



The
Alabama
Climate Report

Brought to you by the Office of the Alabama Climatologist

OCTOBER 2023



Volume 15, Number 6 :: OCTOBER 2023



On average, October is Alabama's driest of all the months. This October was no exception. The state received a mere 1.40 inches of rainfall, which is 1.43 inches less than the 20th century normal of 2.83 inches. With such little rainfall in October, drought conditions continue to degrade throughout the month.

A drier than average October translates to a very dry month. Of the 231 stations with rain gauges and no missing days of recorded observations, 133 stations reported less than 1 inch of rainfall. The driest location for this October was the Harvest 3.9 SE station recording a measly 0.19 inch of rainfall. Drier than average conditions also contributed to almost 96% of the state being placed in some level of drought by the end of October. There were, however, a few stations that reported adequate rainfall amounts. The Auburn No.2 station had the highest rainfall total reported for the month at 4.07 inches, most of which occurred between the 11th and 12th of October.

From a temperature perspective, Alabama was 1.3°F warmer than normal statewide. Since October is a transition month, there were bouts of colder and warmer than normal weather throughout the month. The first few days of the month were particularly hot, where many stations across Alabama recorded temperatures in the upper 80s and low 90s. Six stations (Mobile Regional Airport, Muscle Shoals Airport, Selma, Northport 2 S, Bon Secour, and Open Pond) recorded the warmest locations of the month with a high temperature of 92°F. In contrast, the coldest daily extreme of the month was recorded at the Auburn No. 2 station at 30°F on the 31st.

The dry weather has helped the progress of fall harvests. As of Oct 30, Corn has finished harvest, nearly all the cotton bolls have opened, with half the planted acreage harvested. Peanuts and soybeans are roughly $\frac{3}{4}$ harvested. Now that we have a better picture, the damage of the drought is especially seen in the peanuts, where the current forecast has Peanut predicted to be the lowest since 2010. While the impact of the drought on row crops is coming to an end as the season wraps up, there are still major impacts being felt by the cattle producers around the state. Many producers are still buying supplemental hay for feed as pasture conditions continue to plummet.

Many farmers are comparing this drought to that of 2016, where again we had a rapid onset of conditions in the late summer and fall. Figure 1 below shows the percentage of each Drought Category that covers the state, and compares the past two fall droughts to the current (2023) drought. It can be seen that indeed, it's easy to see the similarities. The rapid intensification in Sept and Oct was similar to 2019, but the level of dryness is approaching that of 2016. This time of year, Alabama is susceptible to these rapid intensifying conditions, as we enter our dry season.

Looking ahead into winter (December, January, February), the Climate Prediction Center (CPC) forecasts the entire state is likely to experience equal chances of below, near, and above-normal seasonal average temperatures. For precipitation, there is a sharp gradient from equal chances of below, near, and above-normal precipitation in the counties that border Tennessee to 60-70% chance of above-normal

precipitation in Southern Alabama. The CPC forecast is strongly influenced by the ongoing El Niño (the warm phase of the El Niño/Southern Oscillation mode) in the central Pacific Ocean.

However, we examined past El Niños (1957-58, 1972-73, 1965-66, and 1997-98) that initiated around the same time as the current El Niño to serve as analogs for predicting how this winter may unfold. Figures 3 & 4 display composite temperature and precipitation anomalies from December to January based on these analogs. Figure 3 shows a colder-than-average winter across the state, while Figure 4 depicts a drier northern half of Alabama and a wetter southern half. It's important to note that while these analogs provide valuable insights, they represent averages, and the week-to-week weather can be highly variability in winter.

Monthly summaries are provided by Dr. Rob Junod, Lee Ellenburg and John Christy.

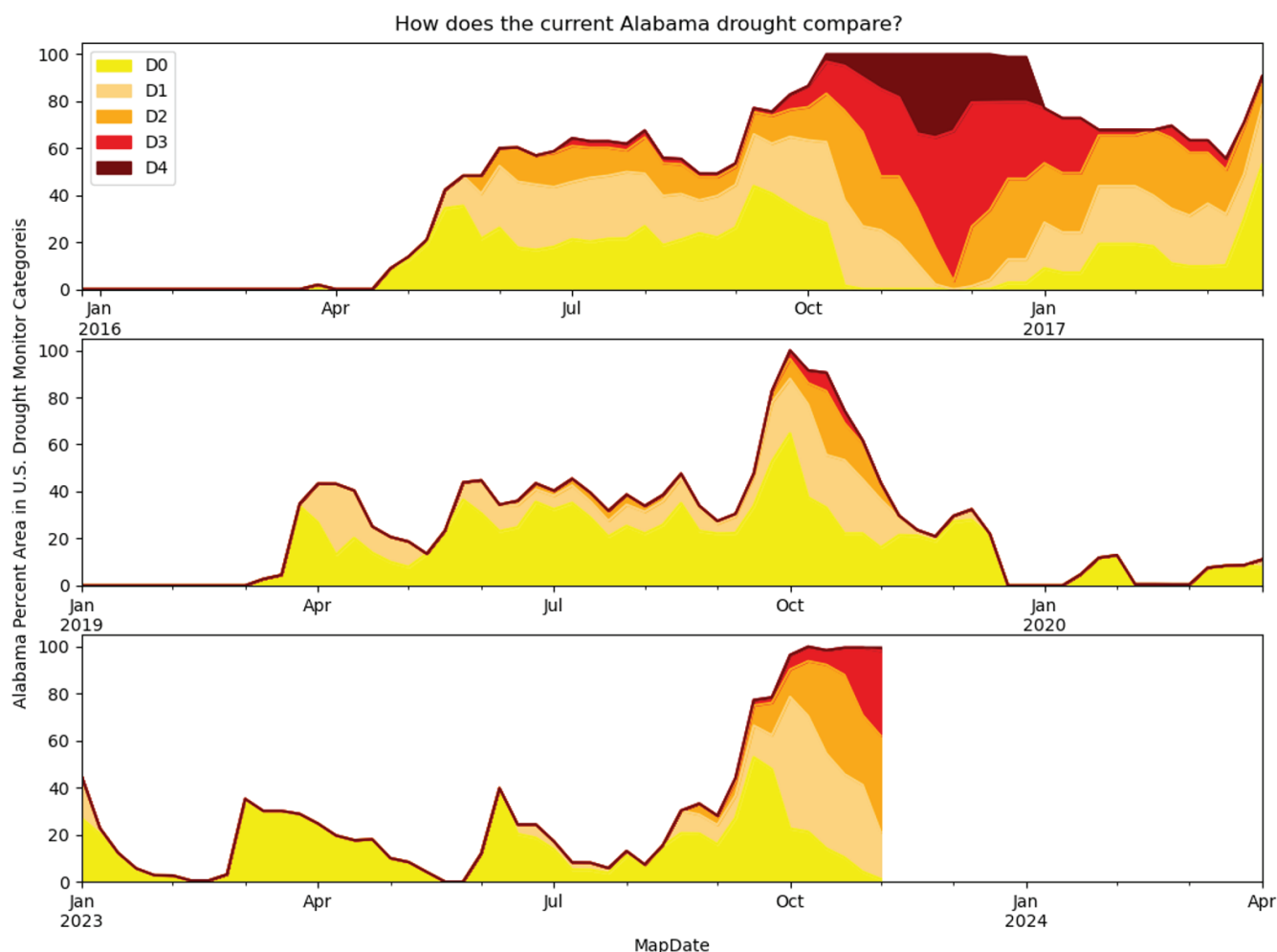


Figure 1. Drought Monitor categories for 2016, 2019, & current (2023).

Precipitation Percent of Normal October 2023

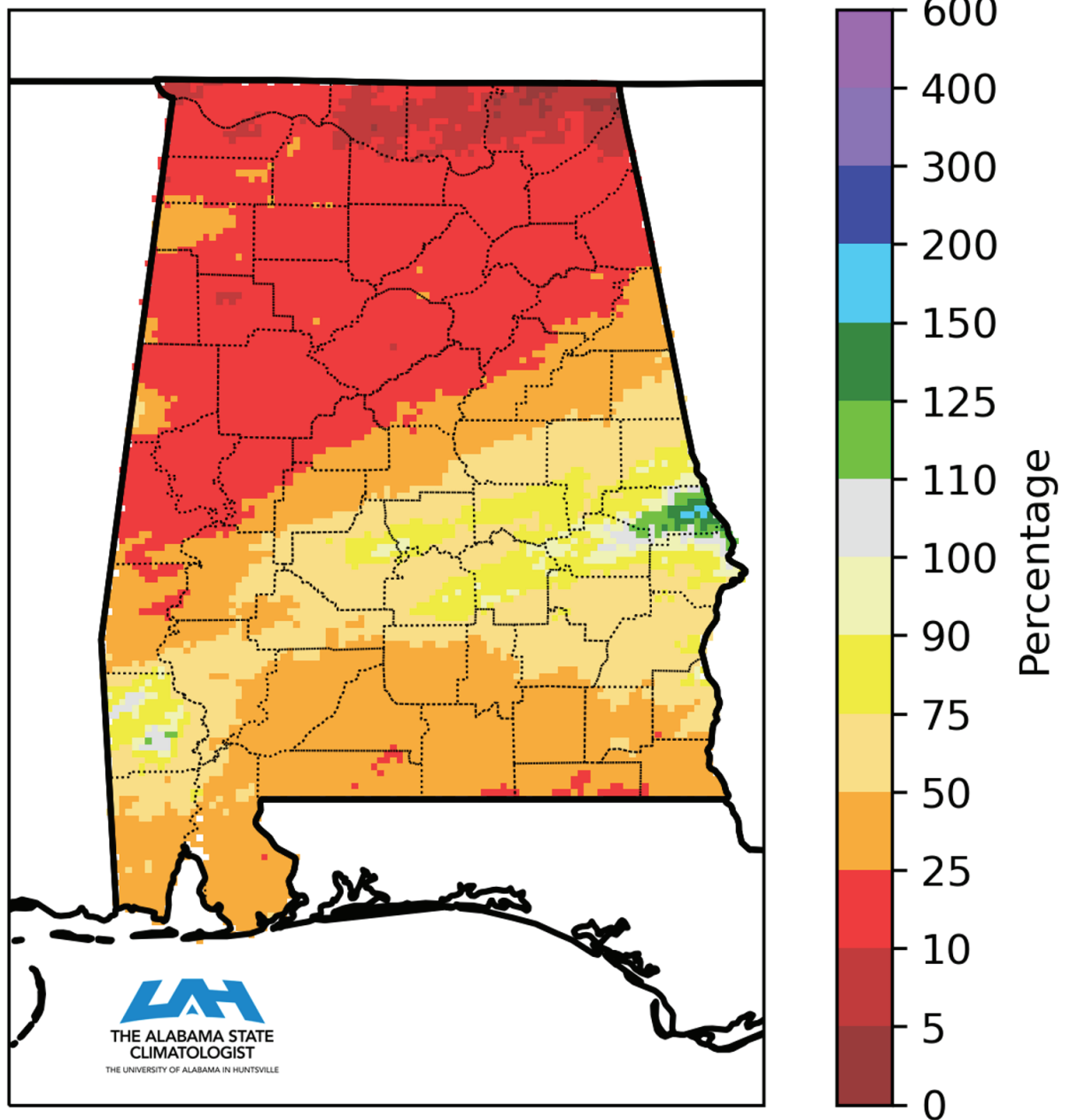


Figure 2: Data source: NCEP Stage IV Quantitative Precipitation Estimates

Dec to Feb Temperature Composite Anomalies w.r.t. 1991-2020 Reference period

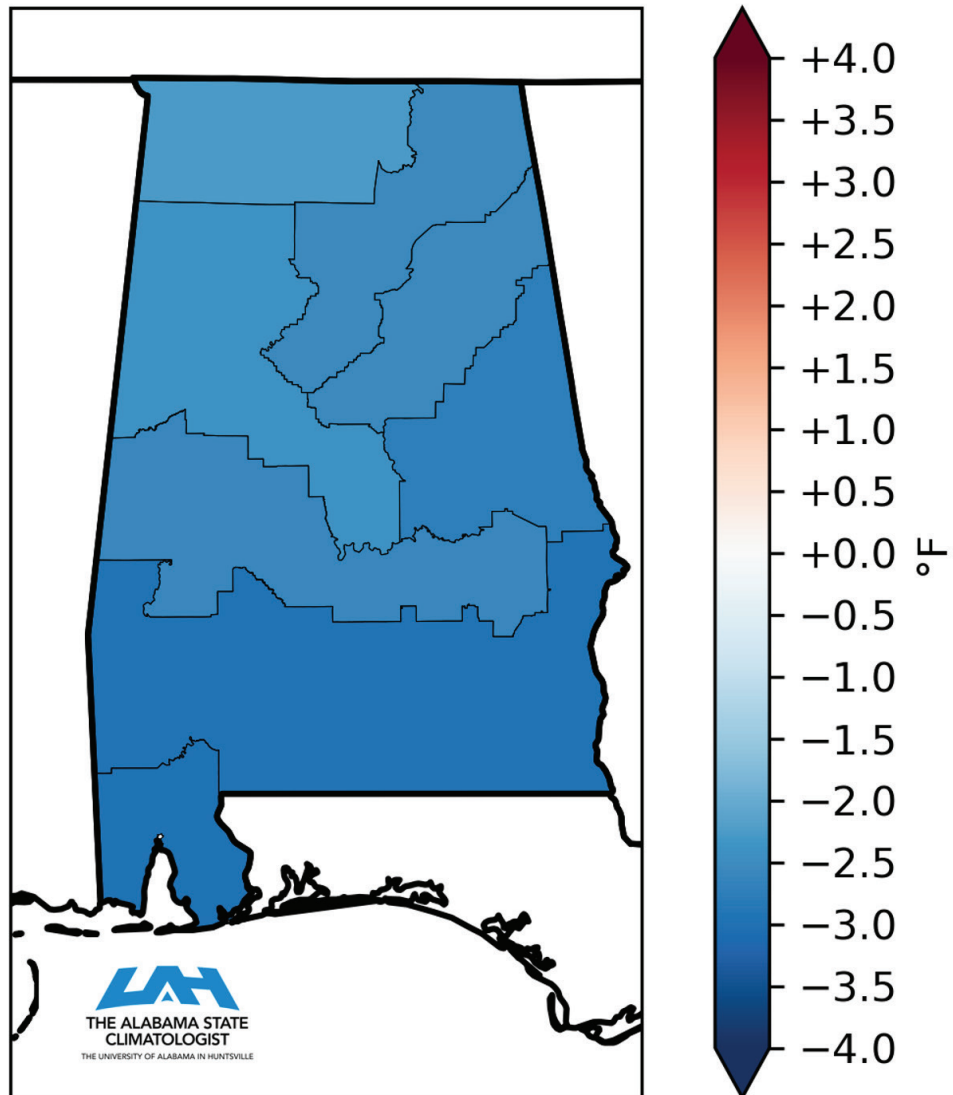


Figure 3. 1957-58,1972-73,1965-66, & 1997-98 composite temperature anomalies. (Data source: NOAA/NCEI)

Dec to Feb Precipitation Composite Anomalies w.r.t. 1991-2020 Reference period

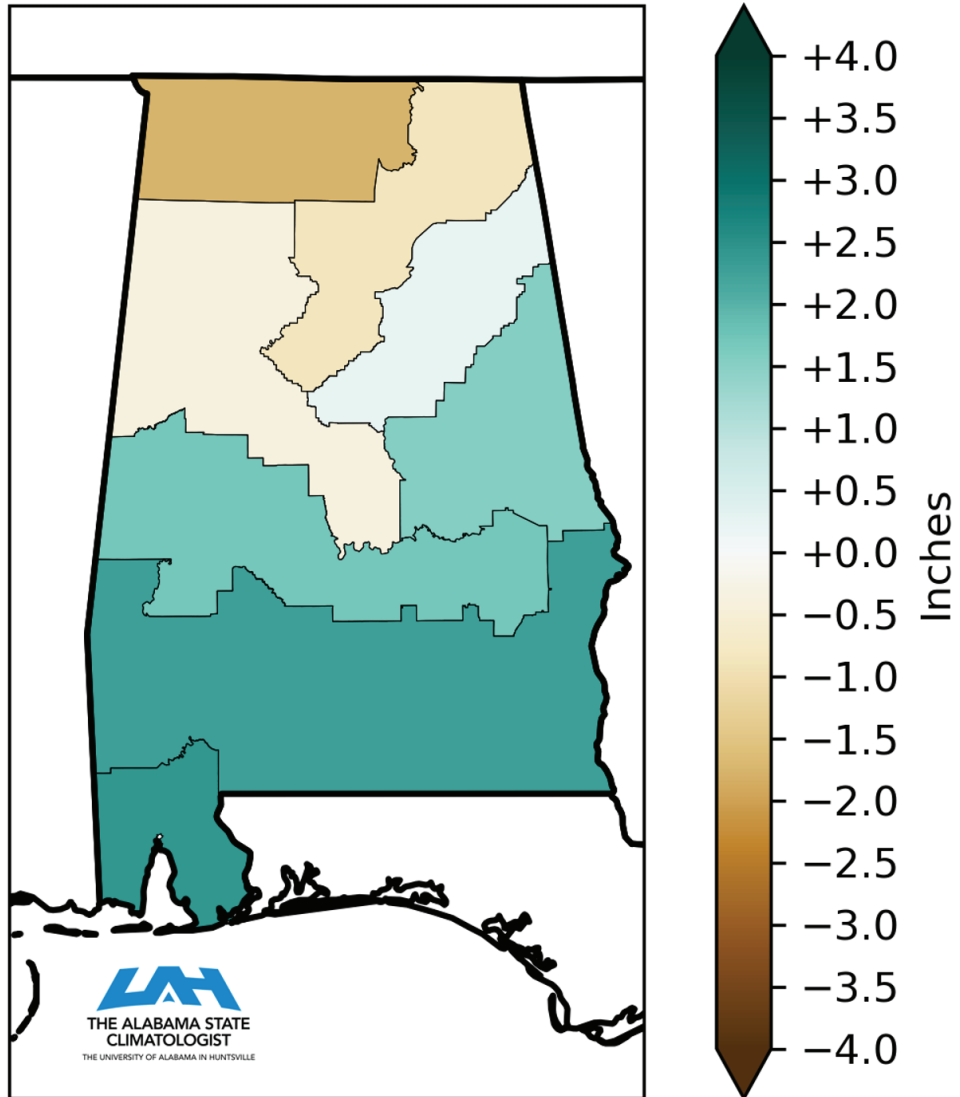


Figure 4. 1957-58, 1972-73, 1965-66, & 1997-98 composite precipitation anomalies. (Data source: NOAA/NCEI)

December				
	Mean Temperature(°F)	Average Daily High Temperature(°F)	Average Daily Low Temperature(°F)	Total Precipitation(inches)
Alabama	47.7	58.4	37.0	5.46
Birmingham	47.4	56.9	37.9	4.87
Huntsville	45.5	55	35.9	5.87
Mobile	53.3	63.5	43	5.45
Montgomery	50.2	61.9	38.6	4.99

January				
	Mean Temperature(°F)	Average Daily High Temperature(°F)	Average Daily Low Temperature(°F)	Total Precipitation(inches)
Alabama	45.3	56.1	34.5	5.29
Birmingham	44.7	54.5	34.9	5.03
Huntsville	42.7	52.3	33.1	4.99
Mobile	51.1	61.5	40.7	5.66
Montgomery	48.1	59.8	36.5	4.64

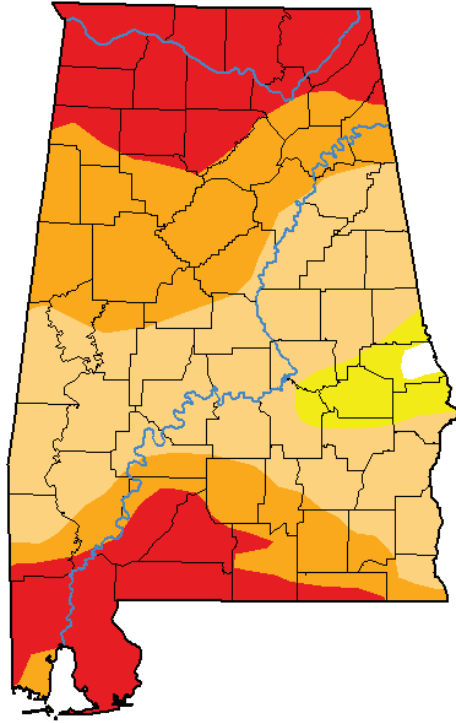
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February				
	Mean Temperature(°F)	Average Daily High Temperature(°F)	Average Daily Low Temperature(°F)	Total Precipitation(inches)
Alabama	49.3	60.7	37.9	5.17
Birmingham	48.8	59.1	38.4	4.95
Huntsville	46.7	57.1	36.4	5.11
Mobile	55	65.6	44.4	4.47
Montgomery	52.6	64.7	40.4	4.88







DROUGHT MONITOR

U.S. Drought Monitor Alabama

October 31, 2023
(Released Thursday, Nov. 2, 2023)
Valid 8 a.m. EDT



Intensity:

-  None
-  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. For more information on the Drought Monitor, go to <http://droughtmonitor.unl.edu/About.aspx>

Author:

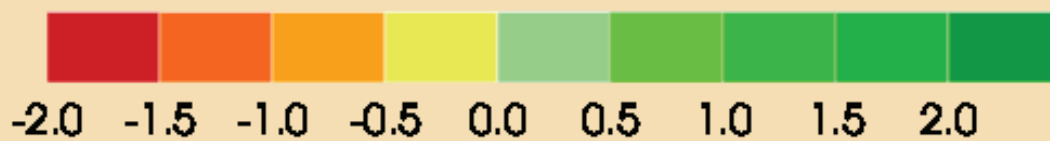
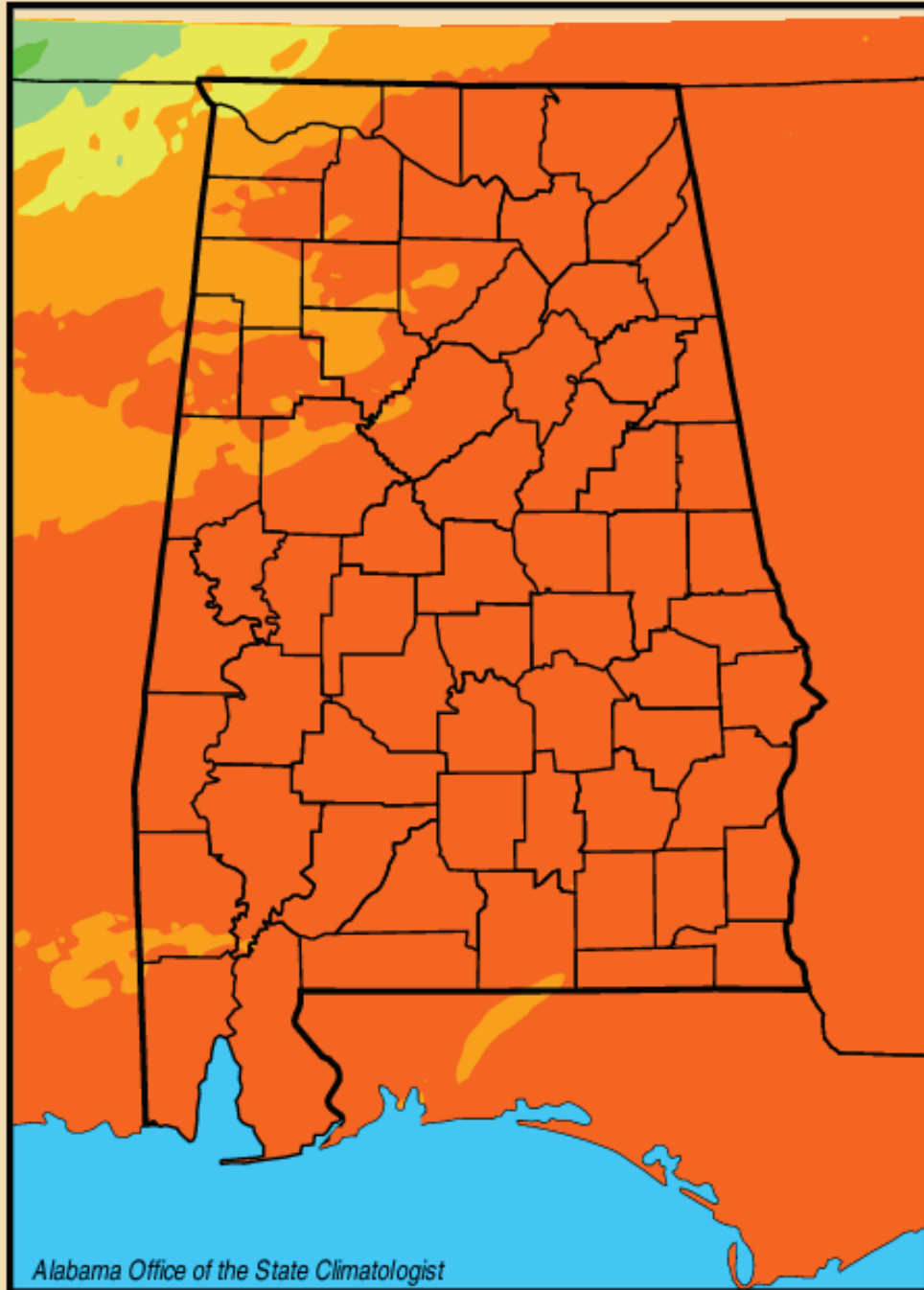
Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

LAWN AND GARDEN

Lawn-and-Garden Moisture Index
for November 10, 2023



ALABAMA MONTHLY CLIMATE SUMMARIES

Alabama Monthly Climate Summaries						
October 2023						
	Oct. Mean Oct. Norm	Oct. High Temp Record High	Oct. Low Temp Record Low	Total Precip. Normal Precip.	Wettest Oct. Driest Oct.	Heaviest Day Record Day
Anniston	64.1	85 10/4/23	37 10/31/23	.84"	9.35" 1995	.67" 10/11/23
	62.9	99 10/05/54	22 10/30/52	2.87"	.15" 1978	3.96" 10/8/77
Auburn	M	M	M	M	M	M
	62.5	94+ 10/6/54	27+ 10/28/57	3.4"	0.00" 1963	5.72" 10/1/65
Birmingham	66.5	88 10/2/23	40 10/31/23	.29"	11.90" 1995	.24" 10/11/23
	62.9	94 10/06/54	27 10/28/57	3.23"	.07" 1991	6.94" 10/3/95
Brewton	65.2	87.9 10/3/23	39.8 10/9/23	1.25"	14.95" 1995	1.06" 10/11/23
	64.5	97+ 10/5/54	21 10/30/52	3.09"	.05" 1998	7.5" 10/5/95
Calera	65.7	89 10/1/23	42 10/31/23	.66"	10.74" 1918	.58" 10/11/23
	62.2	95 10/01/81	22 10/26/82	4.16"	0.00" 1924	4.70" 10/05/95
Clanton	63.5	86.2 10/1/23	40.2 10/8/23	1.61"	10.32" 1995	1.45" 10/11/23
	62	98 10/6/54	24+ 10/29/57	3.14"	.00" 1978	6.30" 10/5/95
Courtland	63	88.2 10/1/23	35.6 10/31/23	1.00"	M	.55" 10/5/23
	M	M	M	M	M	M
Cullman (St. Bernard)	60.9	85.2 10/2/23	36.5 10/18/23	.44"	M	.18" 10/6/23
	M	M	M	M	M	M
Decatur (Pryor Field)	63.9	89 10/2/23	37 10/31/23	.41"	8.83" 1932	.30" 10/6/23
	62.8	100 10/05/1911	26 10/31/17	M	0.00" 1924	6.40" 10/18/28
Dothan	68.6	90 10/5/23	45 10/18/23	1.13"	12.41" 1932	.98" 10/11/23
	68	95 10/01/33	29 10/29/08	3.25"	0.00" 1939	7.37" 10/31/32
Fairhope	67	89.7 10/1/23	41.6 10/9/23	.87"	13.08" 1985	.75" 10/11/23
	67.9	93+ 10/5/54	33+ 10/21/89	3.57"	.00" 1978	7.37" 10/5/95
Gadsden	60.9	82 10/3/23	35.5 10/8/23	.70"	9.00" 1995	.19" 10/16/23
	61.8	96 10/5/54	23 10/30/54	2.95"	.24" 1978	4.98" 10/26/97
Gainesville Lock	65	88.5 10/1/23	41.5 10/31/23	.24"	8.83" 1985	.20" 10/11/23
	63.5	94 10/1/81	30+ 10/29/2001	3.15"	.03" 1987	3.86" 10/25/77
Greensboro	65.3	89.5 10/1/23	41.2 10/31/23	.72"	10.00" 1995	.69" 10/11/23
	65.3	100+ 10/6/54	24 10/26/65	3.37"	.20" 1987	4.42" 10/21/59
Guntersville	M	M	M	M	7.65" 1977	M
	61.1	95 10/5/54	26 10/28/57	3.06"	.03" 1991	4.00" 10/10/34
Highland Home	66	86.6 10/5/23	42.1 10/31/23	2.57"	12.13" 1995	2.11" 10/11/23
	64.9	94 10/6/54	29 10/16/87	2.67"	.00" 1973	6.10" 10/1/65
Huntsville	64.4	91 10/1/23	37 10/31/23	.46"	12.06" 1975	.30" 10/5/23
	61.3	96 10/08/1911	23 10/30/63	3.54"	.01" 2000	4.86" 10/7/75
Mobile	69.6	92 10/1/23	44 10/17/23	1.34"	13.20" 1985	1.25" 10/11/23
	67.7	95 10/02/1904	30 10/31/93	3.25"	.00" 1978	4.99" 10/29/85
Montgomery	67	89 10/6/23	42 10/8/23	2.60"	7.60" 1995	2.58" 10/11/23
	65.4	100 10/06/54	26 10/30/52	2.58"	.01" 1978	4.02" 10/4/64
Muscle Shoals Airport	65.2	92 10/1/23	36 10/31/23	.38"	8.25" 1984	.14" 10/5/23
	61.5	94+ 10/12/63	25 10/27/61	3.22"	.00" 2000	3.24" 10/24/86
Russellville	62.3	88.2 10/1/23	33.8 10/31/23	.77"	8.68" 1984	.45" 10/6/23
	59.6	93 10/6/54	19 10/28/61	3.43"	.16" 2000	3.33" 10/29/70
Scottsboro	60.6	86.5 10/3/23	34.3 10/31/23	.27"	8.06" 1984	.11" 10/6/23
	60	96 10/5/54	20 10/26/68	3.61"	.36" 1991	4.70" 10/26/97
Selma	64.6	87.8 10/1/23	37.2 10/8/23	2.41"	9.24" 1995	2.25" 10/11/23
	65.8	100+ 10/6/54	27 10/30/52	2.59"	.06" 2000	6.09" 10/5/95
Talladega	63	85.6 10/1/23	37.3 10/8/23	.53"	11.01" 1995	.42" 10/11/23
	60.3	99 10/5/54	23+ 10/25/65	3.36"	.02" 1978	5.51" 10/5/95
Thomasville	63.8	87 10/1/23	40 10/9/23	2.31"	10.41" 1997	1.95" 10/11/23
	65.7	100 10/7/54	29+ 10/31/93	2.9"	.03" 1987	5.80" 10/31/67
Troy	68.4	90 10/6/23	42 10/9/23	2.27"	12.19" 1995	2.24" 10/11/23
	64.9	103 10/5/54	28 10/24/37	2.84"	.06" 1987	6.50 10/4/95
Tuscaloosa	66.4	90 10/1/23	42 10/8/23	.48"	9.11" 1995	.28" 10/11/23
	65	98 10/04/54	23 10/30/52	3.47"	.12" 1987	5.73" 10/25/77
Valley Head	60.3	84.6 10/2/23	32.6 10/31/23	.28"	9.91" 1995	.12" 10/6/23
	57.9	93+ 10/5/54	19 10/27/61	3.29"	.10" 1991	6.02" 10/5/95

NEW ALABAMA CLIMATE RECORDS

NO MONTHLY WEATHER RECORDS FOR OCTOBER 2023							
Highest Maximum Temperature Daily Record							
STATION	DATE	RECORD	PREV. DATE	PREV. RECORD	NUMBER OF YEARS	DIFFERENCE	
MOBILE DOWNTOWN AIRPORT, AL US	10/20/23	89	10/20/18	89	74	0	
ATHENS, AL US	10/21/23	83	10/21/20	83	31	0	
ATHENS, AL US	10/26/23	84	10/26/16	83	31	1	
HALEYVILLE, AL US	10/26/23	88	10/26/00	83	120	5	
HUNTSVILLE INTNL AIRPORT, AL US	10/26/23	85	10/26/14	85	64	0	
DEMOPOLIS LOCK AND DAM, AL US	10/27/23	85	10/27/63	85	71	0	
MOBILE DOWNTOWN AIRPORT, AL US	10/27/23	87	10/27/20	84	74	3	
MOBILE REGIONAL AIRPORT, AL US	10/27/23	87	10/27/95	85	75	2	
TUSCALOOSA AIRPORT ASOS, AL US	10/27/23	86	10/27/14	85	75	1	
ATHENS, AL US	10/28/23	84	10/28/16	84	31	0	
HUNTSVILLE INTNL AIRPORT, AL US	10/28/23	85	10/28/16	85	64	0	
MUSCLE SHOALS AIRPORT, AL US	10/28/23	86	10/28/16	85	82	1	
BELLE MINA 2 N, AL US	10/29/23	85	10/29/50	85	73	0	
GENEVA NUMBER 2, AL US	10/29/23	85	10/29/96	85	47	0	
GUNTERSVILLE, AL US	10/29/23	83	10/29/16	82	113	1	
MOULTON 2, AL US	10/29/23	85	10/29/16	84	66	1	
SCOTTSBORO, AL US	10/29/23	86	10/29/16	85	131	1	
VERNON, AL US	10/29/23	87	10/29/00	87	66	0	
HEFLIN, AL US	10/30/23	82	10/30/04	82	67	0	
RUSSELLVILLE NUMBER 2, AL US	10/30/23	84	10/30/16	84	69	0	
THORSBY EXPERIMENTAL STATION, AL US	10/30/23	85	10/30/61	84	65	1	
Highest Minimum Temperature Daily Record							
ATHENS, AL US	10/26/23	62	10/26/15	61	31	1	
BANKHEAD LOCK AND DAM, AL US	10/27/23	67	10/27/10	67	66	0	
BELLE MINA 2 N, AL US	10/27/23	60	10/27/91	60	73	0	
Lowest Maximum Temperature Daily Record							
BAY MINETTE, AL US	10/12/23	63	10/12/94	63	108	0	
MOBILE DOWNTOWN AIRPORT, AL US	10/12/23	73	10/12/51	74	74	-1	
ATHENS, AL US	10/15/23	57	10/15/14	62	31	-5	
ATMORE, AL US	10/16/23	61	10/16/02	66	83	-5	
BANKHEAD LOCK AND DAM, AL US	10/16/23	57	10/16/64	63	66	-6	
BAY MINETTE, AL US	10/16/23	61	10/16/91	67	108	-6	
BELLE MINA 2 N, AL US	10/16/23	57	10/16/02	62	73	-5	
BREWTON 3 ENE, AL US	10/16/23	62	10/16/02	65	46	-3	
GENEVA NUMBER 2, AL US	10/16/23	65	10/16/04	70	47	-5	
JACKSON, AL US	10/16/23	64	10/16/02	66	39	-2	
MARION JUNCTION 2 NE, AL US	10/16/23	62	10/16/02	62	73	0	
MOULTON 2, AL US	10/16/23	57	10/16/91	62	66	-5	
VERNON, AL US	10/16/23	63	10/16/02	64	66	-1	
WINFIELD 2 SW, AL US	10/16/23	60	10/16/02	64	47	-4	
ATMORE, AL US	10/17/23	65	10/17/43	66	83	-1	
GENEVA NUMBER 2, AL US	10/17/23	66	10/17/97	67	47	-1	
Lowest Minimum Temperature Daily Record							
GENEVA NUMBER 2, AL US	10/9/23	38	10/9/91	39	47	-1	
MOBILE DOWNTOWN AIRPORT, AL US	10/9/23	47	10/9/00	47	74	0	
Highest Precipitation Daily Record							
BEVILL LOCK AND DAM, AL US	10/6/23	1.82	10/6/21	0.95	43	0.87	
MOBILE DOWNTOWN AIRPORT, AL US	10/11/23	0.98	10/11/01	0.65	74	0.33	
MONTGOMERY AIRPORT, AL US	10/11/23	1.76	10/11/48	1.04	75	0.72	
ALEXANDER CITY, AL US	10/12/23	1.97	10/12/83	0.72	53	1.25	
BILLINGSLEY, AL US	10/12/23	1.7	10/12/22	1.54	84	0.16	
CLANTON, AL US	10/12/23	1.72	10/12/04	0.87	128	0.85	
CLAYTON, AL US	10/12/23	2.5	10/12/46	2.2	94	0.3	
COFFEEVILLE LOCK AND DAM, AL US	10/12/23	2.1	10/12/94	1.11	40	0.99	
DAUPHIN ISLAND NUMBER 2, AL US	10/12/23	1.27	10/12/94	1.22	47	0.05	
GENEVA NUMBER 2, AL US	10/12/23	1.05	10/12/04	0.52	47	0.53	
HEADLAND, AL US	10/12/23	1.2	10/12/54	1	73	0.2	
JACKSON, AL US	10/12/23	2.22	10/12/01	0.69	61	1.53	
LAFAYETTE 2 W, AL US	10/12/23	3	10/12/02	0.71	78	2.29	
MARION JUNCTION 2 NE, AL US	10/12/23	2.03	10/12/09	1.3	73	0.73	
WETUMPKA, AL US	10/12/23	3.03	10/12/46	1.08	129	1.95	

CoCoRAHS

Community Collaborative Rain, Hail and Snow Network (CoCoRAHS)								
October 2023								
	Ave. Total Precip.	# Stations			Ave. Total Precip.	# Stations	Normal Precipitation*	
Autauga	2.64	1	Houston		1.35	2	Abbeville	3.11
Baldwin	1.54	35	Jackson		0.41	6	Alberta	3.41
Barbour	2.08	2	Jefferson		0.44	15	Alex City	3.08
Bibb	n.a.	0	Lamar		0.45	1	Aliceville	3.17
Blount	0.35	6	Lauderdale		0.69	9	Andalusia	3.71
Bullock	n.a.	0	Lawrence		0.66	3	Ashland	3.95
Butler	2.65	1	Lee		3.45	5	Athens	3.81
Calhoun	0.73	2	Limestone		0.34	7	Bay Minette	3.76
Chambers	n.a.	0	Lowndes		n.a.	0	Bessemer	3.74
Cherokee	n.a.	0	Macon		n.a.	0	Billingsly	2.77
Chilton	1.79	1	Madison		0.36	25	Centreville WSM	3.83
Choctaw	1.79	1	Marengo		n.a.	0	Chatom	3.61
Clarke	2.49	3	Marion		0.47	1	Claiborne L&D	2.82
Clay	1.26	1	Marshall		0.50	10	Clayton	2.50
Cleburne	n.a.	0	Mobile		1.44	24	Dauphin Isl.	3.85
Coffee	n.a.	0	Monroe		1.87	4	Elba	3.53
Colbert	0.51	5	Montgomery		2.98	4	Eufaula WR	2.96
Conecuh	n.a.	0	Morgan		0.61	8	Evergreen	3.55
Coosa	n.a.	0	Perry		n.a.	0	Fayette	3.63
Covington	1.70	1	Pickens		n.a.	0	Geneva 2	3.52
Crenshaw	n.a.	0	Pike		n.a.	0	Greenville	3.64
Cullman	0.46	3	Randolph		1.58	2	Haleyville	4.15
Dale	n.a.	0	Russell		3.54	1	Hamilton 3S	3.83
Dallas	2.64	1	St. Clair		0.61	6	Heflin	3.45
DeKalb	0.50	7	Shelby		0.56	16	Hurtsboro	3.40
Elmore	2.99	5	Sumter		n.a.	0	Jasper	4.00
Escambia	0.65	2	Talladega		0.83	2	Lafayette	3.28
Etowah	0.55	2	Tallapoosa		2.20	2	Livingston	3.73
Fayette	n.a.	0	Tuscaloosa		0.44	7	Melvin	2.90
Franklin	n.a.	0	Walker		0.38	2	Milstead	3.07
Geneva	0.99	1	Washington		2.43	1	Moulton	3.92
Greene	n.a.	0	Wilcox		2.07	2	Oneonta	3.50
Hale	n.a.	0	Winston		0.51	3	Perryville	3.06
Henry	n.a.	0					Plantersville	3.30
							Rock Mills	2.86
							Rockford	2.89
							Sylacauga	3.47
							Union Springs	3.06
							Uniontown	3.32
							Vernon	3.76
							Warrior L&D	3.56
							Wetumpka	2.90



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