

The Alabama Climate Report

Brought to you by the Office of the Alabama Climatologist

Volume 7, Number 1, October 2016



Dr. John Christy, Alabama State Climatologist

Alabama Octobers can be dry. In our survey of 25 sites around the state, through October 2015 eight of those sites reported 0.00" as their lowest October rainfall on record.

Of those 25 sites, nine reported 0.00" of rain in October 2016, and eight others saw less than 0.1" for the entire month. Our 25-site statewide average rainfall for October 2016 was a trifling 0.16"; normal rainfall is about 3.20" for the month. The official driest October in Alabama's climate record was in 1963, when the statewide average rainfall was 0.03".

But as dry as October was — and it will be among the driest Octobers on record — it is the combination of intense drought in both September and October that will set 2016 in the record

books.

While dry Septembers and dry Octobers aren't rare in Alabama (from 1904 through 2016, Birmingham got less than one inch of October rain 20 times; in Montgomery, it happened 30 times), two autumn months of back-to-back intense drought are few and far between.

Birmingham recorded 0.00" of rain in October and 0.68" in September. The only other time on record when Birmingham got less than one inch of rain for both September and October in the same year was in 1904 (October 0.24" and September 0.44").

Huntsville's rain records go back to 1907. It had never seen a September and October where both months got less than one inch of rain, until 2016 (September 0.47" and October 0.77").

Drought and heat frequently go hand in glove, and that was the case in October. While we wait for the official standing of October's mean temperature, we wanted to look at just the high temperatures. While the heat set 110 daily high temperature records in October, what was unique about this heat wave was its persistence.

The high-pressure ridge that pushed both rain and cool air north of Alabama throughout September and October hasn't yielded a bit. It was generally as warm at the end of October as at the beginning. The collective effect was a month that just didn't cool.

If we consider only the daily high temperatures in October, the average for several stations around the state is stifling. The high temperature average for Birmingham was 84.4° in October. The previous high was 83.0° ... in October 1919.

Anniston's average October high was 84.3°; the previous high was 81.8° in October 1963. The 83.9° October average in Muscle Shoals was a bit under its record-setting 84.3° average in October 1963.

There have been some temperature extremes in past Alabama Octobers, including a 103° day in Troy on Oct. 5, 1954. That was a hot week. Within a day or two either side of Troy's October record, it hit 100° in Greensboro, Montgomery and Selma, and 99° in Anniston and Talladega.

But by the end of that October, temperatures fell to near (or below) seasonal norms. The average highs for October 1954 were warmer than normal, but nothing like what we recorded this fall.

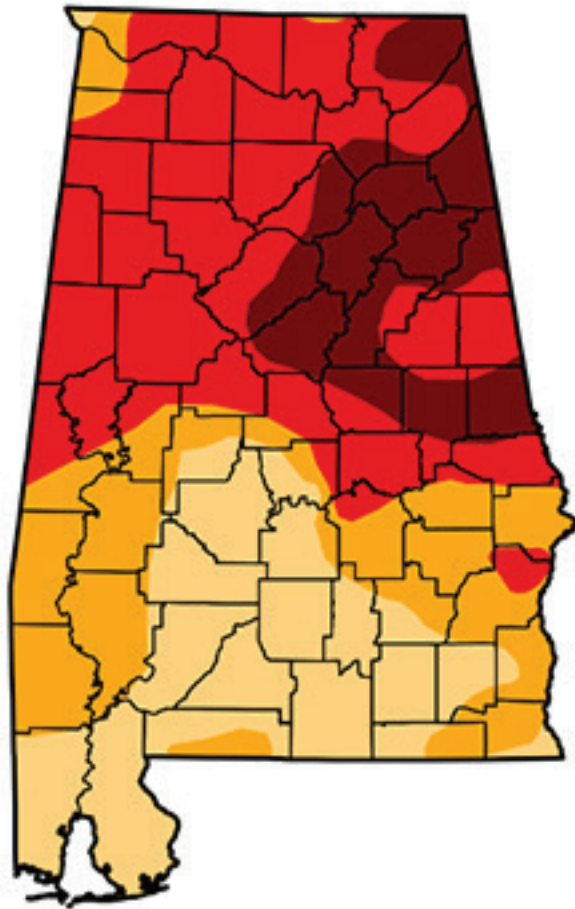
Of course, the drought and heat wave are having widespread effects across the state. Some streams and creeks that normally have low flows this time of year are completely dry, and there are concerns about the survival of aquatic species that exist in only a few watersheds in Alabama.

The Little River in northeastern Alabama has no water running over the waterfalls in the national park there. USGS records show this is the first time that has happened since record keeping started in the late 1950s. The lowest flow there previously was about one tenth of a cubic foot of water per second in the early 1960s.

While farmers, orchard keepers and others have been hit by the drought, the biggest impact we see is on livestock farmers. Their pastures die when there is two months of drought, so they face the dilemma of deciding whether to sell livestock in a saturated market or importing hay to get them through the winter.

- John Christy

U.S. Drought Monitor Alabama



November 1, 2016
(Released Thursday, Nov. 3, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	74.76	51.91	14.84
Last Week 10/25/2016	0.00	100.00	100.00	73.14	33.03	9.04
3 Months Ago 8/2/2016	32.44	67.56	40.76	18.33	2.90	0.00
Start of Calendar Year 12/29/2015	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 9/27/2015	17.15	82.85	47.12	17.04	6.36	0.00
One Year Ago 11/2/2015	63.77	36.23	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

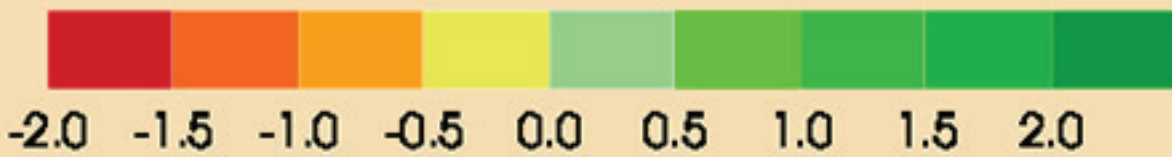
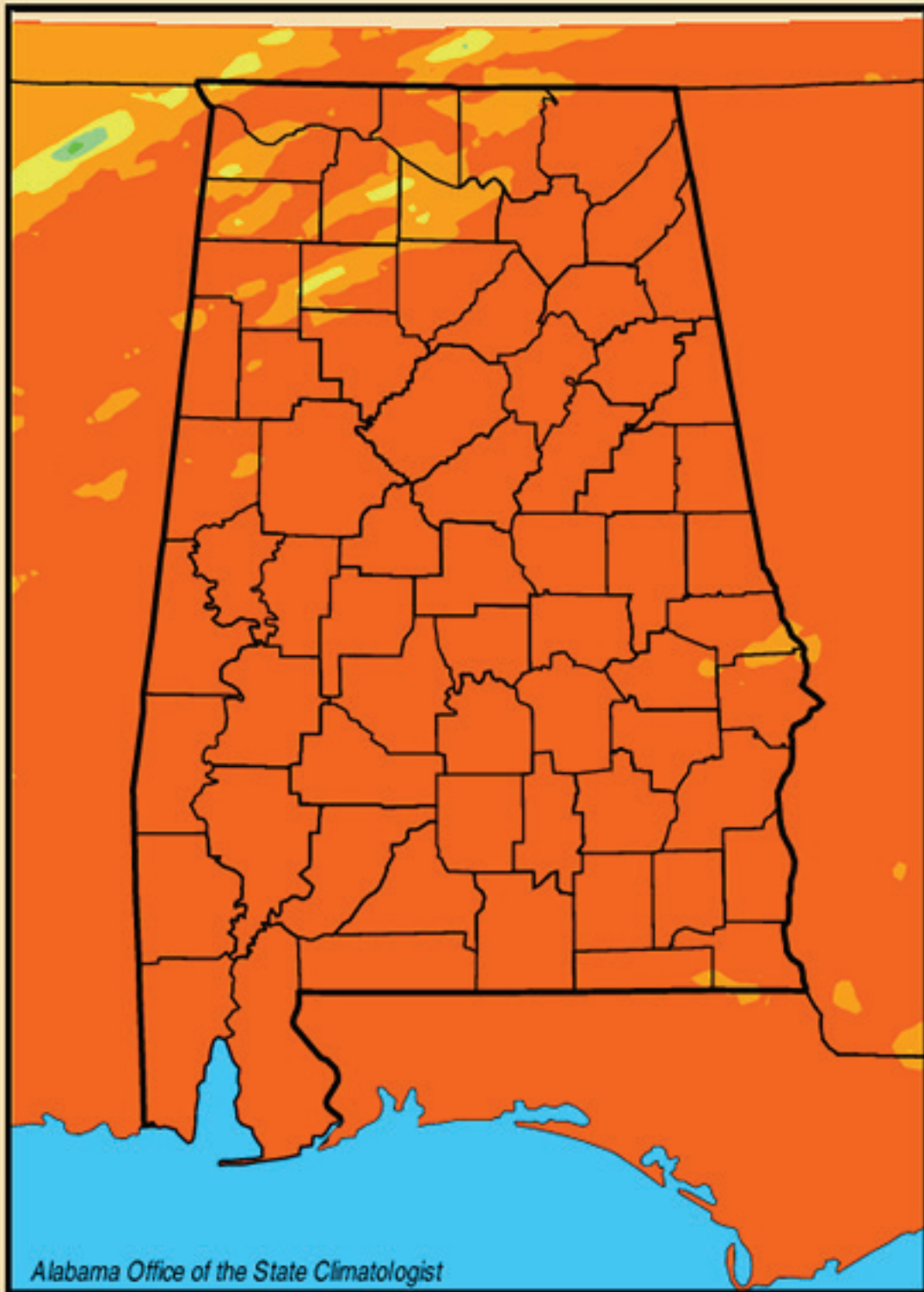
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Deborah Bathke
National Drought Mitigation Center



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

Lawn-and-Garden Moisture Index for November 1, 2016



Alabama Monthly Climate Summaries

Oct. 2016

	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	69.1°	90 8/20/16	38 10/23/16	* T	9.35° 1995	T 10/21/16
		62.9°	99 10/05/54	22 10/30/52	2.87"	0.15° 1978	3.96° 10/8/77
Auburn	1/1893	69.9°	89 10/8/16	43 10/22/16	0.57"	10.24° 1970	0.57° 10/16/16
		62.5°	94+ 10/6/54	27+ 10/28/57	3.4"	0.00° 1963	5.72° 10/1/85
Birmingham	1/1930	71.0°	91 10/19/16	42 10/22/16	* T	11.90° 1995	T 10/16/16
		62.9°	94 10/06/54	27 10/28/57	3.23"	0.07° 1991	6.94° 10/3/95
Brewton	4/1977	67.5°	88.4 10/18/16	37.3 10/23/16	* 0.00"	14.95° 1995	0.00°
		64.5°	97+ 10/5/54	21 10/30/52	3.09"	0.05° 1998	7.50° 10/5/95
Calera	9/1900	69.9°	91 10/7/16	39 10/23/16	0.03"	10.74° 1918	0.03° 10/16/16
		62.2°	95 10/01/81	22 10/26/82	4.16"	0.00° 1924	4.70° 10/05/95
Clanton	2/1893	66.6°	88.9 10/19/16	37.1 10/23/16	0.01"	10.32° 1995	0.01° 10/22/16
		62.0°	98 10/6/54	24+ 10/29/57	3.14"	0.00° 1978	6.30° 10/5/95
Courtland		66.5°	89 10/19/16	37.8 10/23/16	0.04"	M	0.04° 10/20/16
		M	M	M	M	M	M
Cullman	7/1907	65.2°	88.1 10/19/16	34.2 10/23/16	.41"	M	0.34° 10/16/16
		M	M	M	M	M	M
Decatur	2/1880	67.4°	90 10/19/16	39 10/23/16	0.75"	8.83° 1932	0.75° 10/20/16
		62.8°	100 10/05/1911	26 10/31/17	M	0.00° 1924	6.40° 10/18/28
Dothan	2/1902	71.6°	92 10/8/16	40 8/23/16	T	12.41° 1932	T 10/16/16
		68.0°	95 10/01/33	29 10/29/08	3.25"	0.00° 1939	7.37° 10/31/32
Fairhope	8/1917	68.8°	86.9 10/4/16	40.3 10/23/16	0.04"	13.08° 1985	0.04° 10/16/16
		67.9°	93+ 10/5/54	33+ 10/21/89	3.57"	0.00° 1978	7.37° 10/5/95
Gadsden	7/1893	65.2°	87 10/19/16	33.7 10/23/16	* 0.00"	9.00° 1995	0.00°
		61.8°	96 10/5/54	23 10/30/54	2.95"	0.24° 1978	4.98° 10/26/97
Gainesville Lock	6/1948	67.9°	89.9 10/18/16	38.9 10/23/16	* 0.01"	8.83° 1985	0.01° 10/20/16
		63.5°	94 10/1/81	30+ 10/29/2001	3.15"	0.03° 1987	3.86° 10/25/77
Greensboro	2/1890	68.0°	88.9 10/7/16	38.2 10/23/16	* 0.02"	10.00° 1995	0.02° 10/20/16
		65.3°	100+ 10/6/54	24 10/26/65	3.37"	0.20° 1987	4.42° 10/21/59
Highland Home	3/1892	70.9°	90.3 10/4/16	43.2 10/22/16	0.00"	12.13° 1995	0.00°
		64.9°	94 10/6/54	29 10/16/87	2.67"	0.00° 1973	6.10° 10/1/85
Huntsville	1/1959	69.6°	91 10/7/16	42 10/22/16	0.77"	12.06° 1975	0.77° 10/20/16
		61.3°	96 10/08/1911	23 10/30/63	3.54"	0.01° 2000	4.86° 10/7/75

Alabama Monthly Climate Summaries

Oct. 2016

	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	71.8° 67.7°	89 10/20/16 95 10/02/1904	43 10/23/16 30 10/31/93	0.00" 3.25"	13.20" 1985 0.00" 1978	0.00" 4.99" 10/29/85
Montgomery	6/1948	71.6° 65.4°	92 10/18/16 100 10/06/54	39 10/23/16 26 10/30/52	0.12" 2.58"	7.60" 1995 0.01" 1978	0.12" 10/16/16 4.02" 10/4/64
Muscle Shoals	12/1940	67.0° 61.5°	89.7 10/19/16 94+ 10/12/63	36.9 10/23/16 25 10/27/61	0.31" 3.22"	8.25" 1984 0.00" 2000	0.29" 10/20/16 3.24" 10/24/86
Russellville	9/1953	65.6° 59.6°	88.3 10/19/16 93 10/6/54	35.1 10/23/16 19 10/28/61	0.17" 3.43"	8.68" 1984 0.16" 2000	0.17" 10/20/16 3.33" 10/29/70
Scottsboro	10/1891	64.2° 60.0°	91 10/19/16 96 10/5/54	33 10/23/16 20 10/26/68	* 0.09" 3.61"	8.06" 1984 0.36" 1991	0.09" 10/20/16 4.70" 10/26/97
Selma	1/1895	67.1° 65.8°	88.6 10/18-19/16 100+ 10/6/54	35.1 10/23/16 27 10/30/52	* 0.00" 2.59"	9.24" 1995 0.06" 2000	0.00" 6.09" 10/5/95
Talladega	2/1888	67.2° 60.3°	89.8 10/19/16 99 10/5/54	36.4 10/23/16 23+ 10/25/65	0.05" 3.36"	11.01" 1995 0.02" 1978	0.05" 10/16/16 5.51" 10/5/95
Thomasville	9/1891	66.7° 65.7°	89.4 10/18/16 100 10/7/54	36.8 10/23/16 29+ 10/31/93	* 0.00" 2.9"	10.41" 1997 0.03" 1987	0.00" 5.80" 10/31/67
Troy	6/1908	68.5° 64.9°	91 10/8/16 103 10/5/54	35 10/23/16 28 10/24/37	0.02" 2.84"	12.19" 1995 0.06" 1987	0.02" 10/16/16 6.50" 10/4/95
Tuscaloosa	6/1948	69.4° 65.0°	92 10/7/16 98 10/04/54	39 10/23/16 23 10/30/52	* T 3.47"	9.11" 1995 0.12" 1987	T 10/20/16 5.73" 10/25/77
Valley Head	1/1893	63.7° 57.9°	86.4 10/19/16 93+ 10/5/54	34 10/23/16 19 10/27/61	0.74" 3.29"	9.91" 1995 0.10" 1991	0.74" 10/20/16 6.02" 10/5/95
Statewide Oct. 2015		68.25° /	92° 3 stations	43.2° Russellville	0.15"	25.20" Brewton	0.77" Huntsville
Oct. Norm		63.45° /	103° Troy	29° Valley Head	3.20"	0.00" Tuscaloosa	7.50" Brewton

M: Data is missing or not available

*New Record

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

^ This record differs from long-term data in the AOSC climate database:

http://nsstc.uah.edu/aclimate/climate/daily_climate_and_normals.php

New Local Climate Records¹

October 2016

Maximum High Temperature, Daily

	New Record	Previous Hottest Day	Previous Record	Period of Record					
01 October 2016									
GADSDEN	96	1998-10-01	92	63	MUSCLE SHOALS REGL	91	2005-10-19	89	75
05 October 2016					SAND MT SUBSTATION	87	1984-10-19	85	66
HAMILTON 3 S	93	2000-10-05	92	54	SCOTTSBORO	89	1926-10-19	87	124
07 October 2016					SYLACAUGA 4 NE	88	1984-10-19	86	61
HAMILTON 3 S	92	2007-10-07	90	54	THORSBY EXP STATION	88	2006-10-19	84	58
08 October 2016					TUSCALOOSA MUNI	91	2005-10-19	89	68
HAMILTON 3 S	93	2007-10-08	90	54	20 October 2016				
VERNON	92	2007-10-08	91	59	ATMORE	89	1941-10-20	88	76
FT BENNING LAWSON FD	93	1962-10-08	91	67	BESSEMER 3 WSW	88	2005-10-20	86	39
09 October 2016					DEMOPOLIS L&DAM	89	2006-10-20	87	64
FT BENNING LAWSON FD	93	2014-10-09	90	67	ENTERPRISE 2 W	91	2005-10-20	87	50
15 October 2016					EUFALA WILDLIFE REF	92	1984-10-20	91	49
GUNTERSVILLE	87	1989-10-15	85	106	GADSDEN	89	1984-10-20	85	63
SAND MT SUBSTATION	85	1984-10-15	84	66	GAINESVILLE LOCK	90	2005-10-20	88	58
FT BENNING LAWSON FD	88	1950-10-15	86	67	GENEVA NUMBER 2	90	2006-10-20	88	40
18 October 2016					GUNTERSVILLE	90	1963-10-20	86	106
ANNISTON METRO	89	1984-10-18	87	113	HAMILTON 3 S	92	2005-10-20	88	54
BESSEMER 3 WSW	90	2005-10-18	86	39	JACKSON	89	1993-10-20	87	32
BIRMINGHAM AIRPORT	89	1947-10-18	86	86	JASPER	89	1963-10-20	86	55
FT BENNING LAWSON FD	91	1963-10-18	85	67	SCOTTSBORO	92	2005-10-20	88	124
GADSDEN	86	1984-10-18	85	63	SYLACAUGA 4 NE	90	2005-10-20	87	61
HAMILTON 3 S	90	2011-10-18	89	54	VERNON	90	1962-10-20	89	59
HUNTSVILLE INTERNTL	90	1984-10-18	85	57	FT BENNING LAWSON FD	91	1963-10-20	88	67
JACKSON	88	2011-10-18	87	32	MOBILE DTWN AIRPORT	89	2004-10-20	88	67
MONTGOMERY AIRPORT	92	2006-10-18	87	68	ANNISTON METRO ARPT	90	1953-10-20	87	113
MUSCLE SHOALS REGL	90	2005-10-18	85	75	BIRMINGHAM AIRPORT	90	1941-10-20	88	86
TUSCALOOSA MUNI APT	90	1962-10-18	88	68	MONTGOMERY AIRPORT	91	1993-10-20	88	68
19 October 2016					21 October 2016				
ANNISTON METRO APT	90	1993-10-19	89	113	DAUPHIN ISLAND No. 2	86	1985-10-21	85	40
ATMORE	91	1947-10-19	89	76	ENTERPRISE 2 W	90	2005-10-21	87	50
BELLE MINA	88	2005-10-19	87	66	GAINESVILLE LOCK	90	1962-10-21	88	58
BESSEMER 3 WSW	90	2005-10-19	89	39	JACKSON	88	1993-10-21	87	32
BIRMINGHAM AIRPORT	91	1938-10-19	88	86	SYLACAUGA 4 NE	89	1963-10-21	86	61
CHATOM	91	2006-10-19	89	66	22 October 2016				
DAUPHIN ISLAND No. 2	86	1984-10-19	84	40	CLAYTON	92	1993-10-22	87	60
DEMOPOLIS L&D	90	2006-10-19	87	64	28 October 2016				
ENTERPRISE 2 W	89	2007-10-19	88	50	ENTERPRISE 2 W	88	2010-10-26	86	50
EUFALA WILDLIFE REF	91	1984-10-19	90	49	SYLACAUGA 4 NE	85	2010-10-26	83	61
FT BENNING LAWSON FD	91	1963-10-19	84	67	28 October 2016				
GAINESVILLE LOCK	90	2006-10-19	89	58	ANNISTON METRO ARPT	87	1991-10-28	85	113
GENEVA NUMBER 2	90	2006-10-19	86	40	BIRMINGHAM AIRPORT	86	1991-10-28	85	86
GUNTERSVILLE	88	1998-10-19	84	106	GADSDEN	85	1998-10-28	83	63
HALEYVILLE	88	1938-10-19	87	113	HUNTSVILLE INTRNL	85	1991-10-28	84	57
HAMILTON 3 S	91	2005-10-19	86	54	ROCK MILLS	85	2000-10-28	84	74
HUNTSVILLE INTERNL	90	2005-10-19	87	57					
JACKSON	89	2006-10-19	88	32					
MONTGOMERY AIRPORT	91	1993-10-19	88	68					

(Continued on next page)

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

New Local Climate Records¹

October 2016

Maximum High Temperature, Daily

	New Record	Previous Hottest Day	Previous Record	Period of Record		New Record	Previous Record	Period of Record	
(Continued from previous page)									
29 October 2016									
ANNISTON METRO ARPT	88	1984-10-29	84	113	GADSDEN	86	1998-10-30	85	63
BIRMINGHAM AIRPORT	87	1984-10-29	86	86	GAINESVILLE LOCK	88	2000-10-30	87	58
CHILDERSBURG WTR PT	87	2004-10-29	86	59	GUNTERSVILLE	86	1984-10-30	84	106
FT BENNING LAWSON FD	88	1950-10-29	85	67	HAMILTON 3 S	89	2000-10-30	86	54
GADSDEN	86	1984-10-29	85	63	SAND MT SUBSTATION	85	1950-10-30	82	66
GAINESVILLE LOCK	88	2003-10-29	87	58	SCOTTSBORO	87	1923-10-30	86	124
HALEYVILLE	85	1971-10-29	83	113	SYLACAUGA 4 NE	86	1961-10-30	85	61
HUNTSVILLE AIRPORT	88	2004-10-29	82	57	VERNON	87	2000-10-30	86	59
MONTGOMERY AIRPORT	89	2004-10-29	87	68	31 October 2016				
MUSCLE SHOALS REGL	88	2004-10-29	84	75	ATMORE	88	2000-10-31	87	76
SYLACAUGA 4 NE	86	1996-10-29	85	61	CHILDERSBURG WTR PT	89	1961-10-31	88	59
TUSCALOOSA MUNI APT	87	1991-10-29	86	68	CLAYTON	91	1971-10-31	86	60
30 October 2016					ENTERPRISE 2 W	89	2004-10-31	84	50
ATMORE	89	2000-10-30	88	76	GADSDEN	86	2000-10-31	84	63
CLAYTON	87	1996-10-30	86	60	JACKSON	87	2009-10-31	86	32
EUFAULA WILDLIFE REF	89	1984-10-30	87	49	SAND MT SUBSTATION	83	1998-10-31	82	66
					SYLACAUGA 4 NE	88	1984-10-31	86	61

Warmest minimum temperature

	Period of Record	New Record	Previous Record	Previous Date
16 October 2016				
GUNTERSVILLE	67	1975-10-16	65	106
18 October 2016				
VERNON	67	1980-10-18	65	59
MUSCLE SHOALS REGIONAL	68	1984-10-18	67	75
19 October 2016				
GUNTERSVILLE	67	1984-10-19	66	106
SAND MT SUBSTATION	67	1980-10-19	63	66
20 October 2016				
GUNTERSVILLE	66	1993-10-20	64	106

Precipitation, Daily

	New Record	Previous Year	Previous Record	Period of Record
21 October 2016				
ADDISON	0.41	1988-10-21	0.33	78

Community Collaborative Rain, Hail & Snow Network (CoCoRAHS)

October 2016

	Total Precip.	# Stations
Autauga	0.11	2
Baldwin	0.04	22
Barbour	n.a.	0
Bibb	n.a.	0
Blount	0.02	9
Bullock	n.a.	0
Butler	0.00	1
Calhoun	0.00	3
Chambers	n.a.	0
Cherokee	0.26	1
Chilton	0.00	1
Choctaw	0.00	1
Clarke	0.00	1
Clay	n.a.	0
Cleburne	n.a.	0
Coffee	0.00	1
Colbert	0.28	6
Conecuh	n.a.	0
Coosa	0.04	2
Covington	n.a.	0
Crenshaw	n.a.	0
Cullman	0.15	4
Dale	0.00	1
Dallas	0.05	1
DeKalb	0.33	3
Elmore	0.51	5
Escambia	0.00	1
Etowah	0.00	1
Fayette	0.10	3
Franklin	n.a.	0
Geneva	n.a.	0
Greene	n.a.	0
Hale	n.a.	0
Henry	n.a.	0

	Total Precip.	# Stations
Houston	0.42	2
Jackson	0.16	7
Jefferson	0.03	13
Lamar	n.a.	0
Lauderdale	0.27	11
Lawrence	0.60	2
Lee	0.96	4
Limestone	0.28	10
Lowndes	n.a.	0
Macon	0.03	1
Madison	0.40	39
Marengo	n.a.	0
Marion	0.11	1
Marshall	0.14	10
Mobile	0.00	12
Monroe	0.00	2
Montgomery	0.30	5
Morgan	0.68	6
Perry	n.a.	0
Pickens	0.20	1
Pike	n.a.	0
Randolph	0.04	2
Russell	0.56	2
St. Clair	0.01	6
Shelby	0.07	16
Sumter	n.a.	0
Talladega	0.06	4
Tallapoosa	0.00	3
Tuscaloosa	0.02	5
Walker	n.a.	0
Washington	0.00	1
Wilcox	0.01	2
Winston	0.94	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.serc.com

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

Bob Clymer

Assistant State Climatologist

The University of Alabama in Huntsville

bob.clymer@nsstc.uah.edu

256-961-7771

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