

The Alabama Climate Report

Brought to you by the Office of the Alabama Climatologist

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Dr. John Christy, Alabama State Climatologist

In addition to keeping an eye on Alabama's weather and climate, at UAH we also spend a fair amount of time using instruments on NOAA and NASA satellites to track temperatures in almost all of Earth's atmosphere. We build datasets of those temperatures and how they have changed through time since late November 1978.

Sometimes those two things merge or overlap, as they did this month.

On the local front, NOAA is predicting that Alabama should see a warmer and drier winter than normal this year into next, based in part on a predicted La Niña Pacific Ocean cooling event developing this winter into the spring.

At the same time, the Southeastern Regional Climate Center says that at least for Alabama's four largest cities, the first 10 months of 2017 put the year on pace to be the warmest year in the SERCC climate record, at least based on average temperatures.

When we look at the global temperature during the past several months, however, another issue pops up: an unexpected warming in the eastern equatorial Pacific in June and July.

It wasn't an El Niño warming event. We've all gotten much more familiar with the effects those Pacific Ocean warming events have on regional climates around the world. This warming was at the wrong time of year and it didn't last very long. Then, things got really turned around.

That doesn't mean it isn't having an effect on the climate, or that it won't have an effect on Alabama's climate. Instead, we can probably expect that surge of warm air to slightly boost temperatures in Alabama for the next several months. It works like this: What goes up, keeps going up!

When we see high values in sea surface temperatures like those this past summer, they eventually fall back down. This time they dropped rapidly. But the heat the leaves the ocean must go somewhere. A lot of it ends up in the atmosphere before it is expelled into space.

It takes a month or two for that heat to rise out of the ocean and warm the air above it. Once that happens, part of that extra punch of warm air starts to spread both north and south from the Equator. This takes several months. In fact, our data suggests the peak warming from last sum-

mer's warm Pacific will hit the latitudes that include the U.S. contiguous 48 states (including Alabama) in about ten months after the peak warming in the Pacific.

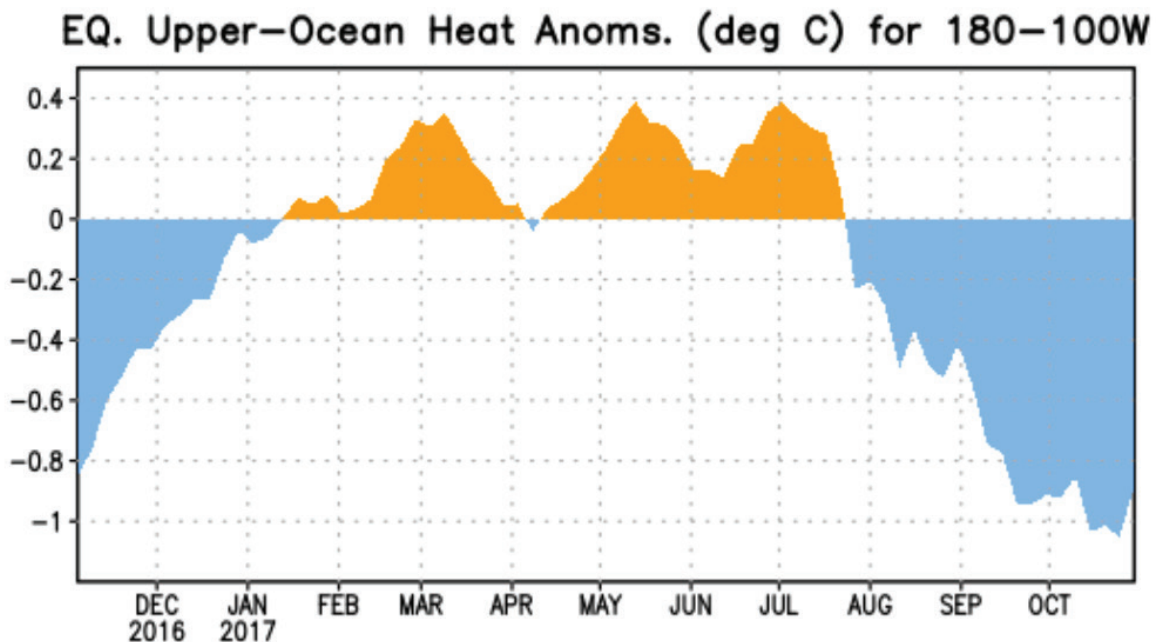
That means there should be some extra heat trickling in from the south throughout the winter and early spring, with that Pacific heat peaking around these parts from March through May.

During a La Niña event, winter in Alabama tends to be warmer and drier than average. But that's an average. As our friends at the National Weather Service were at pains to remind us, that doesn't mean we won't see cold snaps or "winter weather events." In fact, some of us might recall that a steady flow of warm, moist air from the gulf has been the lead up to several significant "winter weather events" in recent history. It wasn't that long ago (2015) when several stations in north Alabama received their record total of February snow.

All it takes is a moist atmosphere and a single cold front, and we can see a run of eggs, bread and milk.

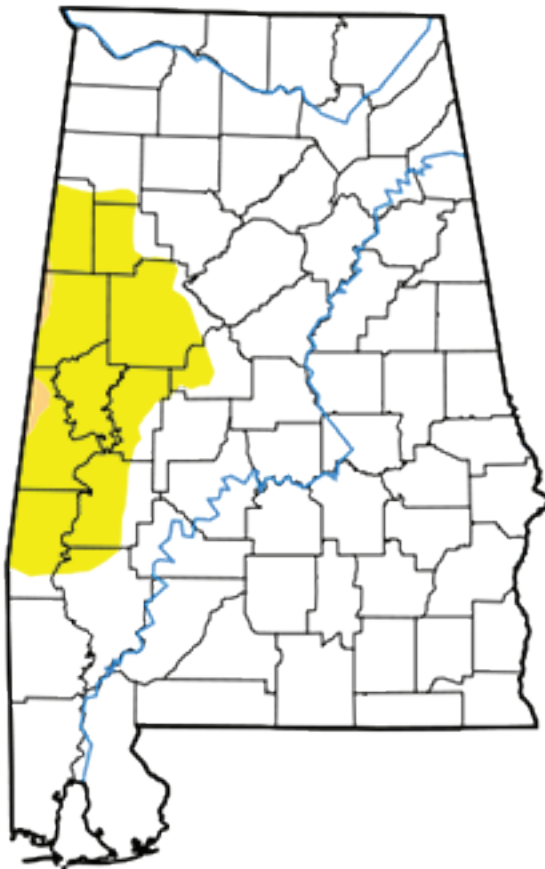
This being Alabama, we would be remiss if we didn't remind everyone that in our state, tornado season never really ends — and that there is a secondary peak in the late fall. This month is the 60th anniversary of November 1957, when the state was hit by 17 tornadoes (and this back in the day before Doppler radar and such). That includes an outbreak on Nov. 17 and 18, when 15 tornadoes — including an F-4 in Walker County and an F-4 in Blount County — caused eight fatalities and 71 injuries.

Let's be weather aware and weather prepared.
- John Christy



U.S. Drought Monitor
Alabama

October 31, 2017
(Released Thursday, Nov. 2, 2017)
Valid 8 a.m. EDT



Intensity:

-  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. See accompanying text summary for forecast statements.

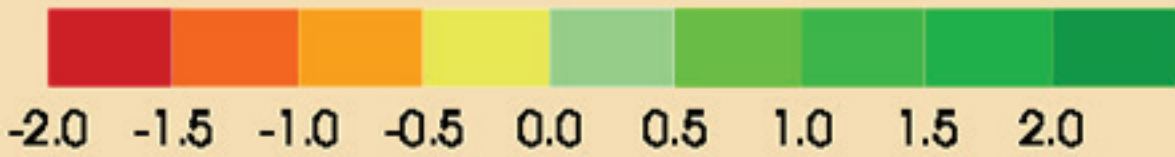
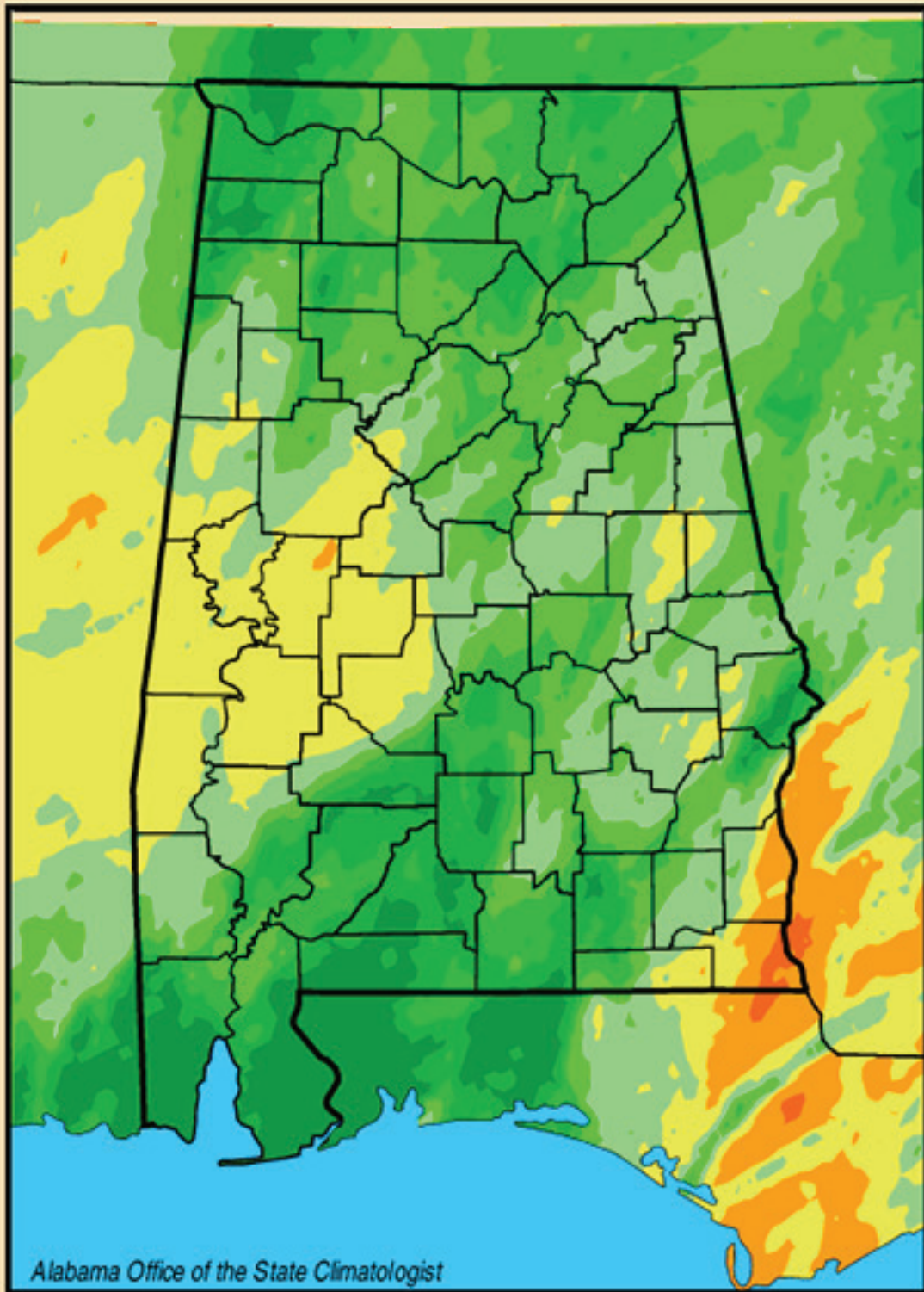
Author:

David Miskus
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

Lawn-and-Garden Moisture Index for November 2, 2017



Alabama Monthly Climate Summaries

October 2017

	Station Began	Oct. Mean Oct. Norm	Oct. Hi Temp Record Hi	Oct. Low Temp Record Low	Total Precip. Normal Prec.	Wettest Oct. Driest Oct.	Heaviest Day Record Day
Anniston	2/1903	64.9°	88° 10/13/17	32° 10/30/17	6.85"	9.35" 1995	2.85" 10/15/17
		62.9°	99° 10/05/54	22° 10/30/52	2.87"	0.15" 1978	3.96" 10/8/77
Auburn	1/1893	65.7°	88° 10/12/17	36° 10/30/17	2.59"	10.24" 1970	1.59" 10/23/17
		62.5°	94°+ 10/6/54	27°+ 10/28/57	3.4"	0.00" 1983	5.72" 10/1/85
Birmingham	1/1930	66.4°	88° 10/13/17	35° 10/30/17	5.55"	11.90" 1995	2.81" 10/7/17
		62.9°	94° 10/06/54	27° 10/28/57	3.23"	0.07" 1991	6.94" 10/3/95
Brewton	4/1977	66.9°	88.8° 10/13/17	35.5° 10/30/17	7.02"	14.95" 1995	3.84" 10/22/17
		64.5°	97°+ 10/5/54	21° 10/30/52	3.09"	0.05" 1988	7.50" 10/5/95
Calera	9/1900	65.9°	89° 10/13/17	35° 10/30/17	5.45"	10.74" 1918	3.34" 10/7/17
		62.2°	95° 10/01/81	22° 10/26/82	4.16"	0.00" 1924	4.70" 10/05/95
Clanton	2/1893	62.4°	85° 10/15/17	33.1° 10/30/17	6.10"	10.32" 1995	3.21" 10/8/17
		62.0°	98° 10/6/54	24°+ 10/29/57	3.14"	0.00" 1978	6.30" 10/5/95
Courtland		61.8°	86.3° 10/9/17	33.1° 10/30/17	4.19"	M	1.19" 10/23/17
		M	M	M	M	M	M
Cullman	7/1907	61.1°	84.1° 10/11/17	29.2° 10/30/17	6.29"	M	1.68" 10/8/17
		M	M	M	M	M	M
Decatur	2/1880	62.5°	89° 10/9/17	29° 10/30/17	4.58"	8.83" 1932	1.25" 10/23/17
		62.8°	100° 10/05/1911	26° 10/31/17	M	0.00" 1924	6.40" 10/18/28
Dothan	2/1902	70.5°	92° 10/12/17	37° 10/30/17	3.08"	12.41" 1932	1.35" 10/23/17
		68.0°	95° 10/01/33	29° 10/29/08	3.25"	0.00" 1939	7.37" 10/31/32
Fairhope	8/1917	68.6°	88.3° 10/13/17	32° 10/27/17	12.24"	13.08" 1985	3.93" 10/22/17
		67.9°	93°+ 10/5/54	33°+ 10/21/89	3.57"	0.00" 1978	7.37" 10/5/95
Gadsden	7/1893	61.0°	83.8° 10/9/17	29.4° 10/30/17	7.57"	9.00" 1995	3.11" 10/8/17
		61.8°	96° 10/5/54	23° 10/30/54	2.95"	0.24" 1978	4.98" 10/26/97
Gainesville Lock	6/1948	64.8°	86.8° 10/6/17	33.6° 10/29/17	3.75"	8.83" 1985	0.97" 10/7/17
		63.5°	94° 10/1/81	30°+ 10/29/2001	3.15"	0.03" 1987	3.86" 10/25/77
Greensboro	2/1890	65.1°	87.5° 10/13/17	33.6° 10/30/17	5.24"	10.00" 1995	2.41" 10/8/17
		65.3°	100°+ 10/6/54	24° 10/26/85	3.37"	0.20" 1987	4.42" 10/21/59
Highland Home	3/1892	66.2°	87.4° 10/11/17	34.8° 10/29/17	6.58"	12.13" 1995	3.17" 10/8/17
		64.9°	94° 10/6/54	29° 10/16/87	2.67"	0.00" 1973	6.10" 10/1/85
Huntsville	1/1959	64.2°	90° 10/9/17	33° 10/30/17	5.31"	12.06" 1975	2.00" 10/10/17
		61.3°	96° 10/08/1911	23° 10/30/83	3.54"	0.01" 2000	4.86" 10/7/75

Alabama Monthly Climate Summaries

October 2017

	Station Began	Oct. Mean Oct. Norm	Oct. Hi Temp Record Hi	Oct. Low Temp Record Lo	Total Precip. Normal Prec.	Wettest Oct. Driest Oct.	Heaviest Day Record Day
Mobile	3/1900	70.5° 67.7°	92° 10/11/17 95° 10/02/1904	38° 10/29/17 30° 10/31/93	*13.44" 3.25"	13.20" 1985 0.00" 1978	4.07" 10/22/17 4.99" 10/29/85
Montgomery	6/1948	69.6° 65.4°	92° 10/13/17 100° 10/06/54	35° 10/30/17 26° 10/30/52	5.64" 2.58"	7.60" 1995 0.01" 1978	2.31" 10/7/17 4.02" 10/4/64
Muscle Shoals	12/1940	63.5° 61.5°	90° 10/9/17 94°+ 10/12/83	32° 10/30/17 25° 10/27/81	4.77" 3.22"	8.25" 1984 0.00" 2000	1.07" 10/23/17 3.24" 10/24/86
Russellville	9/1953	60.9° 59.6°	86.1° 10/9/17 93° 10/6/54	30.6° 10/30/17 19° 10/28/81	7.00" 3.43"	8.68" 1984 0.16" 2000	*3.39" 10/10/17 3.33" 10/29/70
Scottsboro	10/1891	60.6° 60.0°	87.5° 10/9/17 96° 10/5/54	30.1° 10/30/17 20° 10/26/88	6.31" 3.61"	8.06" 1984 0.36" 1991	1.72" 10/8/17 4.70" 10/26/97
Selma	1/1895	64.8° 65.8°	88.4° 10/13/17 100°+ 10/6/54	31.4° 10/30/17 27° 10/30/52	5.85" 2.59"	9.24" 1995 0.06" 2000	3.56" 10/8/17 6.09" 10/5/95
Talladega	2/1888	63.1° 60.3°	88.4° 10/9/17 99° 10/5/54	29.8° 10/30/17 23°+ 10/25/85	5.98" 3.36"	11.01" 1995 0.02" 1978	1.93" 10/15/17 5.51" 10/5/95
Thomasville	9/1891	64.7° 65.7°	88° 10/13/17 100° 10/7/54	32.7° 10/30/17 29°+ 10/31/93	6.04" 2.9"	10.41" 1997 0.03" 1987	3.27" 10/8/17 5.80" 10/31/87
Troy	6/1908	66.3° 64.9°	90° 10/12/17 103° 10/5/54	33° 10/30/17 28° 10/24/37	1.69" 2.84"	12.19" 1995 0.06" 1987	1.36" 10/22/17 6.50" 10/4/95
Tuscaloosa	6/1948	66.3° 65.0°	88° 10/13/17 98° 10/04/54	34° 10/30/17 23° 10/30/52	4.48" 3.47"	9.11" 1995 0.12" 1987	1.62" 10/7/17 5.73" 10/25/77
Valley Head	1/1893	60.0° 57.9°	84.2° 10/9/17 93°+ 10/5/54	27° 10/30/17 19° 10/27/81	7.57" 3.29"	9.91" 1995 0.10" 1991	4.22" 10/8/17 6.02" 10/5/95
Statewide Oct. 2017		65.02° /	92° 3 stations	27° Valley Head	6.09"	14.95" Brewton	2.87" Talladega
Oct. Norm		63.45° /	103° Troy	19° 2 stations	3.20"	0.00" 9 stations	9.30" Brewton

M: Data is missing or not available

*New Record

#This data is missing this month due to an instrument malfunction

Community Collaborative Rain, Hail & Snow Network (CoCoRAHS)

October 2017

	Total Precip.	# Stations
Autauga	6.05	2
Baldwin	13.51	28
Barbour	n.a.	0
Bibb	n.a.	0
Blount	5.52	8
Bullock	n.a.	0
Butler	n.a.	0
Calhoun	5.99	2
Chambers	n.a.	0
Cherokee	n.a.	0
Chilton	4.66	2
Choctaw	3.66	1
Clarke	6.77	1
Clay	n.a.	0
Cleburne	n.a.	0
Coffee	4.76	1
Colbert	5.71	5
Conecuh	7.20	1
Coosa	4.16	2
Covington	n.a.	0
Crenshaw	n.a.	0
Cullman	6.15	3
Dale	4.73	1
Dallas	6.25	1
DeKalb	7.56	5
Elmore	5.16	5
Escambia	9.28	1
Etowah	n.a.	0
Fayette	2.92	3
Franklin	n.a.	0
Geneva	7.53	1
Greene	n.a.	0
Hale	n.a.	0
Henry	1.11	1

	Total Precip.	# Stations
Houston	2.21	2
Jackson	6.21	6
Jefferson	5.58	15
Lamar	0.00	1
Lauderdale	4.88	10
Lawrence	5.64	2
Lee	4.47	2
Limestone	5.57	7
Lowndes	n.a.	0
Macon	4.64	1
Madison	5.69	22
Marengo	n.a.	0
Marion	5.53	1
Marshall	6.11	10
Mobile	13.66	15
Monroe	7.70	2
Montgomery	6.83	4
Morgan	5.68	5
Perry	n.a.	0
Pickens	n.a.	0
Pike	n.a.	0
Randolph	5.46	2
Russell	6.20	2
St. Clair	6.49	5
Shelby	6.64	17
Sumter	n.a.	0
Talladega	6.24	4
Tallapoosa	2.49	2
Tuscaloosa	4.33	5
Walker	n.a.	0
Washington	12.21	1
Wilcox	5.53	2
Winston	5.53	2

Normal October Precipitation*

Abbeville	2.78"
Alberta	2.84"
Alex City	3.20"
Aliceville	3.16"
Andalusia	2.81"
Ashland	3.44"
Athens	3.17"
Bay Minette	3.33"
Bessemer	3.66"
Billingsley	2.42"
Centreville WSMO	3.32"
Chatom	3.29"
Claiborne L&D	2.87"
Clayton	2.50"
Dauphin Isl.	4.15"
Elba	2.69"
Eufaula WR	2.74"
Evergreen	3.00"
Fayette	3.07"
Geneva 2	3.49"
Greenville	2.71"
Haleyville	3.40"
Hamilton 3S	3.49"
Heflin	3.20"
Hurtsboro	3.49"
Jasper	3.67"
Lafayette	2.86"
Livingston	2.91"
Melvin	2.51"
Milstead	2.58"
Moulton	3.60"
Oneonta	2.97"
Perryville	2.67"
Plantersville	2.67"
Rock Mills	2.44"
Rockford	3.03"
Sylacauga	3.13"
Union Springs	2.68"
Uniontown	2.41"
Vernon	3.22"
Warrior L&D	3.34"
Wetumpka	2.56"

*Southeast Regional Climate Center
www.serrc.com

New Local Climate Records¹

October 2017

Precipitation, Daily

	New Record	Previous Year	Previous Record	Period of Record
07 Oct. 2017				
BESSEMER 3 WSW	1.20	2009-10-07	1.02	40
MOBILE DTOWN AIRPORT	4.14	1955-10-07	1.60	68
MOBILE REG'L AIRPORT	2.81	2008-10-07	1.70	69
08 Oct. 2017				
ATMORE	3.60	2008-10-08	2.40	77
BAY MINETTE	4.70	1916-10-08	1.95	103
BESSEMER 3 WSW	2.60	1984-10-08	2.02	40
BILLINGSLEY	4.41	1970-10-08	1.25	78
CAHABA PUMP HOUSE	1.28	1984-10-08	0.50	35
CENTREVILLE 2.9 SW	2.00	1981-10-08	1.14	42
CHATOM	4.10	2008-10-08	0.71	67
FAIRHOPE 2 NE	4.27	1998-10-08	1.07	99
FT BENNING LAWSON FLD	0.94	2008-10-08	0.88	68
GADSDEN	1.95	1955-10-08	1.35	64
GAINESVILLE LOCK	1.67	1975-10-08	1.45	69
GENEVA NUMBER 2	1.25	1996-10-08	0.71	41
JACKSON	4.43	2008-10-08	1.01	55
LEEDS	4.10	1955-10-08	1.63	100
MITCHELL DAM	1.89	1955-10-08	1.09	80
MOBILE REG'L AIRPORT	1.55	1999-10-08	1.51	69
MONTGOMERY AIRPORT	2.21	2008-10-08	1.93	69
ROBERTSDALE	5.57	2008-10-08	0.88	105
ROCK MILLS	2.83	1982-10-08	1.13	79
SELMA	2.65	1895-10-08	1.06	122
WALLACE 2 E	2.72	1998-10-08	1.35	76
WEST BLOCTON	4.10	1982-10-08	2.00	77
09 Oct. 2017				
CALERA	1.45	1977-10-09	1.29	116
CHILDERSBURG WTR PLT	2.37	1977-10-09	1.30	60
GENEVA NUMBER 2	2.25	2008-10-09	1.40	41
HOLT LOCK AND DAM	0.95	2008-10-09	0.92	36
MITCHELL DAM	3.25	1970-10-09	2.42	80
MOBILE REG'L AIRPORT	1.94	1999-10-09	1.37	69
OPELIKA	4.63	1977-10-09	2.05	60
SCOTTSBORO	2.32	1977-10-09	2.30	125
SYLACAUGA 4 NE	2.80	2008-10-09	2.04	62
TALLAPOOSA WATER PLNT	1.30	1994-10-09	0.64	39
WEST POINT, GA	6.23	1977-10-09	1.12	124
10 Oct. 2017				
ATHENS	1.65	1941-10-10	0.89	76
BAY MINETTE	3.80	1966-10-10	2.93	103
ENTERPRISE 2 W	2.00	1966-10-10	0.53	51
HUNTSVILLE INT'L AIRPORT	2.00	1992-10-10	0.80	58
RUSSELLVILLE NUMBER 2	3.05	2009-10-10	0.63	63
11 Oct. 2017				
HAMILTON 3 S	1.96	2014-10-11	1.58	55
MOBILE REG'L AIRPORT	1.87	1977-10-11	1.08	69

12 Oct. 2017

ROBERTSDALE 1.28 1927-10-12 0.98 105

15 Oct. 2017

ANNISTON METRO AIRPRT 2.33 1964-10-15 1.80 114

16 Oct. 2017

ADDISON 0.76 2002-10-16 0.51 79

ATMORE 1.11 1993-10-16 1.01 77

DAUPHIN ISLAND No 2 1.20 1993-10-16 1.00 41

FAIRHOPE 2 NE 2.88 1959-10-16 2.75 99

JACKSON 3.17 1989-10-16 1.65 55

SAND MT SUBSTATION 1.42 1974-10-16 0.92 68

TALLADEGA 1.85 1932-10-16 1.40 129

22 Oct. 2017

MOBILE DTOWN AIRPORT 4.59 2007-10-22 3.09 68

MOBILE REG'L AIRPORT 4.07 2007-10-22 2.70 69

MONTGOMERY AIRPORT 1.98 1994-10-22 1.78 69

23 Oct. 2017

ADDISON 1.45 1996-10-23 0.61 79

ATHENS 1.48 1996-10-23 0.81 76

ATMORE 4.10 1951-10-23 1.25 77

BILLINGSLEY 2.00 2007-10-23 1.80 78

CALERA 2.10 1919-10-23 1.50 116

CLAIBORNE LOCK & DAM 1.82 2007-10-23 1.74 64

CLAYTON 2.90 1990-10-23 0.96 88

DAUPHIN ISLAND No 2 4.20 2007-10-23 1.88 41

EVERGREEN 3.88 2007-10-23 1.75 121

FAIRHOPE 2 NE 3.73 1983-10-23 3.44 99

GENEVA NUMBER 2 1.85 1990-10-23 1.42 41

LAY DAM 1.73 1945-10-23 1.71 80

MITCHELL DAM 1.46 1990-10-23 1.42 80

PINE APPLE 2.80 2009-10-23 0.84 49

ROBERTSDALE 6.90 1983-10-23 3.26 105

WALLACE 2 E 5.20 1945-10-23 1.75 76

Precipitation, Wettest October Day on Record

	New Record	Previous Wettest Day	Previous Record	Period of Record
08 Oct. 2017				
BILLINGSLEY	4.41	1965-10-01	4.07	78
WEST BLOCTON	4.10	1958-10-01	4.00	77
09 Oct. 2017				
MITCHELL DAM	3.25	1983-10-12	3.18	80
WEST POINT, GA	6.23	1989-10-01	4.55	124

¹ ncdc.noaa.gov/cdo-web/datatools/records

New Local Climate Records¹

October 2017

Maximum High Temperature, Daily

	New Record	Previous Hottest Day	Previous Record	Period of Record
02 Oct. 2017				
ENTERPRISE 2 W	92	2006-10-02	91	51
09 Oct. 2017				
HUNTSVILLE INT'L ARPRT	90	2015-10-09	89	58
10 Oct. 2017				
RUSSELLVILLE No. 2	88	2009-10-10	86	63
11 Oct. 2017				
FT BENNING LAWSON FD	92	2014-10-11	90	68
MOBILE DTN AIRPORT	89	1997-10-11	87	68
MOBILE REG'L AIRPORT	92	1980-10-11	89	69
MONTGOMERY AIRPORT	92	2014-10-11	90	69
12 Oct. 2017				
ENTERPRISE 2 W	91	2010-10-12	90	51
MOBILE DTN AIRPORT	90	2009-10-12	87	68
MONTGOMERY AIRPORT	91	2014-10-12	90	69
13 Oct. 2017				
BESSEMER 3 WSW	89	1997-10-13	87	40
ENTERPRISE 2 W	91	2002-10-13	88	51
FAIRHOPE 2 NE	91	1959-10-13	90	99
FT BENNING LAWSON FD	90	2014-10-13	90	68
MOBILE DTN AIRPORT	90	2013-10-13	87	68
MONTGOMERY AIRPORT	92	2014-10-13	90	69
14 Oct. 2017				
ENTERPRISE 2 W	91	1985-10-14	90	51
FAIRHOPE 2 NE	92	1972-10-14	89	99
15 Oct. 2017				
FAIRHOPE 2 NE	89	1968-10-15	88	99
16 Oct. 2017				
ENTERPRISE 2 W	88	2015-10-16	87	51
18 Oct. 2017				
GADSDEN	87	2016-10-18	86	64
20 Oct. 2017				
CLAYTON	89	1998-10-20	88	61

Alabama State Climatologist

John R. Christy

Alabama State Climatologist

The University of Alabama

in Huntsville

christy@nsstc.uah.edu

256-961-7763

Contact:

Phillip Gentry

UAHuntsville Communications

The University of Alabama in Huntsville

gentry@nsstc.uah.edu

256.961.7618

<http://nsstc.uah.edu/alclimatereport>