

Alabama Climate Report

Vol. 1, No. 5

Alabama Office of State Climatologist

The University of Alabama in Huntsville

February 2011

Once again this winter we experienced snowier and colder than average conditions, at least for the first half of February. Though not breaking major records, the continued cold statewide and snow in Northern Alabama through the first half of the month was starting to annoy many of our state's residents: Even kids are tired of seeing the school year extended to make up for snow days.

With the heightened interest in snow we have prepared lists of winter snowfall totals for a few long-term North Alabama stations – some back to 1893 – so you can see how variable this phenomenon is and where this year falls in the grand scheme of things (see link).

Note that Valley Head (elevation 1,062 ft.) tends to be Alabama's snowiest station and has seen as much as 25 inches in a single season with over 15 inches

seven times. The winter of 1963-64, which included the massive New Years Day storm, still holds several records. Florence and Madison reported over 27 inches for that winter.

But don't get too excited. Some stations out west have snowfall records of over 720 inches in a single season. That's more than 60 feet or, looked at another way, two first downs.

Last month we mentioned that by the end of January Mobile had already exceeded by two its full-winter average (22) of nights below freezing. As of the end of February, Mobilians have seen nine more (and even a trace of snow) for a total of 33 frosty nights so far ... and still counting.

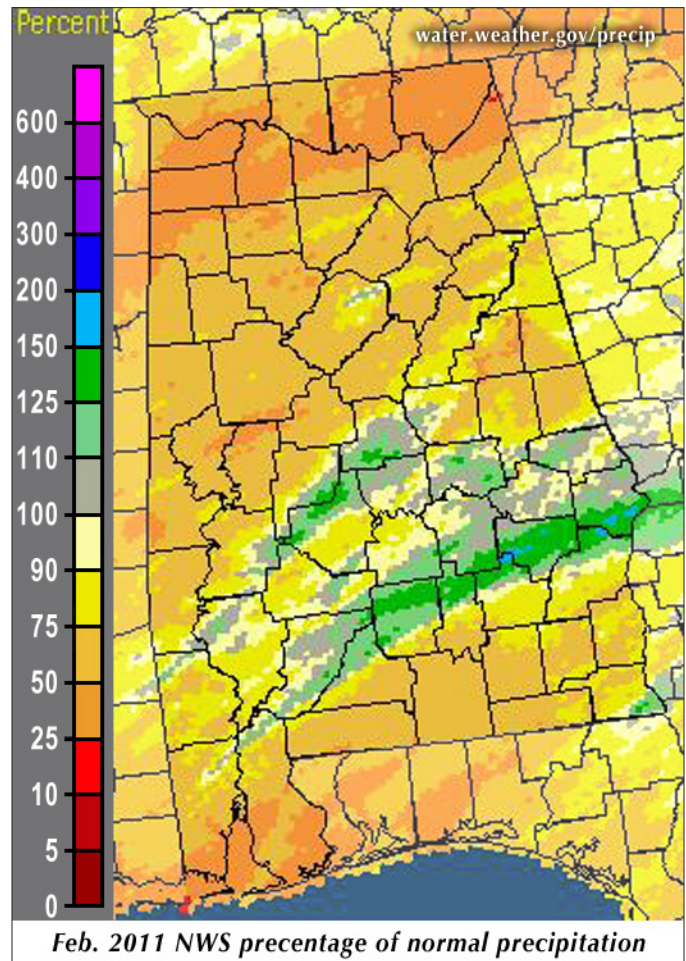
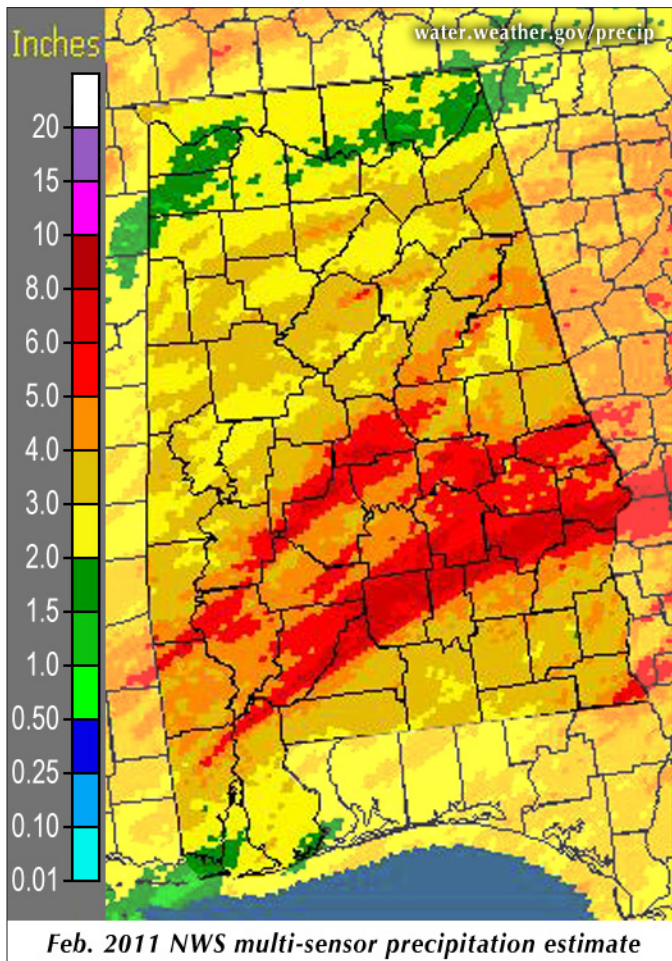
There has also been a developing drought situation in various stages across the state this winter. In particular, stream

levels are very low. The southern and eastern sections of Alabama are well under average rainfall, as is typical when the tropical Pacific Ocean is colder than normal, an event known as a La Niña.

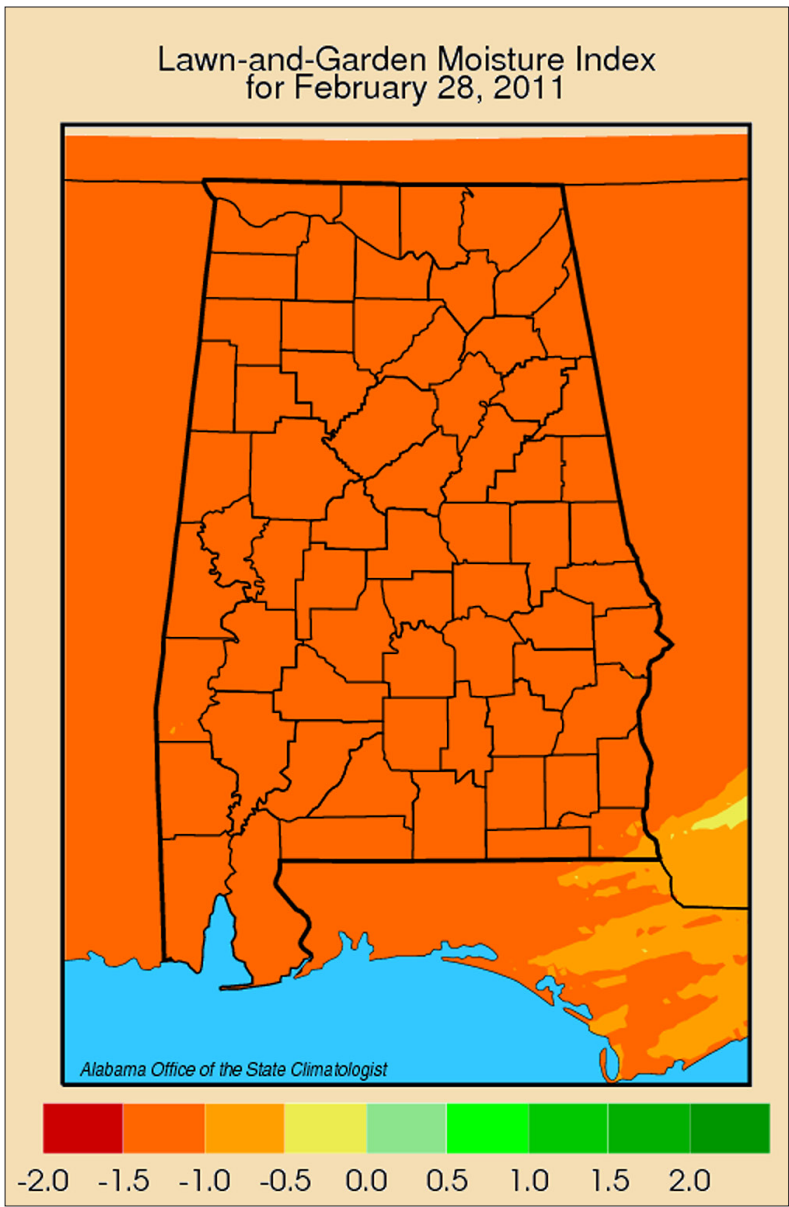
A feature of the La Niña is that storm systems tend to be steered toward the Ohio Valley and away from the Gulf states. While this won't happen with all storms, any reduction in our usual number will lead to dryness. Such a situation often persists into spring. If this happens it sets up a serious drought situation for the summer, when spotty showers leave many areas high and dry for long periods.

As everyone can attest, a switch from cold winter to unseasonable warmth occurred around the 13th of this past month, followed by several tied and broken warm weather records during the rest

Continued on page 2



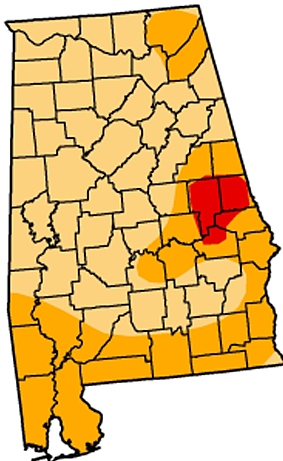
The lawn-and-garden moisture index measures the capacity of current soil moisture to sustain healthy lawns and gardens. The index is computed by estimating how much precipitation in the past three weeks contributes to current soil moisture. That rainfall is compared to a "standard" amount of rainfall considered to be adequate for that time of year to sustain healthy lawns and gardens. The difference is the lawn-and-garden moisture index.



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	38.70	3.31	0.00
Last Week (02/22/2011 map)	0.00	100.00	87.54	28.25	0.00	0.00
3 Months Ago (11/30/2010 map)	7.43	92.57	60.07	35.09	6.26	0.00
Start of Calendar Year (12/28/2010 map)	17.47	82.53	55.26	29.34	1.82	0.00
Start of Water Year (09/28/2010 map)	3.64	96.36	66.34	25.17	4.40	0.00
One Year Ago (02/23/2010 map)	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

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



U.S. Drought Monitor Alabama

<http://drought.unl.edu/dm>



Released Thursday, March 3, 2011
L. Edwards, Western Regional Climate Center

of the month. (See listings below.) It was a bit of a roller coaster month.

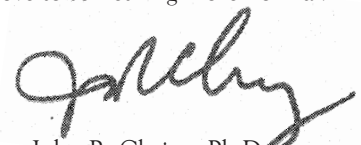
I'm often asked, mainly by industries considering a move to Alabama, about various climate parameters. The general rule is that industry does not want service or transportation interruptions due to weather, so the less snow and ice the better. Another common question relates to the range in temperature between summer and winter. As you can imagine, the larger the temperature swing the more expensive it is to build the infrastructure to accommodate those temperature extremes – from heating and cooling systems to materials for construction and so on.

On average, Alabama's statewide average temperature varies from 79.1° F in summer (average of June, July and August) to 46.9° F in winter (Dec., Jan. and Feb.). That gives us a range of 32.2° F.

For the U.S. mainland, that isn't especially large. Illinois varies on average 45° F between summer and winter, while North Dakota sees a range of over 55° F. So Alabama's annual temperature range is relatively small (i.e. not very expensive), but it does vary from year to year.

Some years might have a cool summer and a warm winter, such as 1950, when the difference between summer and the previous winter was only 23.2° F. More recently, the hot summer of 2010 followed the colder than normal winter of 2009-10, producing a temperature spread of 40.4° F. That just beat the previous record difference between the summer of 1977 and the following winter (40.1° F).

The past year or so has given us a rather wild ride of temperature variations, from the cold winter in 2009-10 to the hot summer in 2010 back to a cold winter again in 2010-11. The summer-to-winter change gave us another large spread, about 38° F (although final numbers were not available at press time). I believe many of us are ready to get off this roller coaster and move to something more normal.


John R. Christy, Ph.D.

Alabama Monthly Climate Summaries

February 2011

	Feb. Mean Feb. Norm	Feb. Hi Temp Record Hi	Feb. Low Temp Record Lo	Total Precip. Normal Prec.	Wettest Feb. Driest Feb.	Heaviest Day Record Day
Anniston	48.5°	80° 2/28/11	17° 2/11/11	3.50"	8.99" 1990	.97" 2/3-4/11
	47.3°	84°+ 2/23/96	4° 2/17/58	4.80"	1.19" 1978	3.40" 2/2/82
Auburn	51.3°	77° 2/19,28/11	27° 2/11-12/11	4.83"	17.61" 1961	1.95" 2/4/11
	49.9°	82° 2/14/62	7° 2/3/17	5.27"	1.50" 1943	7.83" 2/25/61
Birmingham	50.1°	81° 2/28/11	18° 2/11/11	3.25"	9.28" 1971	1.01" 2/25/11
	46.8°	83°+ 2/23/96	3° 2/17/58	4.21"	1.31" 1978	5.46" 2/21/61
Brewton	52°	80.8° 2/28/11	21.7° 2/12/11	3.46"	1.45" 1980	1.56" 2/4/11
	51°	87° 2/13/62	11°+ 2/4/70	5.67"	12.19" 1982	8.18" 2/11/81
Calera	49.7°	80° 2/28/11	20° 2/11/11	3.30"	15.62" 1961	1.20" 2/1/11
	46.5°	85° 2/13/62	4° 2/10/79	5.32"	.61" 1968	5.55" 2/3/36
Clanton	48.5°	78.3° 2/28/11	18.9° 2/11/11	4.63"	10.22" 1998	1.74" 2/1/11
	46.6°	84° 2/14/62	5° 2/5/96	5.48"	2.27" 2000	4.87" 2/4/36
Courtland	46.1°	76.1° 2/27/11	11.8° 2/11/11	1.50"	M	.61" 2/1/11
	M	M	M	M	M	M
Cullman	46.3°	76.1° 2/28/11	14° 2/11/11	2.85"	M	.91" 2/1/11
	M	M	M	M	M	M
Decatur	46.6°	76° 2/28/11	15° 2/11/11	1.92"	12.16" 1939	.73" 2/24-25/11
	44.2°	83° 2/14/62	-12° 2/13/1899	4.88"	.79" 1968	3.86" 2/1/51
Dothan	54.3°	83° 2/28/11	27° 2/12/11	4.13"	10.36" 1939	1.42" 2/3-4/11
	53.5°	84° 2/25/44	12° 2/3/51	4.80"	.93" 1951	4.26" 2/9/37
Fairhope	51.7°	78.8° 2/27/11	19.9° 2/12/11	2.51"	11.61" 1983	1.11" 2/4/11
	53.1°	87° 2/19/82	3° 2/3/51	5.47"	.82" 1999	8.61" 2/11/81
Gadsden	45.7°	79° 2/28/11	18° 2/11/11	1.88"	10.12" 1990	.76" 2/1/11
	44.1°	82° 2/13/62	1° 2/1/66	4.91"	.71" 1978	4.75" 2/21/61
Gainesville	49.5°	84° 2/28/11	18.1° 2/11/11	3.24"	11.00" 1983	1.51" 2/1/11
	47.2°	87° 2/14/62	9°+ 2/6/96	4.99"	1.55" 2000	5.36" 2/16/90
Greensboro	50.2°	81.7° 2/27-28/11	18.1° 2/11/11	3.47"	12.72" 1990	1.62" 2/1/11
	50°	87° 2/13/62	7° 2/4/96	5.37"	1.64" 2000	5.18" 2/21/61
Guntersville	48.3°	77° 2/28/11	18.9° 2/11/11	2.72"	10.84" 1990	.80" 2/1/11
	43.5°	82° 2/13/62	-2° 2/17/58	5.01"	.39" 1978	5.57" 2/11/94
Highland Home	51.9°	77.5° 2/27/11	23.9° 2/11/11	6.63"	10.78" 1975	3.19" 2/4/11
	49.4°	86° 2/19/56	7°+ 2/6/96	5.35"	1.20" 1980	5.33" 2/17/75
Huntsville	47.4°	77° 2/28/11	17° 2/11/11	2.15"	10.14" 1994	.55" 2/24-25/11
	43.8°	83° 2/23/96	1° 2/4/96	4.70"	.59" 1978	4.04" 2/10/94

Alabama Monthly Climate Summaries

February 2011

	Feb. Mean Feb. Norm	Feb. Hi Temp Record Hi	Feb. Low Temp Record Lo	Total Precip. Normal Prec.	Wettest Feb. Driest Feb.	Heaviest Day Record Day
Mobile	54.2°	81° 2/27/11	23° 2/12/11	2.94"	11.89" 1983	1.13" 2/4/11
	53.5°	84° 2/13/62	11°+ 2/5/96	5.10"	1.09" 1999	5.37" 2/10/81
Montgomery	52.5°	82° 2/27/11	21° 2/12/11	4.67"	9.87" 1982	1.69" 2/3-4/11
	50.5°	85° 2/13/62	10°+ 2/5/96	5.45"	1.11" 1999	5.54" 2/24/61
Muscle Shoals	46.6°	75.7° 2/27/11	11.8° 2/11/11	2.00"	10.74" 1991	.75" 2/24/11
	44.6°	83° 2/13/62	-2° 2/18/58	4.46"	.51" 1978	5.03" 2/12/48
Russellville	46.4°	75.9° 2/28/11	8.8° 2/11/11	2.30"	11.28" 1989	.95" 2/1/11
	42.5°	84° 2/24/96	-12°+ 2/19/58	4.81"	.98" 1972	6.75" 2/19/91
Scottsboro	45.8°	77.7° 2/27-28/11	14.9° 2/11/11	2.08"	9.60" 1990	.56" 2/25/11
	43°	82° 2/15/89	-8° 2/1/66	5.22"	.77" 1978	4.10" 2/16/95
Selma	50°	80.2° 2/27/11	20.8° 2/12/11	3.52"	9.97" 1982	1.21" 2/1/11
	50.5°	85° 2/27/62	9° 2/3/51	4.87"	1.54" 2000	5.31" 2/3/82
Talladega	47.8°	79.9° 2/28/11	16.3° 2/11/11	3.49"	10.37" 1983	1.02" 2/1/11
	44.9°	84°+ 2/26/77	2° 2/18/58	5.11"	1.20" 1978	4.51" 2/21/61
Thomasville	50.3°	80.4° 2/27/11	20.7° 2/12/11	3.51"	14.37" 1929	1.17" 2/1/11
	49.9°	86° 2/10/32	-5° 2/13/1899	5.25"	1.27" 2000	7.15" 2/11/1897
Troy	50.6°	81° 2/28/11	21° 2/12/11	4.57"	10.87" 1975	2.43" 2/3-4/11
	50.3°	85°+ 2/17/01	10°+ 2/6/96	4.83"	.93" 2000	5.60" 1/11/81
Tuscaloosa	49.3°	83° 2/28/11	18° 2/11/11	2.80"	12.70" 1983	.95" 2/1/11
	49.8°	86° 2/13/62	5° 2/2/51	5.07"	1.73" 1978	5.44" 1/21/61
Valley Head	44.7°	75° 2/28/11	13.5° 2/11/11	2.19"	14.73" 1990	.58" 2/1/11
	40.6°	80° 2/14/62	-12°+ 1/19/58	5.62"	.74" 1978	7.39" 2/16/90
Statewide	49.38°	84° Gainesville	8.8° Russellville	3.30"		3.19" Highland H.
	47.58°	87° (Four sites)	-12° (Three sites)	6.08"		8.61" Fairhope

M: Data is missing or not available

*New Record

Community Collaborative Rain, Hail & Snow Network (CoCoRAHS)

February 2011

Normal

February

Precipitation*

	Ave. Total Precip.	# Stations
Autauga	5.18	4
Baldwin	3.21	29
Barbour	4.88	2
Bibb	1.95	2
Blount	2.94	8
Bullock	0.00	0
Butler	0.00	0
Calhoun	2.68	5
Chambers	4.45	1
Cherokee	3.63	1
Chilton	3.92	2
Choctaw	2.70	1
Clarke	2.93	2
Clay	0.00	0
Cleburne	0.00	0
Coffee	1.65	2
Colbert	1.96	7
Conecuh	0.00	0
Coosa	2.88	2
Covington	0.00	0
Crenshaw	0.00	0
Cullman	3.48	4
Dale	4.04	1
Dallas	0.00	0
DeKalb	2.63	3
Elmore	4.74	10
Escambia	3.85	1
Etowah	2.45	1
Fayette	3.34	3
Franklin	2.42	1
Geneva	0.00	0
Greene	0.00	0
Hale	0.00	0
Henry	1.63	2

	Ave. Total Precip.	# Stations
Houston	5.09	3
Jackson	2.78	6
Jefferson	3.24	12
Lamar	2.64	1
Lauderdale	2.26	18
Lawrence	2.01	2
Lee	4.07	4
Limestone	2.17	15
Lowndes	0.00	0
Macon	5.47	1
Madison	1.84	61
Marengo	0.00	0
Marion	2.48	1
Marshall	2.56	11
Mobile	3.51	20
Monroe	0.00	0
Montgomery	4.71	4
Morgan	2.12	7
Perry	0.00	0
Pickens	3.92	1
Pike	0.00	0
Randolph	4.91	3
Russell	4.77	3
St. Clair	2.59	4
Shelby	3.50	19
Sumter	0.00	0
Talladega	4.34	5
Tallapoosa	4.70	7
Tuscaloosa	2.59	4
Walker	3.02	1
Washington	0.00	0
Wilcox	4.56	2
Winston	2.70	2

Abbeville	5.00"
Alex City	5.09"
Aliceville	5.28"
Andalusia	4.98"
Ashland	5.63"
Athens	5.41"
Bay Minette	5.09"
Bessemer	4.90"
Billingsley	5.23"
Centreville	5.52"
Chatom	5.46"
Claiborne L&D	4.74"
Clayton	4.66"
Dauphin Isl.	5.06"
Elba	5.21"
Eufaula WR	4.30"
Evergreen	5.45"
Fayette	5.70"
Geneva 2	5.15"
Greenville	5.19"
Haleyville	5.40"
Hamilton 3S	5.10"
Heflin	5.59"
Hurtsboro	4.42"
Jasper	5.32"
Lafayette	5.38"
Livingston	5.10"
Melvin	5.26"
Milstead	5.09"
Moulton	4.94"
Oneonta	5.24"
Perryville	4.99"
Pine Apple	4.94"
Plantersville	5.43"
Rock Mills	5.09"
Rockford	5.57"
Sylacauga	5.23"
Union Springs	5.09"
Uniontown	4.89"
Vernon	5.21"
Warrior L&D	5.25"
Wetumpka	5.27"

*Southeast Regional Climate Center
www.serrc.com

New Daily Local Climate Records¹

February 2011

Snowfall

4 February 2011

SAND MT SUBSTN	3.0 in	0.5 in	1998	62
GUNTERSVILLE	2.5 in	Trace	1995	106
FT PAYNE	1.5 in	0.0 in	2007	75

9 February 2011

HUNTSVILLE INTL AP	2.3 in	1.0 in	1979	52
BIRMINGHAM AP	1.0 in	0.8 in	1967	81

10 February 2011

SAND MT SUBSTN	3.0 in	0.0 in	2007	62
RUSSELLVILLE #2	2.0 in	0.5 in	1988	57
MOULTON 2	1.6 in	0.5 in	1980	53

Minimum Low Temperature

	New Record	Previous Record	Previous Year	Period of Record
11 February 2011				
BELLE MINA 2 N	12.0°F	14.0°F	1955	60
MOULTON 2	14.0°F	15.0°F	1981	51
TUSCALOOSA ACFD	18.0°F	19.0°F	1981	62
TUSCALOOSA MUNI AP	18.0°F	19.0°F	1981	49
MOBILE DOWNTOWN AP	25.0°F	28.0°F	1997	50
ATMORE	25.0°F	26.0°F	1947	50
DAUPHIN IS #2	29.0°F	31.0°F	1979	35

Precipitation

	New Record	Previous Record	Previous Year	Period of Record
1 February 2011				
DOTHAN AP	1.09 in	0.95 in	2008	109
4 February 2011				
TROY MUNICIPAL AP	2.13 in	0.79 in	1998	41
GADSDEN	1.8 in	1.48 in	1990	57
MONTGOMERY AP	1.66 in	1.38 in	1986	63
BILLINGSLEY 3 NE	1.28 in	1.25 in	1956	72
DOTHAN AP	1.24 in	1.21 in	1959	109
HEADLAND	1.14 in	0.77 in	1995	60
5 February 2011				
GREENVILLE	2.82 in	2.26 in	1986	110
HURTSBORO	2.25 in	1.04 in	1986	32
OPELIKA	1.95 in	1.8 in	1986	53
8 February 2011				
GENEVA #2	0.46 in	0.25 in	1986	34
10 February 2011				
VERNON	4.0 in	2.1 in	1990	72
BERRY 3 NW	3.5 in	0.15 in	1950	71
ALICEVILLE L&D	2.75 in	2.43 in	1983	30
25 February 2011				
BANKHEAD L&D	1.15 in	1.12 in	1961	54
PALMERDALE	1.13 in	1.03 in	1961	62
ALICEVILLE L&D	0.93 in	0.82 in	1985	30

Maximum High Temperature

	New Record	Previous Record	Previous Year	Period of Record
17 February 2011				
PINSON	71.0°F	70.0°F	1994	30
19 February 2011				
MOBILE RGNL AP	80.0°F	79.0°F	1976	62
TUSCALOOSA MUNI AP	77.0°F	76.0°F	1986	48
20 February 2011				
MONTGOMERY AP	80.0°F	77.0°F	1976	62
OPELIKA	77.0°F	76.0°F	1971	48
FAYETTE	75.0°F	73.0°F	1971	69
21 February 2011				
MONTGOMERY AP	81.0°F	79.0°F	2005	62
22 February 2011				
MONTGOMERY AP	79.0°F	78.0°F	2005	62
CENTREVILLE 6 SW	78.0°F	77.0°F	2005	36
GADSDEN	76.0°F	75.0°F	1981	54
SYLACAUGA 4 NE	76.0°F	74.0°F	1996	50
23 February 2011				
EUFAULA WILDLIFE REF	80.0°F	79.0°F	2005	38
26 February 2011				
DAUPHIN IS #2	75.0°F	73.0°F	2000	35
27 February 2011				
GENEVA #2	81.0°F	80.0°F	1996	33
DAUPHIN IS #2	76.0°F	73.0°F	1996	35
28 February 2011				
TUSCALOOSA ACFD	83.0°F	80.0°F	1981	62
HEFLIN	81.0°F	80.0°F	1981	49
CENTREVILLE 6 SW	81.0°F	80.0°F	1981	36
BIRMINGHAM AP	81.0°F	80.0°F	1981	80
VERNON	80.0°F	79.0°F	1981	51
GADSDEN	79.0°F	78.0°F	1981	53
HUNTSVILLE INTL AP	77.0°F	76.0°F	2007	51
MOULTON 2	76.0°F	75.0°F	1976	50

Maximum High Temperature, Month

	New Record	Previous Record	Previous Year	Period of Record
28 February 2011				
HEFLIN	81.0°F	80.0°F	27 Feb 1996*	50
* tied 27 Feb 2011				

¹<http://lwf.ncdc.noaa.gov/extremes/records.php>

* This record differs from long-term data in the AOSC climate database:
http://nsstc.uah.edu/alclimate/climate/daily_climate_and_normals.php

