

# **The Alabama Climate Report**

Brought to you by the Office of the Alabama Climatologist

### Volume 8, Number 7, April 2018



Dr. John Christy, Alabama State Climatologist

As we have previously noted (more than once), Alabama's tor-Let's talk about record-breaking weather.

By now you might have heard that a large hailstone that fell in Cullman County on March 19 has officially been declared to be the largest hailstone to fall on Alabama.

An ad hoc committee that included the Alabama state climatologist and officials from both the National Weather Service and the National Centers for Environmental Information reviewed data about the hailstone and unanimously agreed it will set the initial state hailstone record for Alabama in four parameters: diameter, weight, volume and circumference.

The record-setting hailstone in Walter (about 10 miles southeast of Cullman) had a maximum diameter of 5.38 inches along its longest axis. It weighed 9.8 ounces (almost 5/8 of a pound) and had a total volume of 19.8 cubic inches. According to the Insurance Institute for Business and Home Safety (IIBHS) in Tampa, a baseball has a volume of about 13.4 cubic inches, while a 12-ounce soft drink can has a volume of 25 cubic inches.

This is the first official record for a hailstone in Alabama.

"Was this the largest hailstone that fell that day or from this event?" asked Victor Murphy, climate and co-op services program manager at the National Weather Service's southern regional headquarters in Fort Worth, TX. "We don't know, but it is the largest one that was kept and recorded."

Which brings us to one of the more interesting things about hailstone records: Anyone can play. Anyone can pick up a hailstone and put it in the freezer. It's a very democratic process. With few exceptions, official records for temperature highs and lows and for rainfall, snowfall and snow depth can only be accepted into the official records if they come from an officially sanctioned, sanctified and standardized weather station.

The exception? Data provided by volunteer members of the Community Collaborative Rain, Hail and Snow Network (CoCoRAHS) is now being included in official reports of rainfall, and CoCoRAHS reports of record-breaking events can also go through the validation and certification process as state and national records.

What are Alabama's other weather records?

Max Temp:	112° F	Sept.	6, 1925		Centreville, Ala.
Min Temp:	-27° F		Jan. 30, 19	66	New Market, Ala.
24-hr. rainfa		32.52″	July 19-20,	1997	Dauphin Island, AL
24-hr. snow	20″	March	า 13, 1993	Walnu	ut Grove, AL
Snow Depth	22″	Jan. 24	4, 1940	Refor	m, AL

Knowing a hailstone that fell March 19 in Walter was the largest to fall in Alabama — and one of the three largest ever documented east of the Mississippi River — is only half of the story.

The other half is learning how the record-setting hailstone compares to others that fell on Alabama in the past. To document the record and learn how it compares to hailstones from the past, my office is establishing a state hailstone record.

We are investigating earlier reports of large hailstones, but these reports are for information only and won't be part of the official record. With a record-setting hailstone in hand, researchers would like more information about large hailstones that fell in the past and those that fall in the future.

For past storms, send documentation by email that must include a photo of the hailstone beside a ruler or tape measure for evidence of the size. Please include contact information, the date of the event, the exact location and the time of day the hailstone fell.

We have several historic accounts of four-and-a-half inch hailstones falling in Alabama. But we don't need stories. We need evidence. Then we can compile a list of unofficial reports as background.

For hailstones that fall in the future, please immediately put the hail in a zip lock bag and put it in the freezer. Unless it is bagged, hail sublimates (evaporates) directly from ice to water vapor even if it is stored below freezing.

Information about past and future hailstones can be emailed to: weather\_record@nsstc.uah. edu

The largest hailstone ever recorded in the U.S. fell on July 23, 2010, in Vivian, SD. It was 8 inches in diameter, 18.62 inches in circumference, and weighed 1.93 pounds.

April was a record-setting weather month for parts of Alabama, but that is the case almost every month. Daily records are broken on a fairly routine basis because the sheer number of types of events we track for records (heavy rainfall, drought, high temperature, low temperature, etc.) makes "record-breaking" a target-rich environment. For example, 58 stations in Alabama reported daily rainfall records in April, so 58 times 30 days means there were 1,740 opportunities for a daily rainfall record to be set.

At least five stations in Alabama had their all-time wettest April days on April 14 and 15. Thomasville got 8.21" on April 14, breaking the 5.47" record set in April 1979. On April 15, Chatom got 7.1", breaking the 6.75" record set in 1954; Jackson got 6.06", breaking a record set in 1974; Addison got 4.34", breaking a record set in 2014; and Millers Ferry Lock and Dam got 4.11", breaking a record set in 2003. - John Christy

# U.S. Drought Monitor Alabama

### May 1, 2018 (Released Thursday, May. 3, 2018) Valid 8 a.m. EDT





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

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David Simeral Western Regional Climate Center



http://droughtmonitor.unl.edu/



## Lawn-and-Garden Moisture Index for May 3, 2018

#### Alabama Monthly Climate Summaries April 2018

1	Station Began	April Mean April Norm	April Hi Temp Record Hi	April Low Temp Record Low	Total Precip. Normal Prec.	Wettest April Driest April	Heaviest Day Record Day
Anniston	2/1903	58.7° 62.0°	82° 4/3/18 93° 4/17/55	34° 4/5/18 26° 4/17/1905	3.98° 4.87°	17.30° 1979 0.17° 1986	1.01° 4/14/18 6.15° 4/29/63
Auburn	1/1893	60.6° 64.0°	82° 4/3/18 94° 4/30/42	36° 4/16/18 27° 4/13/40	3.23" 4.92"	17.66* 1964 0.50* 1915	1.28° 4/15/18 5.15° 4/8/64
Birmingham	1/1930	60.2° 62.6°	85° 4/3/18 92° 4/21/87	32° 4/8/18 26° 4/11/73	8.25* 4.67*	13.75* 1979 0.42* 1986	3.14° 4/14/18 4.61° 4/12/79
Brewton	4/1977	62.1° 65.3°	82.1° 4/18/18 95° 4/30/43	37° 4/16/18 25° 4/7/50	5.07* 4.50*	11.13* 1975 0.50* 1981	1.98° 4/22/18 9.60° 4/14/55
Calera	9/1900	60.6° 62.4°	83° 4/3/18 90° 4/24/60	36° 4/16/18 25° 4/11/73	8.06* 5.15*	18.32* 1979 0.10* 1925	3.95* 4/14/18 5.33* 4/13/79
Clanton	2/1893	59.1° 62.7°	82.3° 4/3/18 94° 4/25/25	33.4° 4/5/18 26° 4/13/40	5.04" 5.43"	22.00° 1979 0.12° 1986	1.87* 4/14/18 9.00* 4/8/38
Courtland		56.3° M	82.8° 4/3/18 M	29.3° 4/8/17 M	8.19* M	M M	3.24* 4/22/18 M
Cullman	7/1907	55.8° M	80.8° 4/3/18 M	29.4° 4/5/18 M	7.24" M	M M	2.46* 4/14/18 M
Decatur	2/1880	56.2° 61.6°	83° 4/3/18 92° 4/29/1899	28° 4/8/18 26° 4/6/1898	8.03* 4.50*	13.57* 1911 0.58* 1930	2.89* 4/14/18 4.38* 4/6/1892
Dothan	2/1902	64.8° 67.3°	85° 4/14/18 95° 4/30/42	40° 4/5/18 31° 4/13/40	4.52° 4.11°	10.32* 1944 0.54* 1967	2.18° 4/15/18 4.25° 4/8/37
Fairhope	8/1917	63.5° 66.9°	82.3° 4/29/18 97° 4/10/23	36° 4/16/18 29° 4/13/40	5.02* 4.53*	13.53° 1980 0.11° 1999	2.73° 4/7/18 8.31° 4/15/96
Gadsden	7/1893	55.6° 61.6°	78.8° 4/3/18 94° 4/30/15	28.1° 4/8/18 24° 4/7/52	7.47° 5.21°	12.65* 1979 0.57* 1986	2.54° 4/14/18 4.60° 4/13/79
Gainesville Lock	6/1948	59.5° 63.3°	84.3° 4/3/18 92°+ 4/28/87	33.9° 4/8/18 29° 4/1/87	7.58* 5.37*	18.41* 1979 0.34* 1976	2.88° 4/14/18 7.55° 4/13/79
Greensboro	2/1890	59.6° 64.4°	82.8° 4/3/18 97° 4/25/16	33.9° 4/5/18 28° 4/13/40	6.91° 5.33°	12.37* 1979 0.59* 1987	3.28° 4/14/18 4.46° 4/5/56
Highland Home	3/1892	61.3° 64.8°	81.3° 4/18/18 96° 4/30/1906	35.3° 4/16/18 24° 4/4/87	3.57* 4.57*	14.00° 1964 0.35° 1915	1.02* 4/14/18 7.57* 4/27/64
Huntsville	1/1959	57.9° 61.2°	83° 4/3/18 92° 4/16/67	30° 4/8/18 26° 4/1/87	9.03° 4.86°	12.55° 1964 0.42° 1986	3.77° 4/14/18 3.85° 4/5/83

#### Alabama Monthly Climate Summaries April 2018

	Station Began	April Mean April Norm	April Hi Temp Record Hi	April Low Temp Record Lo	Total Precip. Normal Prec.	Wettest April Driest April	Heaviest Day Record Day
Mobile	3/1900	64.3° 67.3°	84° 4/29/18 94° 4/21/87	38° 4/16/18 32° 4/5/87	3.07" 5.70"	15.43" 1980 0.08" 1999	1.23° 4/14/18 6.65° 4/5/57
Montgomery	6/1948	62.0° 64.8°	85° 4/3/18 91°+ 4/5/88	37° 4/5/18 28° 4/1/87	3.96" 4.34"	15.64" 1964 0.52" 1986	1.28° 4/22/18 4.54° 4/8/84
Muscle Shoals	12/1940	57.8° 61.5°	84° 4/3/18 92° 4/30/87	33° 4/7/18 27° 4/11/89	7.42" 4.43"	12.81° 1983 0.36° 1986	2.56° 4/14/18 5.34° 4/5/83
Russellville	9/1953	55.6° 58.0°	82.3° 4/3/18 89°+ 4/11/01	26.2° 4/8/18 22° 4/11/73	7.84" 4.97"	14.00" 1991 0.57" 1986	3.02" 4/14/18 3.85" 4/6/83
Scottsboro 1	10/1891	55.8° 58.7°	82.3° 4/3/18 92° 4/30/43	29.5° 4/8/18 23°+ 4/3/92	6.97" 4.52"	9.57° 2000 1.22° 1976	2.22° 4/14/18 3.72° 4/29/63
Selma	1/1895	59.8° 63.5°	82.9° 4/3/18 93°+ 4/22/87	36.8° 4/5/18 29° 4/13/40	8.58" 4.33"	10.02" 1973 0.22" 1986	5.87° 4/14/18 8.74° 4/8/38
Talladega	2/1888	58.6° 59.8°	81.8° 4/3/18 92° 4/18/55	33° 4/5/18 24°+ 4/3/92	4.81" 4.80"	18.27° 1979 0.35° 1986	1.57° 4/14/18 5.72° 4/4/74
Thomasville	9/1891	59.7° 64.1°	82.4° 4/3/18 94° 4/22/87	33.6° 4/16/18 27° 4/13/40	11.40" 4.64"	12.02" 1979 0.49" 1987	*8.21" 4/14/18 5.47* 4/3/79
Troy	6/1908	60.8° 63.4°	84° 4/3/18 94° 4/30/42	36° 4/17/18 29° 4/13/40	3.57" 4.25"	8.41° 1979 0.73° 1986	1.32° 4/22/18 4.52° 4/15/34
Tuscaloosa	6/1948	61.0° 63.9°	86° 4/3/18 94° 4/21/87	34° 4/8/18 29° 4/1/87	8.03" 5.10"	14.41° 1979 0.30° 1987	2.88° 4/14/18 6.44° 4/12/79
Valley Head	1/1893	54.5° 55.9°	79.7° 4/13/18 88°+ 4/27/86	28.6° 4/5/18 19° 4/3/92	7.93" 4.73"	10.08" 1979 1.10" 1976	2.95° 4/22/18 4.18° 4/30/63
Statewide April April 1	2017 Norm	59.58° / 62.84° /	86° Tuscaloosa 97° 2 stations	26.2° Russellville 19° Valley Head	6.37" 4.79"	22.00" Clanton 0.08" Mobile	8.21" Thomasville 9.60" 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) April 2018

1	Total Precip.	# Stations
Autauga	3.97	2
Baldwin	4.19	24
Barbour	3.53	1
Bibb	8.51	1
Blount	5.82	9
Bullock	n.a.	0
Butler	n.a.	0
Calhoun	3.90	3
Chambers	n.a.	0
Cherokee	4.13	1
Chilton	4.72	1
Choctaw	6.66	1
Clarke	10.39	1
Clay	n.a.	0
Cleburne	n.a.	0
Coffee	5.29	1
Colbert	7.81	5
Conecuh	5.50	1
Coosa	3.58	2
Covington	n.a.	0
Crenshaw	n.a.	0
Cullman	6.71	4
Dale	4.66	1
Dallas	5.94	1
DeKalb	7.37	5
Elmore	4.02	5
Escambia	4.61	2
Etowah	n.a.	0
Fayette	7.75	1
Franklin	n.a.	0
Geneva	3.86	1
Greene	n.a.	0
Hale	n.a.	0
Henry	n.a.	0

	Total Precip.	# Stations	í -
Houston	4.97	2	
Jackson	7.52	6	۸h
Jefferson	7.41	16	Alk
Lamar	7.46	1	Ale
Lauderdale	6.46	8	Ali
Lawrence	10.51	3	As
Lee	2.47	2	Ati
Limestone	8.68	7	Ba
Lowndes	n.a.	0	Bil
Macon	3.19	1	Ce
Madison	8.90	19	Ch
Marengo	n.a.	0	Cla
Marion	7.70	1	Da
Marshall	5.93	10	Elk
Mobile	3.49	15	Eu
Monroe	3.86	2	Fa
Montgomery	2.71	4	Ge
Morgan	8.37	5	Gr
Репу	n.a.	0	Ha Ha
Pickens	n.a.	0	He
Pike	n.a.	0	Hu
Randolph	4.01	2	Ja
Russell	4.32	2	Liv
St. Clair	6.55	5	Me
Shelby	7.78	16	Mi
Sumter	n.a.	0	On
Talladega	5.68	4	Pe
Tallapoosa	1.90	1	Pla
Tuscaloosa	7.24	6	Ro
Walker	n.a.	0	Sy
Washington	7.70	1	Un
Wilcox	7.99	2	Un
Winston	10.54	2	Wa

Normal	
April	
Precipitatio	n*
Abbeville	. 4.08"
Alberta	. 4.89"
Alex City	. 4.56"
Aliceville	. 5.26"
Andalusia	. 4.88"
Ashland	. 4.64"
Athens	. 4.53"
Bay Minette	. 5.31"
Bessemer	. 4.80"
Billingsley	. 5.00"
Centreville WSMO.	. 5.02"
Chatom	. 5.01"
Claiborne L&D	. 4.29"
Clayton	. 4.25"
Dauphin Isl	. 4.31"
Elba	. 4.52"
Eufaula WR	. 3.56"
Evergreen	. 4.51"
Fayette	. 5.75"
Geneva 2	. 3.92"
Greenville	. 4.71"
Haleyville	. 5.48"
Hamilton 3S	. 5.89"
Heflin	. 5.26"
Hurtsboro	. 3.92"
Jasper	. 5.59"
Lafayette	. 5.15"
Livingston	. 5.10"
Melvin	. 5.38"
Milstead	4.59"
Moulton	. 5.16"
Oneonta	. 5.01"
Perryville	. 5.06"
Plantersville	. 5.18"
Rock Mills	.4.90"
Rockford	. 5.23"
Sylacauga	.4.74"
Union Springs	4.45"
Uniontown	4.64"
Vernon	. 5.52"
Warrior L&D	. 5.12"
Wetumpka	4.68"
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# New Local Climate Records<sup>1</sup> April 2018

### Precipitation, Daily

	New	Previous	Previous	Period of
	Record	Year	Record	Record
07 April 2018				
JACKSON	1.63	2014-04-07	1.23	56
MOBILE D'TOWN AIRPORT	0.98	2014-04-07	0.74	69
WALLACE 2 E	1.95	1983-04-07	1.67	77
14 April 2018				
ATHENS	3.43	2007-04-14	1.30	77
BESSEMER 3 WSW	3.05	2014-04-14	1.86	41
BIRMINGHAM AIRPORT	3.14	2014-04-14	1.48	88
GADSDEN	2.25	1980-04-14	1.98	65
HUNTSVILLE INT'L AIRPRT	3.77	1991-04-14	2.05	59
TUSCALOOSAAIRPORT	2.88	2014-04-14	2.08	70
15 April 2018				
ADDISON	4.34	1991-04-15	1.37	80
ALICEVILLE L AND D	2.87	2014-04-15	2.64	38
BANKHEAD LOCK & DAM	3.15	2014-04-15	1.80	61
BELLE MINA	3.52	1956-04-15	2.89	68
BILLINGSLEY	2.45	1975-04-15	2.04	79
CAHABA PUMP HOUSE	4.10	1996-04-15	1.95	36
CALERA	4.76	1956-04-15	2.65	117
CHATOM	7.10	2007-04-15	4.20	68
CHILDERSBURG WTR PLT	2.27	2014-04-15	1.56	61
COFFEEVILLE LOCK & DAM	M 4.33	2013-04-15	3.00	35
DEMOPOLIS LOCK & DAM	2.64	2014-04-15	2.20	66
FAYETTE	4.14	2011-04-15	2.42	109
FORT PAYNE	2.10	1985-04-15	1.24	82
GAINESVILLE LOCK	2.89	2014-04-15	2.45	70
HAMILTON 3 S	3.17	1991-04-15	2.77	56
HOLT LOCK AND DAM	2.33	2014-04-15	1.95	37
JACKSON	6.06	2007-04-15	3.75	56

### Minimum Low Temperature, Daily

	New Record	Previous Coldest D <del>a</del> y	Previous Record	Period of Record
05 April 2018				
FT BENNING LAWSON FLD.	33	1966-04-05	36	69
06 April 2018				
FT BENNING LAWSON FLD.	33	2013-04-06	35	69
08 April 2018				
HALEYVILLE	29	2009-04-08	30	115
09 April 2018				
GAINESVILLE LOCK	29	1972-04-09	33	60
12 April 2018				
FT BENNING LAWSON FLD.	38	2012-04-12	38	69
16 April 2018				
GAINESVILLE LOCK	33	2014-04-16	35	60
30 April 2018				
HAMILTON 3 S	32	1992-04-30	33	56

JASPER	2.59	1991-04-15	2.07	57
LEEDS	3.62	1999-04-15	1.06	101
MILLERS FERRY L&D	4.11	2013-04-15	1.76	37
MOULTON 2	3.72	2007-04-15	1.93	61
ONEONTA	3.32	1968-04-15	1.45	123
SELMA	2.79	1924-04-15	1.87	123
TUSCALOOSA OLIVER DAM	2.70	2014-04-15	2.23	118
UNIONTOWN	3.35	1908-04-15	1.74	123
WALNUT GROVE	3.19	2015-04-15	1.09	77
CENTREVILLE 2.9 SW	3.82	2014-04-15	1.81	43
16 April 2018				
HEADLAND	2.89	1954-04-16	1.37	68
22 April 2018				
ATHENS	2.47	1951-04-22	1.00	77
BIRMINGHAM AIRPORT	1.52	1983-04-22	1.35	88
GADSDEN	1.25	1972-04-22	1.05	65
HUNTSVILLE INT'L AIRPRT	1.90	1984-04-22	1.28	59
MONTGOMERY AIRPORT	1.28	1997-04-22	1.12	70
MUSCLE SHOALS REG'L	1.91	1984-04-22	0.94	77
WINFIELD 2 SW	1.78	1951-04-22	1.72	95
23 April 2018				
BELLE MINA	1.95	1971-04-23	1.43	68
CHILDERSBURG WTR PLT	1.81	1967-04-23	1.61	61
CLAYTON	2.25	1945-04-23	1.27	89
DEMOPOLIS LOCK & DAM	1.43	1997-04-23	1.19	66
FAYETTE	3.30	1995-04-23	2.00	109
FT BENNING LAWSON FLD	1.62	1997-04-23	1.08	69
FORT PAYNE	2.53	2017-04-23	1.55	82
HURTSBORO	2.52	1997-04-23	0.96	40
JASPER	3.87	1995-04-23	2.57	57
MOUNDVILLE	2.45	1983-04-23	1.62	35
ONEONTA	1.49	1945-04-23	1.40	123
SAND MT SUBSTATION	2.18	1995-04-23	1.60	69
WALNUT GROVE	1.93	1977-04-23	1.72	77
27 April 2018				
CAHABA PUMP HOUSE	0.83	2007-04-27	0.75	36

### Wettest April Day

	New Record	Previous Wettest Day	Previous Record	Period of Record
15 April 2018				
ADDISON	4.34°	2014-04-07	2.90"	80
CHATOM	7.10"	1954-04-16	6.75"	68
JACKSON	6.06"	1974-04-14	5.79"	56
MILLERS FERRY L&D	4.11"	2003-04-25	3.85"	37

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

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