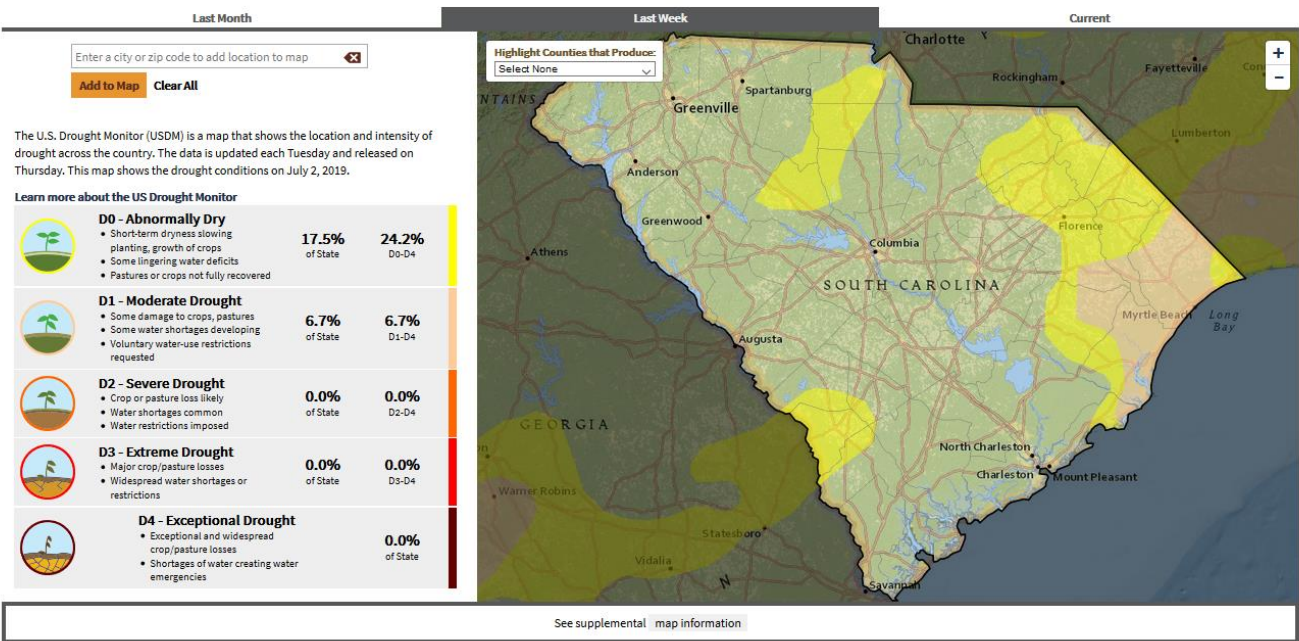
# Drought in South Carolina

Residents in drought:  
**221,000**  
1,243,000 more in abnormally dry areas.

This is:  
**5%**  
of the state's population,  
28% more in abnormally dry areas.



Report Your Drought Impacts



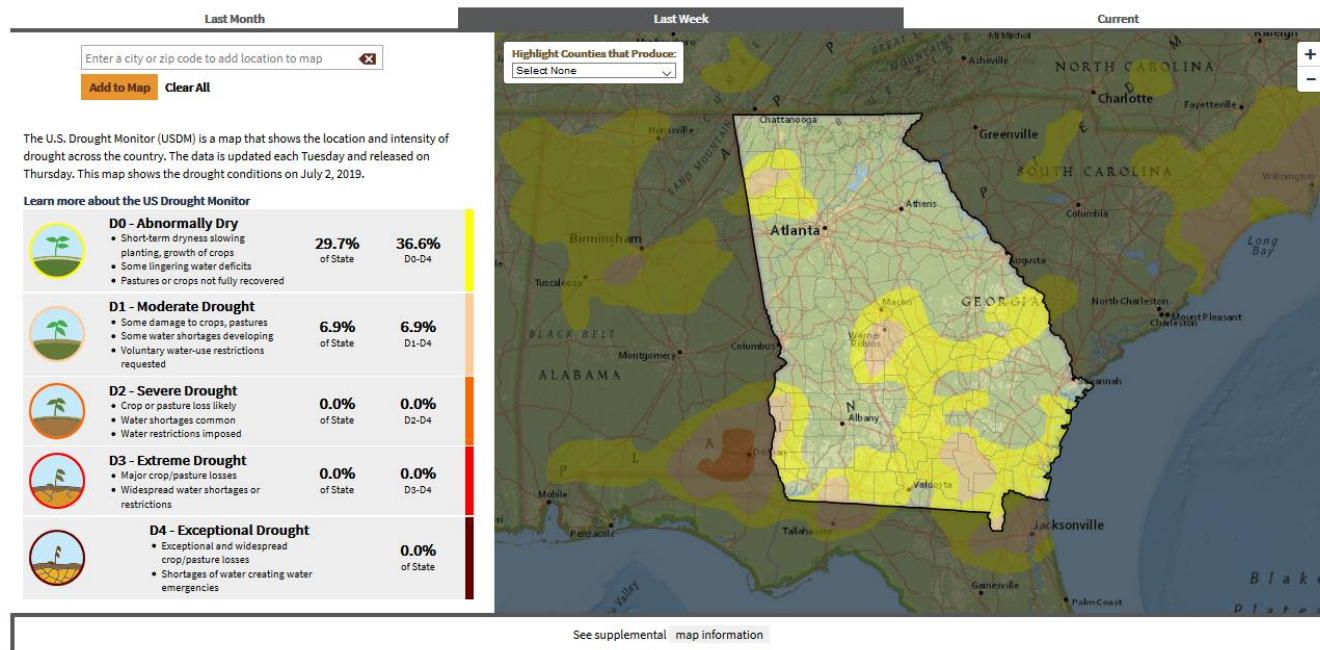
# Drought in Georgia

Residents in drought:  
**331,000**  
 1,558,000 more in abnormally dry areas.

THIS IS:  
**3%**  
 of the state's population,  
 17% more in abnormally dry areas.



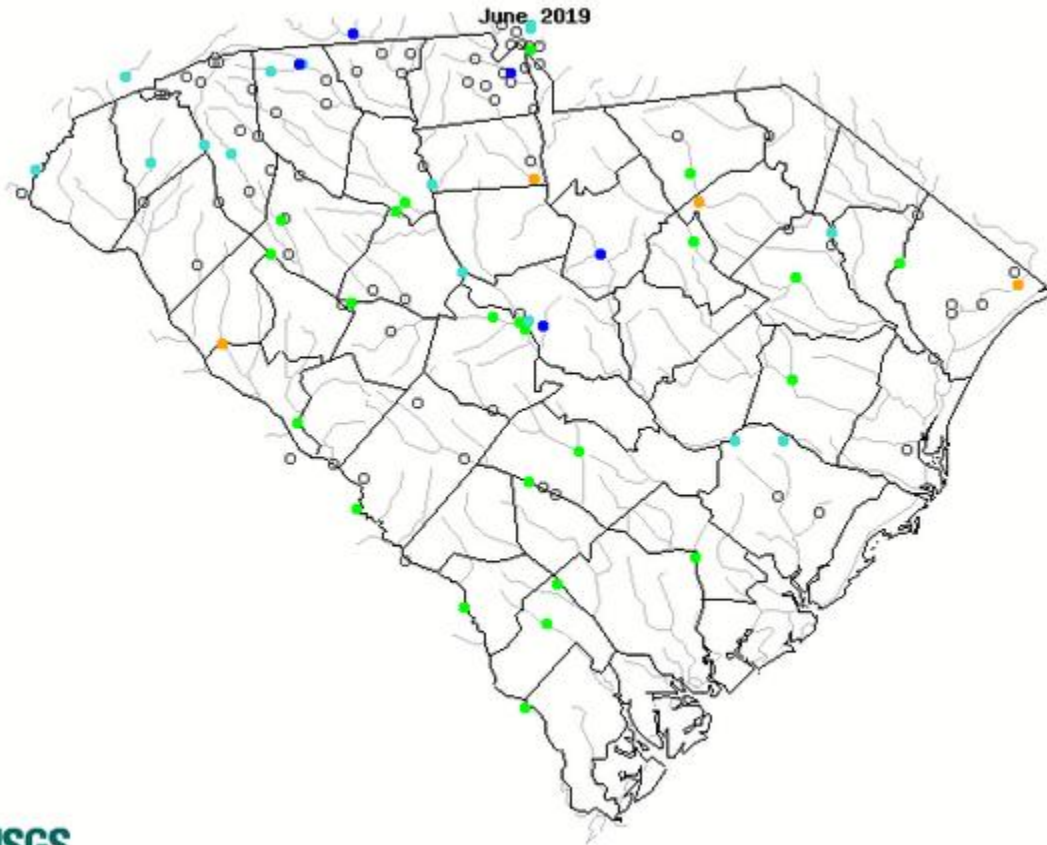
Report Your Drought Impacts



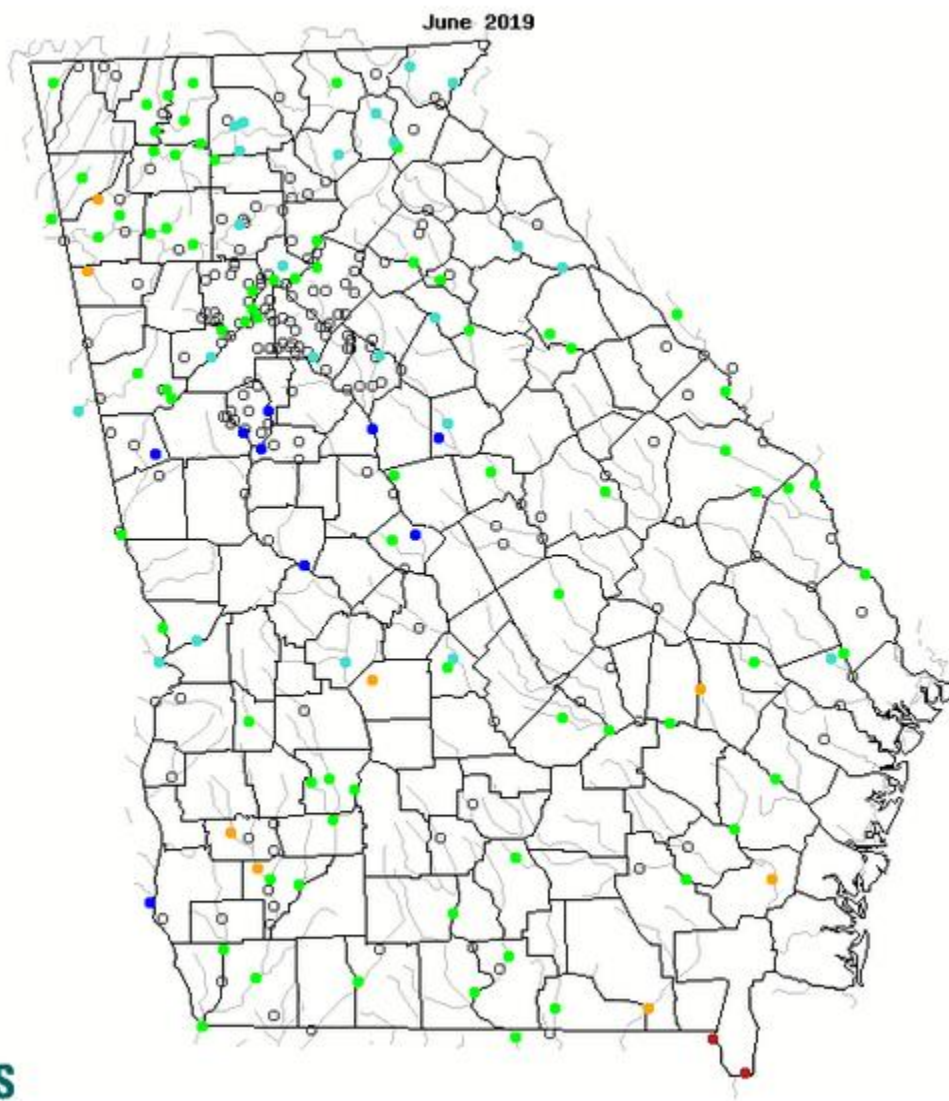
## **Streamflow Conditions**









Monthly average stream flows for June across the Midlands and Central Savannah River Area were much improved from the hot and dry conditions of May. Average stream flows for June ranged from Normal to Much Above Normal across the region. Normal conditions were noted along the Savannah River Basin, Edisto River Basin, Saluda River Basin and the Broad River Basin. Above normal flows were noted on the Santee River Basin. Above normal flows were noted along the Wateree River Basin.

# 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



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**

June 2019 temperatures were near normal for the month.

The monthly average temperature at Columbia (CAE) was 78.5 degrees. This value was 0.6 degrees below the normal of 79.1 degrees. The highest temperature during the month was 94 degrees reached on the 2<sup>nd</sup>, 24<sup>th</sup>, and 30<sup>th</sup>. The lowest temperature was 56 degrees that occurred on the 15<sup>th</sup>.

The average temperature for the month at Augusta (AGS) was 79.2 degrees. This value was 0.6 degrees above the normal of 78.6 degrees. The highest temperature during the month was 97 degrees reached on the 3<sup>rd</sup>. The lowest temperature was 54 degrees that occurred on the 14<sup>th</sup>.

The average temperature for the month at Orangeburg (OGB) was 77.8 degrees. This value was 0.5 degrees below the normal of 78.3 degrees. The highest temperature during the month was 94 degrees reached on the 2<sup>nd</sup> and 3<sup>rd</sup>. The lowest temperature was 56 degrees that occurred on the 15<sup>th</sup>.

## Hydrological Products

The following products were issued during June 2019.

DGT	Drought Statements	0
ESF	Hydrologic Outlooks	0
FFA	Flash Flood Watches	4
FFS	Flash Flood Statements	1
FFW	Flash Flood Warnings	1
FLS	Flood Statements	31
FLW	Flood Warnings	6
FLS	Areal Flood Advisories	16