

Alabama Climate Report

When we have our first hot spell of the spring or summer I can count on people asking, “Is this going to be a hot summer?”

This is especially the case when the hot spell follows a cold period, such as the one that set record lows in Alabama in mid-May (see table below). The truth is, no one knows if this will be a “hot” summer or not because we have no skill at predicting how atmospheric pressure patterns will set up.

As May ended and June began, the Southeastern U.S. was locked under an intense, warm high-pressure system that brought record or near record temperatures to Alabama cities. This sweltering region goes from Texas (with devastating drought) to Georgia. At the same time, in the

western U.S. some ski resorts are bragging about staying open through the July 4 weekend because there has been so much snow and persistent cold weather.

Sometimes weather patterns become relatively fixed. This year there has been a strong tendency for low pressure to sit off the west coast, with high pressure from Texas along the Gulf and a stormy low pressure area in the Ohio Valley.

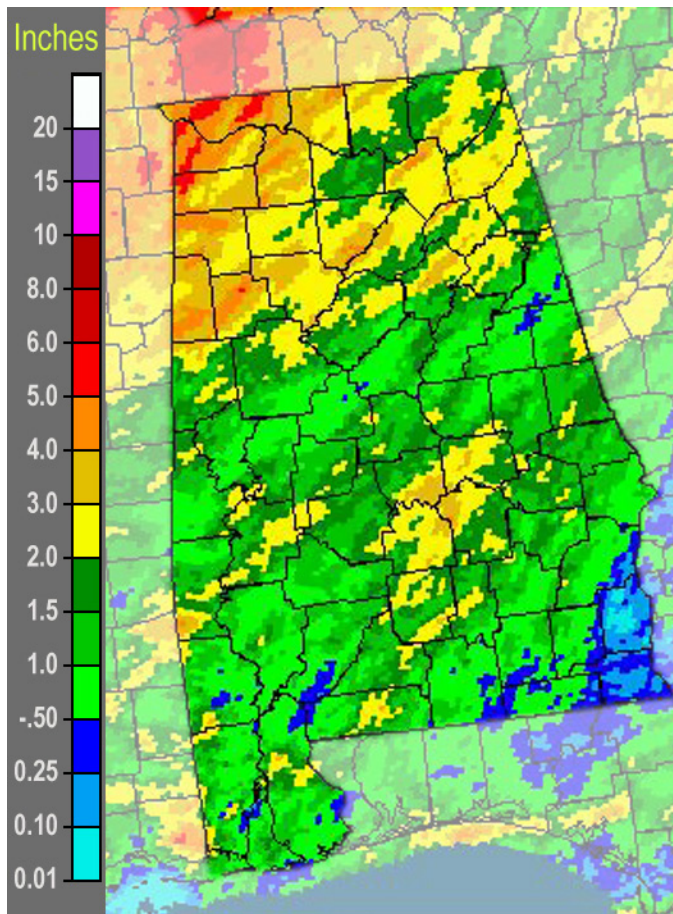
When such patterns become somewhat immobile, so to do the storms associated with low pressure areas. The Ohio Valley had tremendous snow and rain this winter and spring, the results of which are flowing through the lower Mississippi River. Along the southern edge of those storms, i.e. northern

Alabama, is where the strongest air mass contrasts occurred. This sets up conditions for violent weather.

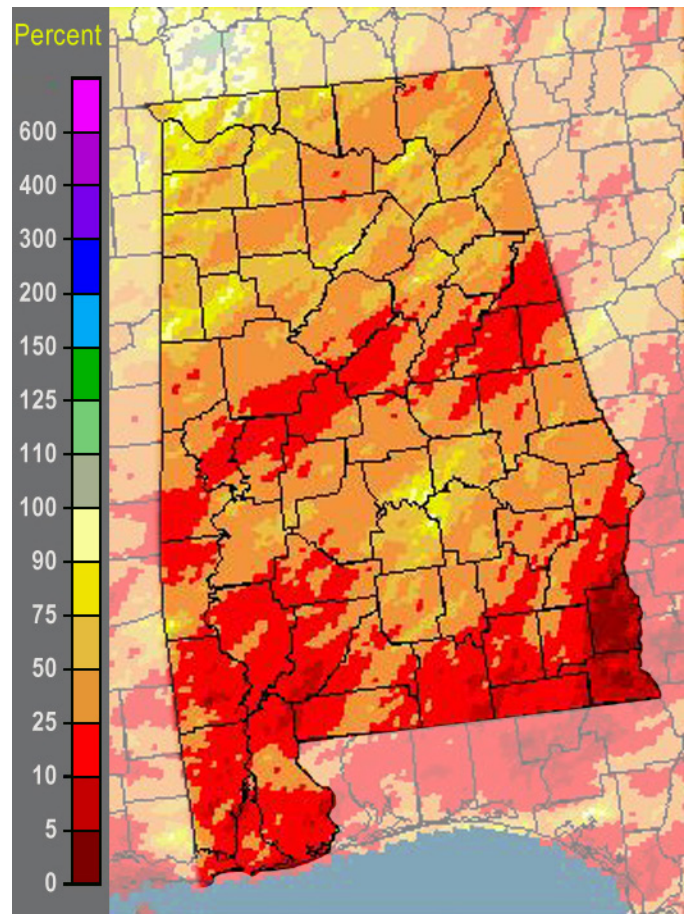
As summer approaches and the general pattern shifts northward, the drought that developed this winter and spring in south Alabama is now in the “Extreme” category, with many streams nearing record low values. Statewide rainfall averaged about one-third of normal in May, while both Dothan and Gadsden set records for the driest May.

We are watching this situation closely because it is quite serious. In somewhat of an irony, we’ve missed out on tropical storms for five years now. It could well be our turn for a drought-quenching but property-damaging hurricane.

Continued on page 2

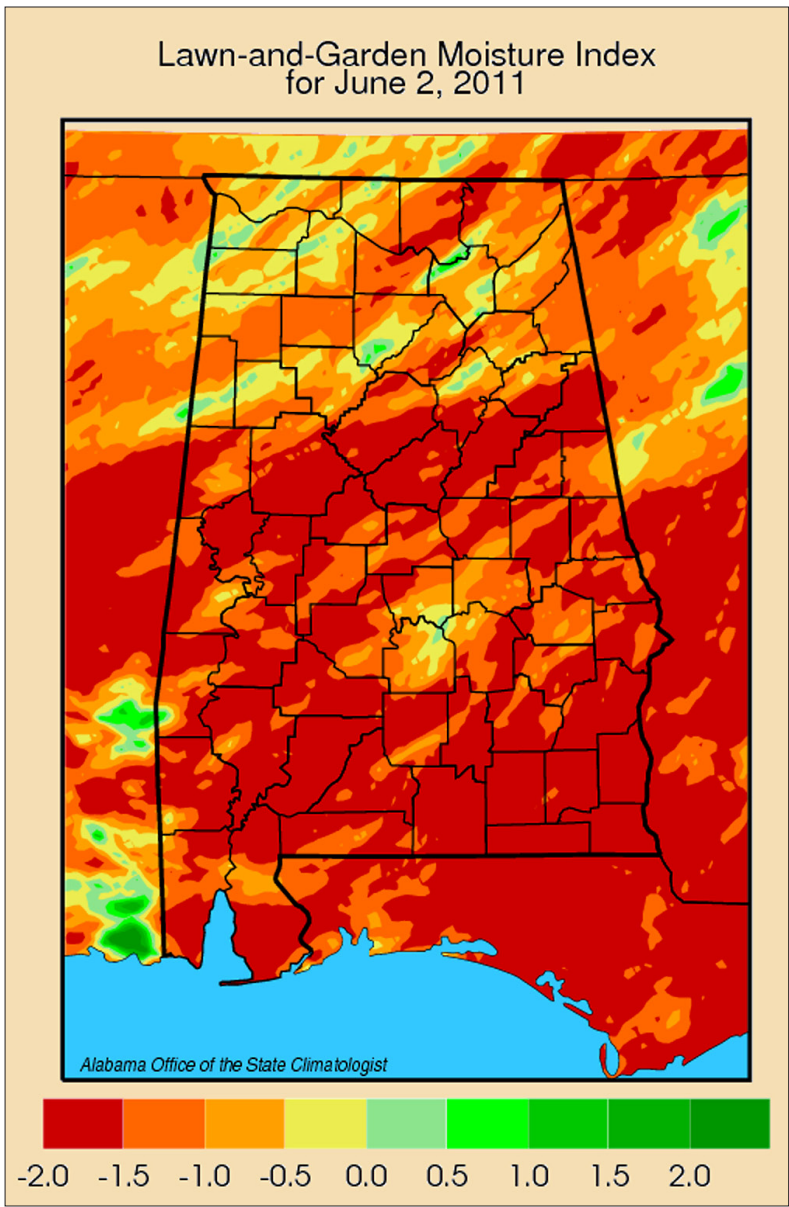


May 2011 NWS multi-sensor precipitation estimate



May 2011 NWS percentage of normal precipitation

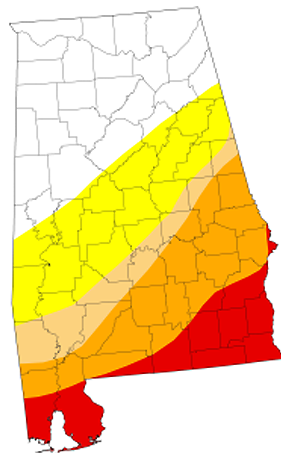
The lawn-and-garden moisture index measures the capacity of current soil moisture to sustain healthy lawns and gardens. The index is computed by estimating how much precipitation in the past three weeks contributes to current soil moisture. That rainfall is compared to a "standard" amount of rainfall 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	33.25	66.75	43.51	34.26	13.15	0.00
Last Week (05/24/2011 map)	33.25	66.75	42.79	33.55	12.87	0.00
3 Months Ago (03/01/2011 map)	0.00	100.00	100.00	38.70	3.31	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 (09/29/2010 map)	3.64	96.36	66.34	25.17	4.40	0.00
One Year Ago (05/25/2010 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, June 2, 2011
Anthony Artusa, NOAA/NWS/NCEP/CPC

There is one other thing that concerns me however. I've been assembling and processing summer temperature data for Alabama's four largest metro areas: Huntsville, Birmingham, Montgomery and Mobile. I read through paper forms since the 1890s for dozens of stations (one per month for each station).

I've finished Huntsville's record and am close on Birmingham and Montgomery. They all show that since the 1890s the overall trend of afternoon summertime high temperatures is *downward*.

But that's not the whole story.

If you are less than 55 years old, the recent summers have been (to you) the hottest ever, with the three hottest by far being 2006, 2007 and 2010.

I'm concerned because our generation has become accustomed to summer activities in what the data (see graph on page 8) shows has been a "cool" period since 1955 (if summer in Alabama can ever be considered "cool").

Recently, however, we've seen a return to the "normal" of the pre-1955 climate. I wonder how we will cope if the persistent heat and droughts of those years returns, especially a year like 1930 in which some Alabama stations saw high temperatures hit 110 °F.

Some folks like it hot and many businesses do quite well the hotter it gets, but let's keep an eye on history and make sure we are prepared if a decade like the 1930's happens to visit us again.

Stay cool.

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Alabama Monthly Climate Summaries

May 2011

	May Mean May Norm	May Hi Temp Record Hi	May Low Temp Record Lo	Total Precip. Normal Prec.	Wettest May Driest May	Heaviest Day Record Day
Anniston	69.4°	95° 5/30-31/11	39° 5/5/11	*0.97"	8.59" 1983	0.62" 5/3-4/11
	69.4°	98° 5/16/62	34° 5/13/60	4.16"	1.81" 1977	3.32" 5/19/83
Auburn	71.2°	95° 5/31/11	43° 5/5/11	1.32"	10.33" 1915	0.55" 5/3/11
	71.7°	98° 5/27/1911	35° 5/13/60	3.75"	0.36" 1914	4.53" 5/7/15
Birmingham	71.0°	95° 5/30-31/11	44° 5/18/11	1.06"	9.57" 1983	0.52" 5/2-3/11
	69.3°	99° 5/28/62	36° 5/4/71	4.83"	0.88" 2000	3.85" 5/6/67
Brewton	70.9°	94.1° 5/31/11	41.4° 5/18/11	2.76"	15.97" 1991	1.83" 5/13/11
	70.9°	100° 5/26/33	34° 5/4/71	5.56"	0.85" 1988	5.00"+ 5/10/95
Calera	70.6°	95° 5/31/11	43° 5/18/11	0.71"	9.99" 2003	0.38" 5/3/11
	69.5°	98° 5/21/62	31° 5/13/60	4.02"	0.34" 1977	3.65" 5/12/12
Clanton	68.6°	91.9° 5/5/31/11	40.8° 5/5/11	1.41"	13.26" 1991	0.71" 5/26/11
	69.2°	99°+ 5/31/45	33° 5/13/60	4.36"	0.57" 1977	3.75" 5/20/46
Courtland	68.1°	91.2° 5/31/11	38.5° 5/5/11	3.36"	M	1.06" 5/3/11
	M	M	M	M	M	M
Cullman	66.7°	91.9° 5/31/11	36.3° 5/5/11	1.94"	M	0.79" 5/3/11
	M	M	M	M	M	M
Decatur	69.7°	96° 5/31/11	42° 5/5/11	1.75"	8.44" 1907	0.78" 5/2-3/11
	70.2	100° 3/31/14	34° 5/2/1909	3.87"	0.15" 1941	3.50" 5/29/1912
Dothan	74.9°	99° 5/31/11	47° 5/5;18/11	*0.34"	8.73" 1947	0.20" 5/13-14/11
	74.6°	104° 5/30/37	44° 5/5/54	3.37"	0.45" 1962	4.10" 5/12/1903
Fairhope	71.2°	91.8° 5/31/11	39° 5/18/11	0.85"	13.75" 1991	0.59" 5/3/11
	73.3°	98° 5/27/53	43° 5/13/60	5.60"	0.31" 1988	6.54" 5/20/81
Gadsden	65.7°	88.7° 5/31/11	34° 5/5/11	2.24"	7.75" 1973	1.28" 5/26/11
	68.4°	99° 5/24/70	33° 5/13/60	4.59"	1.43" 2000	3.22" 5/22/67
Gainesville	70.0°	93.7° 5/31/11	42.8° 5/5/11	1.37"	12.17" 1978	0.54" 5/3/11
	70.0°	97° 5/31/77	38° 5/5/86	4.43"	0.12" 2000	5.12" 5/1/78
Greensboro	70.2°	93.6° 5/31/11	41.4° 5/18/11	1.22"	10.30" 1991	0.61" 5/26/11
	71.9°	98°+ 5/24/96	37°+ 5/10/66	4.47"	0.81" 1992	4.10" 5/18/30
Guntersville	69.0°	91.9° 5/31/11	44.6° 5/4/11	2.17"	8.31" 1973	0.92" 5/26/11
	67.7°	99° 5/17/62	36° 5/2/63	4.47"	1.07" 1982	4.73" 5/3/97
Highland Home	71.4°	92.5° 5/30/11	44.1° 5/5/11	1.11"	9.61" 1976	0.61" 5/3/11
	70.7°	98° 5/22/62	40° 5/13/81	4.05"	0.44" 2000	4.46" 5/4/78
Huntsville	70.1°	96° 5/31/11	42° 5/5/11	1.91"	11.88" 1983	0.87" 5/3/11
	69.2°	96° 5/20/1960	36° 5/3/71	5.04"	0.78" 2007	4.64" 5/16/80

Alabama Monthly Climate Summaries

May 2011

	May Mean May Norm	May Hi Temp Record Hi	May Low Temp Record Lo	Total Precip. Normal Prec.	Wettest May Driest May	Heaviest Day Record Day
Mobile	74.1°	97° 5/31/11	44° 5/18/11	0.42"	15.08" 1980	0.32" 5/26/11
	73.5°	100°+ 5/27/53	43° 5/13/60	6.10"	0.36" 1996	7.96" 5/5/81
Montgomery	71.5°	96° 5/31/11	42° 5/18/11	3.34"	12.01" 1978	2.02" 5/26/11
	72.3°	98° 5/27/53	40° 5/4/71	4.14"	0.68" 1995	5.23" 5/9/78
Muscle Shoals	67.6°	91.2° 5/31/11	39.7° 5/5/11	3.59"	11.86" 1983	1.11" 5/3/11
	68.8°	99° 5/29/41	36°+ 5/4/71	5.30"	1.18" 1987	3.32" 5/17/80
Russellville	66.9°	89.8° 5/31/11	35.6° 5/5/11	3.35"	18.37" 1991	1.39" 5/13/11
	66.1°	95°+ 5/27/00	31°+ 5/4/76	5.87"	0.62" 1987	6.10" 5/8/84
Scottsboro	66.3°	91.8° 5/31/11	36.7° 5/5/11	2.76"	9.81" 1983	1.18" 5/26/11
	67.3°	97° 5/29/41	32° 5/4/71	5.02"	1.27" 1992	5.00" 5/3/97
Selma	70.6°	95.2° 5/31/11	41.2° 5/18/11	1.00"	9.01" 1991	0.37" 5/14/11
	71.8°	100° 5/27/53	40° 5/7/44	3.71"	0.10" 1977	3.40" 5/4/57
Talladega	68.8°	93.7° 5/30/11	39° 5/5/11	1.71"	11.72" 1983	0.70" 5/13/11
	67.4°	96°+ 5/25/96	32° 5/4/71	4.71"	1.55" 1995	5.22" 5/19/83
Thomasville	70.4°	94.5° 5/29/11	39.2° 5/18/11	0.67"	12.04" 1980	0.26" 5/3/11
	72.1°	99° 5/31/37	36° 5/13/60	4.75"	0.64" 1988	5.07" 5/1/40
Troy	70.2°	95° 5/30-31/11	38° 5/5/11	0.85"	9.57" 1976	0.61" 5/13-14/11
	71.2°	99° 5/30/37	38° 5/4/71	3.73"	0.14" 1977	4.65" 5/6/53
Tuscaloosa	70.7°	96° 5/31/11	42° 5/4-5/11	1.09"	11.13" 1976	0.50" 5/13/11
	71.9°	98° 5/31/51	36° 5/4/76	4.55"	0.44" 2000	3.91" 5/1/58
Valley Head	65.4°	89.2° 5/30/11	34.2° 5/5/11	2.02"	8.63" 1978	1.04" 5/26/11
	64.4°	94°+ 5/29/62	29°+ 5/4/76	4.70"	1.08" 1992	4.19" 5/3/97
Statewide	69.86° 70.11°	99° Dothan 104° Dothan	34° Gadsden 29°+ Valley Head	1.62" 4.58"	18.37" Russellville 0.10" Selma	2.02" Montgomery 7.96" Mobile

M: Data is missing or not available
**New Record*

Community Collaborative Rain, Hail & Snow Network (CoCoRAHS)

May 2011

Normal

May

Precipitation*

	Ave. Total Precip.	# Stations
Autauga	2.67	4
Baldwin	1.11	23
Barbour	0.05	1
Bibb	1.66	2
Blount	2.81	8
Bullock	NA	0
Butler	NA	0
Calhoun	1.86	3
Chambers	0.85	1
Cherokee	2.48	1
Chilton	1.80	2
Choctaw	1.59	1
Clarke	1.15	2
Clay	NA	0
Cleburne	NA	0
Coffee	1.82	1
Colbert	3.78	7
Conecuh	NA	0
Coosa	0.65	2
Covington	NA	0
Crenshaw	NA	0
Cullman	3.14	4
Dale	0.85	1
Dallas	1.86	1
DeKalb	3.17	3
Elmore	2.21	8
Escambia	2.12	1
Etowah	1.58	1
Fayette	3.88	3
Franklin	NA	0
Geneva	NA	0
Greene	NA	0
Hale	NA	0
Henry	NA	0

	Ave. Total Precip.	# Stations
Houston	0.57	3
Jackson	3.45	6
Jefferson	1.38	12
Lamar	3.90	1
Lauderdale	3.44	18
Lawrence	2.72	2
Lee	1.92	2
Limestone	2.94	15
Lowndes	NA	0
Macon	0.99	1
Madison	2.13	61
Marengo	NA	0
Marion	3.03	1
Marshall	2.06	11
Mobile	1.54	20
Monroe	NA	0
Montgomery	2.42	4
Morgan	1.59	8
Perry	NA	0
Pickens	1.68	1
Pike	NA	0
Randolph	1.69	3
Russell	0.80	3
St. Clair	1.92	3
Shelby	0.82	17
Sumter	NA	0
Talladega	1.06	6
Tallapoosa	1.63	6
Tuscaloosa	1.40	4
Walker	0.00	1
Washington	0.25	1
Wilcox	1.24	2
Winston	1.95	2

Abbeville	3.98"
Alex City	4.52"
Aliceville	3.80"
Andalusia	4.47"
Ashland	4.47"
Athens	4.40"
Bay Minette	5.42"
Bessemer	5.17"
Billingsley	3.64"
Centreville	4.42"
Chatom	5.01"
Claiborne L&D	4.09"
Clayton	3.94"
Dauphin Isl.	5.02"
Elba	4.18"
Eufaula WR.....	3.70"
Evergreen	4.54"
Fayette	4.37"
Geneva 2	4.02"
Greenville	4.08"
Haleyville	5.18"
Hamilton 3S	5.99"
Heflin	4.81"
Hurtsboro	4.31"
Jasper	5.44"
Lafayette	4.22"
Livingston	4.10"
Melvin	4.59"
Milstead	3.87"
Moulton	5.19"
Oneonta	4.45"
Perryville	3.65"
Pine Apple	4.27"
Plantersville	4.10"
Rock Mills	4.01"
Rockford	4.39"
Sylacauga	4.08"
Union Springs ..	3.85"
Uniontown	3.72"
Vernon	5.00"
Warrior L&D ...	4.08"
Wetumpka	3.54"

*Southeast Regional Climate Center
www.serrc.com

New Local Climate Records¹

May 2011

Maximum High Temperature, Daily

	Period of Record	New Record	Previous Record	Previous Year
5 May 2011				
EUFAULA WR	40	90.0°	89.0°	2002
11 May 2011				
CLAYTON	49	93.0°	91.0°	1962
FAYETTE.....	69	92.0°	91.0°	2007
RUSSELLVILLE #2	57	90.0°	89.0°	2007
12 May 2011				
RUSSELLVILLE #2.....	57	92.0°	90.0°	2005
13 May 2011				
CLAYTON.....	50	94.0°	93.0°	2000
BAY MINETTE.....	85	93.0°	91.0°	2007
22 May 2011				
GENEVA #2.....	35	93.0°	92.0°	2006
23 May 2011				
EUFAULA WR	42	99.0°	94.0°	1970
ENTERPRISE 4 W	39	96.0°	94.0°	1973
GENEVA #2.....	35	95.0°	93.0°	2010
SAND MT SUBSTN	58	90.0°	89.0°	1970
29 May 2011				
GADSDEN.....	54	95.0°	93.0°	1962
30 May 2011				
CLAYTON.....	50	97.0°	95.0°	1958
GENEVA #2.....	35	97.0°	94.0°	1982
ANNISTON METRO AP	70	95.0°	94.0°	1954
TUSCALOOSA MUNI AP	48	95.0°	94.0°	1982
BANKHEAD LOCK & DAM.....	51	94.0°	93.0°	1977
RUSSELLVILLE #2.....	57	92.0°	90.0°	2006
31 May 2011				
ENTERPRISE 4 W	39	97.0°	94.0°	1974
HEADLAND.....	57	96.0°	95.0°	2004
HUNTSVILLE INTL AP.....	53	96.0°	93.0°	2006
GENEVA #2.....	36	96.0°	94.0°	2006
BIRMINGHAM AP	82	95.0°	94.0°	2006
RUSSELLVILLE #2.....	57	94.0°	93.0°	1977
PINSON	32	93.0°	92.0°	2006

Precipitation, Daily

	Period of Record	New Record	Previous Record	Previous Year
5 May 2011				
ALICEVILLE L&D.....	31	0.46 in	0.41 in	2002
13 May 2011				
PINSON	31	0.94 in	0.76 in	1987
14 May 2011				
HAMILTON 3 S.....	49	1.95 in	1.61 in	1976
JONES BLUFF L&D.....	30	1.4 in	0.78 in	1991
HOLT LOCK & DAM.....	30	1.1 in	0.9 in	1987
ENTERPRISE 4 W	44	0.9 in	0.82 in	1999
ALICEVILLE L&D.....	31	0.48 in	0.45 in	1991
26 May 2011				
MONTGOMERY AP	63	2.02 in	1.98 in	2009
BERRY 3 NW	71	1.65 in	0.12 in	1940
TALLAPOOSA WTP.....	33	1.13 in	0.9 in	2009
27 May 2011				
DEMOPOLIS L&D	59	1.68 in	1.12 in	1981
31 May 2011				
BAY MINETTE.....	98	2.5 in	1.65 in	1997

Minimum Low Temperature, Month

	Period of Record	New Record	Previous Record	Previous Date
6 May 2011				
CENTREVILLE 6 SW	36	37.0°	38.0°	5/5/2004
8 May 2011				
TROY MUNICIPAL AP	35	38.0°	42.0°	8/5/2007

Maximum High Temperature, Month

	Period of Record	New Record	Previous Record	Previous Date
23 May 2011				
EUFAULA WILDLIFE REF	43	99.0°	98.0°	30/5/2006
30 May 2011				
GENEVA #2	35	97.0°	96.0°	25/5/2010

Minimum Low Temperature, Daily

	Period of Record	New Record	Previous Record	Previous Year					
5 May 2011					18 May 2011				
MOULTON 2.....	53	36.0°	37.0°	1957	OPELIKA.....	51	38.0°	45.0°	1973
CENTREVILLE 6 SW.....	36	37.0°	38.0°	2004	CENTREVILLE 6 SW.....	36	38.0°	44.0°	1997
ALEXANDER CITY.....	41	39.0°	40.0°	1997	PINSON.....	31	39.0°	43.0°	2009
HUNTSVILLE INTL AP.....	52	42.0°	43.0°	1997	ANNISTON METRO AP.....	70	40.0°	44.0°	1973
WETUMPKA.....	65	42.0°	43.0°	1945	BREWTON 3 SSE.....	84	40.0°	42.0°	1926
DAUPHIN IS #2.....	33	59.0°	61.0°	2005	CLAYTON.....	51	41.0°	45.0°	1983
6 May 2011					BESSEMER 3 WSW.....	34	41.0°	48.0°	2009
CENTREVILLE 6 SW.....	36	37.0°	38.0°	1997	ALEXANDER CITY.....	41	41.0°	44.0°	1973
GAINESVILLE LOCK.....	51	39.0°	44.0°	1997	MONTGOMERY AP.....	63	42.0°	48.0°	1973
GREENVILLE.....	81	42.0°	44.0°	2008	THORSBY EXP STN.....	50	42.0°	43.0°	1973
MOBILE RGNL AP.....	63	47.0°	50.0°	1992	EVERGREEN.....	87	43.0°	45.0°	1967
MOBILE DOWNTOWN AP.....	48	49.0°	51.0°	1997	ENTERPRISE 4 W.....	38	43.0°	48.0°	1973
DAUPHIN IS #2.....	33	59.0°	60.0°	1997	TUSCALOOSA MUNI AP.....	49	43.0°	44.0°	1973
7 May 2011					ATMORE.....	49	44.0°	47.0°	1945
CENTREVILLE 6 SW.....	36	40.0°	42.0°	1992	FAIRHOPE 2 NE.....	91	45.0°	47.0°	1945
TROY MUNICIPAL AP.....	31	44.0°	47.0°	2007	ROBERTSDALE.....	72	45.0°	46.0°	1945
8 May 2011					SELMA.....	111	46.0°	47.0°	1973
CENTREVILLE 6 SW.....	36	43.0°	44.0°	2007	CODEN.....	47	46.0°	50.0°	1973
15 May 2011					MOBILE DWTN AP.....	47	47.0°	51.0°	1945
WETUMPKA.....	64	41.0°	42.0°	1917	BAY MINETTE.....	88	47.0°	51.0°	1924
16 May 2011					DOTHAN AP.....	71	47.0°	51.0°	1945
BREWTON 3 ENE.....	32	46.0°	48.0°	1984	DAUPHIN ISLAND #2.....	33	56.0°	60.0°	2009
MOBILE REGIONAL AP.....	63	48.0°	49.0°	2006	19 May 2011				
MOBILE DWTN AP.....	47	49.0°	53.0°	2006	CENTREVILLE 6 SW.....	35	38.0°	41.0°	2007
FAIRHOPE 2 NE.....	92	49.0°	50.0°	1973	GENEVA #2.....	34	40.0°	47.0°	1976
DAUPHIN ISLAND #2.....	33	63.0°	64.0°	1981	OPELIKA.....	51	40.0°	46.0°	1984
17 May 2011					BREWTON 3 SSE.....	84	41.0°	42.0°	1976
CLAYTON.....	51	42.0°	45.0°	1997	GREENVILLE.....	81	44.0°	47.0°	2007
ROBERTSDALE.....	74	42.0°	47.0°	1967	GAINESVILLE LOCK.....	50	44.0°	46.0°	1976
GENEVA #2.....	35	46.0°	49.0°	2006	SELMA.....	112	44.0°	47.0°	1976
MOBILE REGIONAL AP.....	63	46.0°	52.0°	2006	CLAYTON.....	51	45.0°	48.0°	1976
BREWTON 3 ENE.....	32	47.0°	49.0°	1984	CODEN.....	47	46.0°	49.0°	2002
BAY MINETTE.....	88	47.0°	48.0°	1926	FAIRHOPE 2 NE.....	90	47.0°	49.0°	2002
CODEN.....	48	47.0°	48.0°	1973	ROBERTSDALE.....	74	47.0°	48.0°	1945
MONTGOMERY AP.....	63	47.0°	48.0°	1956					
MOBILE DWTN AP.....	47	50.0°	53.0°	2006					
DAUPHIN ISLAND #2.....	33	56.0°	62.0°	1983					

JJA Huntsville Area Average TMax (16 Stations total since 1893)

