Alabama Climate Report

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OBE



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October is typically Alabama's driest month, and this year was no exception. The state recorded a measly 0.23 inches of rainfall—2.6 inches below the 20th-century average of 2.83 inches. This made October 2024 the third driest on record, trailing only 2016 (second driest) and 1963 (driest). With such limited rainfall, drought conditions worsened across the state.

In keeping with a pattern seen in 2024, October's drier than normal conditions followed a wetter than normal September. The dry spell was widespread, with almost the entire state receiving much less rainfall than usual, as shown in Figure 1. Ten counties (Autauga, Calhoun, Cherokee, Chilton, Clay, Cleburne, Coosa, Dallas, Etowah, and Talladega) recorded their driest October on record. Of the 219 stations with rain gauges and no missing days of observations, 190 recorded less than 1 inch of rainfall, and 72 stations recorded no rainfall at all, making them as the driest locations for the month. The only exception was a small area in southern Baldwin County, where the Loxley 0.4 SSW station recorded 5.36 inches, mostly on October 4th from a tropical airmass.

From a temperature standpoint, Alabama was 2.4°F warmer than normal statewide. As a transition month, October experienced both warm and cool spells throughout the month. The first two weeks and the last week of the month were particularly warm, with the Geneva No. 2 station being the warmest location of the month of 93°F on October 8th. In contrast, during a particularly cold week, the Gadsden Municipal Airport and Russellville 4SSE stations tied for the coldest temperature of the month at 29°F on October 17th.

As a result of record dryness, October saw widespread expansion of drought conditions across Alabama. By early November, Moderate Drought (D1) covered nearly the entire state, according to the US Drought Monitor (Figure 2). Severe Drought (D2) expanded to 30% of the state, and Extreme Drought (D3) was introduced for the second time this year, with the first occurrence in early July. The drought has had significant impacts on Alabama's agricultural sector. Declining pasture conditions forced many farmers to purchase and feed supplemental hay. Additionally, the dry conditions delayed some winter wheat planting, as farmers were concerned that insufficient soil moisture would hinder germination. However, dry Octobers are not entirely bad news. The favorable dry conditions helped ensure the cotton harvest remained on track

Looking ahead to winter (December, January, February), the Climate Prediction Center (CPC) forecasts above-normal seasonal average temperatures across Alabama. The northern half of the state has a 40-50% chance of warmer-than-normal temperatures, while the southern half has a 50-60% chance. For precipitation, there is a gradient from equal chances of below, near, and above-normal precipitation in the Tennessee Valley to a 40-50% chance of below-normal precipitation in southern Alabama. This CPC forecast is strongly influenced by the expected development of La Niña (the cold phase of the El Niño/Southern Oscillation mode) in the central Pacific Ocean. The following tables provide the normals for the state and major metropolitan areas relative to the 1991-2020 reference period for each winter month.

December								
	Mean Temperature(°F)	Average Daily High Temperature(°F)	Average Daily Low Temperature(°F)	Total Precipitation(inches)				
Alabama	47.7	58.4	37.0	5.5				
Auburn	47.6	57.6	37.6	5.6				
Birmingham	47.4	56.9	37.9	4.9				
Dothan	53.1	63.8	42.4	4.8				
Gadsden	45.6	55.6	35.7	5.5				
Huntsville	45.5	55.0	35.9	5.9				
Mobile	53.3	63.5	43.0	5.5				
Montgomery	50.2	61.9	38.6	5.0				
Muscle Shoals	45.6	55.0	36.1	5.5				
Tuscaloosa	49.1	59.2	39.0	5.4				
		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				
Auburn	45.7	56.1	35.3	5.31				
Birmingham	44.7	54.5	34.9	5.03				
Dothan	50.8	61.7	39.8	4.76				
Gadsden	42.8	52.8	32.8	5.7				
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				
Muscle Shoals	42.9	52.4	33.5	4.71				
Tuscaloosa	46.9	57.3	36.4	5.92				
		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				
Auburn	49.9	60.9	38.9	5.14				
Birmingham	48.8	59.1	38.4	4.95				
Dothan	54.6	65.8	43.3	4.82				
Gadsden	46.7	57.3	36.2	5.18				
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				
Muscle Shoals	46.7	56.7	36.7	4.79				
Tuscaloosa	51	62.2	39.9	5.84				

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



Figure 1.

Data source: NCEP Stage IV Quantitative Precipitation Estimates



Historical Perspective: 26th Warmest October Since 1895 Coldest on record Hottest on record



Historical Perspective: 3rd Driest October Since 1895



DROUGHT MONITOR



ALABAMA MONTHLY CLIMATE SUMMARIES

Alabama Monthly Climate Summaries									
	October 2024								
	0.4 14.44	Out Winh Town		Tatal Drasia	Wolland Oat	Hanvinst Day			
	Oct. Mean	Oct. High Temp	Oct. Low Temp	Normal Precip.	Driest Oct.	Record Day			
	65.0	97.10/5/24	33 10/17/24	nomar Piecip.	0.25* 1005	0.00"			
Anniston	62.0	87 10/5/24 00 10/05/54	22 10/30/52	0.00	9.35 1995	0.00			
	02.5 M	99 10/05/54 M	22 10/30/32	2.07	.15 1976	3.90 10/0/17			
Aubum	62.5	WI 04+ 10/8/54	M	M	M 0.00" 1063	M			
	67.7	94+ 10/6/54	2/+ 10/28/5/	3.4	0.00 1963	5.72 10/1/65			
Birmingham	62.0	88 10/5/24	27 10/29/57	0.25	11.90 1995	0.25" 10/31/24			
	67	94 10/06/54	27 10/20/37	3.23	.07 1991	6.94" 10/3/95			
Brewton	64.5	07+ 10/5/24	37.5 10/17/24	0.99	14.95 1995	7.5" 10/4/24			
	69.4	97+10/5/54	21 10/30/52	3.09	.05 1998	7.5" 10/5/95			
Calera	62.2	89 10/7/24	41 10/17/24	0.02	10.74-1918	0.02" 10/31/24			
	64.2	95 10/01/81	22 10/26/82	4.16	0.00* 1924	4.70" 10/05/95			
Clanton	60	86.9 10/7/24	35 10/17/24	0.00*	10.32 1995	0.00"			
	62.0	96 10/6/54	24+ 10/29/57	3.14"	.00-1978	0.30 10/5/95			
Courtland	03.2	87 10/5/24	34.1 10/17/24	0.82	M	0.82 10/31/24			
	M	M	M	M	M	M			
Cullman (St. Bernard)	02	85.8 10/5/24	31.5 10/17/24	1.29	M	1.29 10/31/24			
	M GE G	M	M	M	M	M			
Decatur (Pryor Field)	00.0	90 10/6/24	34 10/17/24	0.59*	8.83" 1932	0.59" 10/31/24			
	02.8	100 10/05/1911	26 10/31/17	M	0.00" 1924	6.40" 10/18/28			
Dothan	70.3	90 10/8/24	41 10/17/24	0.06"	12.41" 1932	0.06" 10/4/24			
	68.4	95 10/01/33	29 10/29/08	3.25"	0.00" 1939	7.37" 10/31/32			
Fairhope	67.9	09 10/3/24	42.4 10/17/24	2.23	13.00 1905	2.13 10/4/24			
	61.4	93+ 10/5/54	33+ 10/21/09	3.57	0.00 1978	0.16" 10/01/04			
Gadsden	61.9	04.1 10/5/24	29.9 10/17/24	0.35	9.00 1995	4.08" 10/31/24			
	01.0	90 10/5/54	23 10/30/54	2.95	.24 19/8	4.98" 10/26/97			
Gainesville Lock	63.5	04 10/5/24	30.4 10/17/24	0.41	0.03 1900	2.96" 10/25/77			
	66.4	94 10/1/01	30+ 10/29/2001	3.15	.03 1907	0.15" 10/23/77			
Greensboro	65.3	100+ 10/8/54	24.0 10/17/24	0.15	201 1095	4 42" 10/31/24			
	00.0 M	100+10/6/54	24 10/20/05	3.37	.20 1907	4.42 10/21/59			
Guntersville	61.1	M 05 10/5/54	WI 26 10/29/57	2.06*	/.05 19//	4 00" 10/10/24			
	67.8	95 10/5/54	20 10/20/57	3.00	12 12" 1005	4.00 10/10/34			
Highland Home	0.10	00 10/7/24	40.7 10/16/24	0.10	12.13 1995	0.10 10/4/24			
	67	94 10/6/54	29 10/16/87	2.07	.00* 1973	0.10" 10/1/05			
Huntsville	61.2	06 10/08/1011	35 10/17/24	0.53	12.06-1975	0.53" 10/31/24			
	72.4	96 10/08/1911	23 10/30/63	3.54	.01 2000	4.66 10/7/75			
Mobile	67.7	92 10/2/24	44 10/17/24	0.52	13.20 1985	0.52 10/3/24			
	69.2	95 10/02/1904	30 10/31/93	3.25	.00* 1978	4.99" 10/29/85			
Montgomery	65.4	91 10/7/24	37 10/17/24	0.02	7.60 1995	0.02" 10/4/24			
	63.4	86 7 10/06/54	26 10/30/52	2.56	8 25" 1978	4.02 10/4/64			
Muscle Shoals Airport	61.5	94+ 10/12/63	25 10/27/61	3.22*	0.25 1964	3 24" 10/24/86			
	61.7	86 3 10/5/24	29 2 10/17/24	0.78*	8 68" 1984	0.78" 10/31/24			
Russellville	59.6	93 10/6/54	19 10/28/61	3.43"	16" 2000	3 33" 10/29/70			
	61	88.1.10/5/24	30.3.10/17/24	0.45"	8.06*1984	0.35" 10/31/24			
Scottsboro	60	96 10/5/54	20 10/26/68	3.61*	36" 1001	4 70" 10/26/97			
	64	88 10/26/24	32 7 10/17/24	0.00*	0.24" 1005	4.70 10/20/97			
Selma	65.8	100+10/6/54	27 10/30/52	2.59*	06" 2000	6.09" 10/5/95			
	63.9	87 1 10/5/24	31.5.10/17/24	0.00*	11 01" 1995	0.00 10/0/90			
Talladega	60.3	99 10/5/54	23+ 10/25/65	3.36"	02" 1979	5 51" 10/5/95			
	65.4	88 10/7/24	34.9 10/17/24	0.70*	10 41" 1997	0.37" 10/4/24			
Thomasville	65.7	100 10/7/54	29+ 10/31/02	2.0"	03* 1997	5 80" 10/21/67			
	65.7	86.5 10/3/24	36.6 10/17/24	0.15*	12 10" 1005	0.14" 10/4/24			
Troy	64.9	103 10/5/54	28 10/24/27	2.84*	06" 1097	6 50 10/4/24			
	67.2	88 10/5/34	36 10/24/37	2.04	0 11 1005	0.44" 10/21/24			
Tuscaloosa	65	08 10/04/54	23 10/20/52	3.47*	12" 1097	5 73" 10/31/24			
	59.8	84 4 10/5/24	29 9 10/17/24	0.04"	0.01" 1005	0.02" 10/25/77			
Valley Head	57.9	93+ 10/5/54	19 10/27/61	3.20"	10" 1001	6.02" 10/51/24			

LAWN & GARDEN



NEW ALABAMA CLIMATE RECORDS

NO MONTHLY WEATHER RECORDS FOR TEMPERAT	URES AND MAX	PRECIPITAT	ON FOR OCTOR	3ER 2024		
Highest Maximum Temperature Daily Record						
Station	Date	Record	Prev. Date	Prev. Record	Number of Years	Difference
GENEVA NUMBER 2, AL US	10/8/24	93	10/8/19	91	48	2
MOULTON 2, AL US	10/9/24	88	10/9/18	87	67	1
GENEVA NUMBER 2, AL US	10/10/24	91	10/10/19	91	48	0
HALEYVILLE, AL US	10/12/24	87	10/12/55	87	121	0
HUNTSVILLE INTNL AIRPORT, AL US	10/13/24	88	10/13/75	87	65	1
THORSBY EXPERIMENTAL STATION, AL US	10/22/24	86	10/22/63	86	66	0
HUNTSVILLE INTNL AIRPORT, AL US	10/23/24	85	10/23/15	85	65	0
MOBILE REGIONAL AIRPORT, AL US	10/23/24	88	10/23/72	88	76	0
ATHENS, AL US	10/24/24	85	10/24/10	81	32	4
GUNTERSVILLE, AL US	10/24/24	84	10/24/92	83	114	1
HUNTSVILLEINTNL AIRPORT, AL US	10/24/24	85	10/24/10	83	65	2
MOBILE DOWNTOWN AIRPORT, ALLUS	10/24/24	88	10/24/20	86	/5	2
DOTHAN REGIONAL AIRPORT, AL US	10/24/24	89	10/24/01	89	54	0
ANNISTON METROPOLITAN AIRPORT, AL US	10/24/24	84	10/24/16	84	121	0
BIRMINGHAM AIRPORT, AL US	10/24/24	86	10/24/10	85	94	1
MOBILE REGIONAL AIRPORT, AL US	10/24/24	89	10/24/95	86	76	3
MONTGOMERY AIRPORT, AL US	10/24/24	88	10/24/10	88	/6	0
ATHENS, ALLUS	10/25/24	85	10/25/16	83	32	2
ATMORE, AL US	10/25/24	8/	10/25/03	8/	84	0
HALEYVILLE, AL US	10/25/24	83	10/25/73	83	121	0
HUNTSVILLEINTNE AIRPORT, AL US	10/25/24	8/	10/25/16	68	65	2
ANNIETON AETROPOLITAN AIRPORT AL US	10/25/24	69	10/25/10	89	54	1
ANNISTON METROPOLITAN AIRPORT, AL US	10/25/24	80	10/25/16	85	121	1
	10/25/24	8/	10/25/31	8/	94	2
MOBILE REGIONAL AIRPORT, AL US	10/25/24	88	10/25/04	00	/0	2
	10/25/24	90	10/25/10	00	/0	2
TISCALOOSA AIRPORTASOS AL US	10/25/24	07	10/25/00	65	63	2
ATHENS ALLIS	10/25/24	8/	10/25/16	00	/0	1
	10/26/24	03	10/26/25	04	52	1
DEMODOLIS LOCK AND DAM, ALL US	10/26/24	0/	10/26/85	00	72	2
GAINESVILLE LOCK ALLIS	10/26/24	87	10/26/16	86	66	1
	10/26/24	87	10/26/92	85	40	2
MARION LUNCTION 2 NE AL LIS	10/26/24	89	10/26/52	87	40	2
	10/26/24	86	10/26/16	85	69	1
VERNON ALLIS	10/26/24	87	10/26/00	86	67	1
HUNTSVILLE INTNL AIRPORT. AL US	10/26/24	86	10/26/23	85	65	- 1
MOBILE DOWNTOWN AIRPORT. AL US	10/26/24	89	10/26/12	88	75	- 1
MOBILE REGIONAL AIRPORT. AL US	10/26/24	90	10/26/12	86	76	4
DEMOPOLIS LOCK AND DAM, AL US	10/27/24	87	10/27/23	85	72	2
GENEVA NUMBER 2. AL US	10/27/24	87	10/27/10	87	48	0
JACKSON, AL US	10/27/24	87	10/27/96	87	40	0
SCOTTSBORO, AL US	10/27/24	87	1899-10-27	85	132	2
MOBILE REGIONAL AIRPORT, AL US	10/27/24	90	10/27/23	87	76	3
CLAYTON, AL US	10/28/24	87	10/28/10	87	68	0
JACKSON, AL US	10/28/24	87	10/28/91	87	40	0
Highest Minimum Temperature Daily Record						
MOBILE DOWNTOWN AIRPORT, AL US	10/29/24	70	10/29/22	69	75	1
BESSEMER 3 WSW, AL US	10/31/24	66	10/31/79	66	47	0
Lowest Maximum Temperature Daily Record						
BESSEMER 3 WSW, AL US	10/16/24	63	10/16/09	63	47	0
BAY MINETTE, AL US	10/17/24	64	10/17/09	65	109	-1
GENEVA NUMBER 2, AL US	10/17/24	65	10/17/23	66	48	-1
Lowest Minimum Temperature Daily Record						
MOULTON 2, AL US	10/16/24	34	10/16/10	35	67	-1
GENEVA NUMBER 2, AL US	10/17/24	33	10/17/77	34	48	-1
GREENSBORO, AL US	10/17/24	33	10/17/77	33	132	0
GAINESVILLE LOCK, AL US	10/18/24	36	10/18/78	36	66	0
GENEVA NUMBER 2, AL US	10/18/24	33	10/18/01	35	48	-2
LAFAVETTE 2 W ALLIS	10/18/24	31	10/18/01	0	70	.1

CoCoRAHS

	Comm	unity Collab	oorative Rain, Hail and Snow	Network (Co	oCoRAHS)		
			October 2024				
	Ave. Total			Ave. Total		Normal	
	Precip.	#Stations		Precip.	#Stations	Precipitation*	
Autauga	n.a.	0	Houston	0.05	3	Abbeville	3.11
Baldwin	2.37	44	Jackson	0.17	5	Alberta	3.41
Barbour	0.03	1	Jefferson	0.04	14	Alex City	3.08
Bibb	n.a.	0	Lamar	0.01	1	Aliceville	3.17
Blount	0.01	5	Lauderdale	0.14	8	Andalusia	3.71
Bullock	n.a.	0	Lawrence	0.00	3	Ashland	3.95
Butler	0.17	5	Lee	0.11	4	Athens	3.81
Calhoun	0.10	3	Limestone	0.15	7	Bay Minette	3.76
Chambers	n.a.	0	Lowndes	n.a.	0	Bessemer	3.74
Cherokee	0.16	1	Macon	n.a.	0	Billingsly	2.77
Chilton	0.00	1	Madison	0.18	26	Centreville WSM0	3.83
Choctaw	0.00	1	Marengo	n.a.	0	Chatom	3.61
Clarke	0.11	3	Marion	0.00	1	Claiborne L&D	2.82
Clay	0.00	1	Marshall	0.01	10	Clayton	2.50
Cleburne	n.a.	0	Mobile	0.99	26	Dauphin Isl.	3.85
Coffee	n.a.	0	Monroe	0.42	4	Elba	3.53
Colbert	0.10	4	Montgomery	0.03	4	Eufaula WR	2.96
Conecuh	n.a.	0	Morgan	0.03	9	Evergreen	3.55
Coosa	n.a.	0	Perry	n.a.	0	Favette	3.63
Covington	0.47	1	Pickens	n.a.	0	Geneva 2	3.52
Crenshaw	n.a.	0	Pike	n.a.	0	Greenville	3.64
Cullman	0.01	4	Randolph	0.00	2	Halevville	4.15
Dale	n.a.	0	Russell	0.00	1	Hamilton 3S	3.83
Dallas	0.00	1	St. Clair	0.00	7	Heflin	3.45
DeKalb	0.09	4	Shelby	0.05	16	Hurtsboro	3.40
Elmore	0.00	2	Sumter	0.00	1	Jasper	4.00
Escambia	0.41	2	Talladega	0.00	1	Lafavette	3.28
Etowah	0.05	2	Tallapoosa	0.00	1	Livingston	3.73
Favette	0.00	1	Tuscaloosa	0.00	1	Melvin	2.90
Franklin	n.a.	0	Walker	0.00	2	Milstead	3.07
Geneva	n.a.	0	Washington	3.75	1	Moulton	3.92
Greene	n.a.	0	Wilcox	0.33	2	Oneonta	3.50
Hale	n.a.	0	Winston	0.01	4	Perryville	3.06
Henry	n.a.	0				Plantersville	3.30
						Rock Mills	2.86
						Rockford	2.89
						Svlacauga	3.47
						Union Springs	3.06
						Uniontown	3.32
						Vernon	3.76
						Warrior L&D	3.56
						Wetumpka	2.90
							2100



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