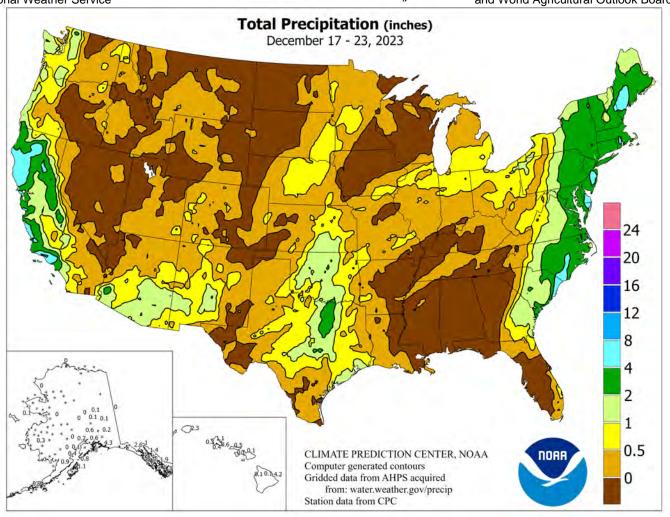
# WEEKEWATHER AND CROPEBULLETIN

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Weather Service U.S. DEPARTMENT OF AGRICULTURE National Agricultural Statistics Service and World Agricultural Outlook Board



### **HIGHLIGHTS**

### **December 17 - 23, 2023**

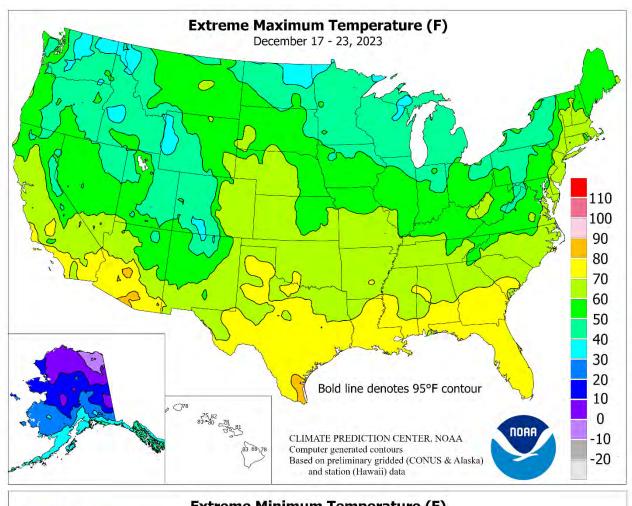
Highlights provided by USDA/WAOB

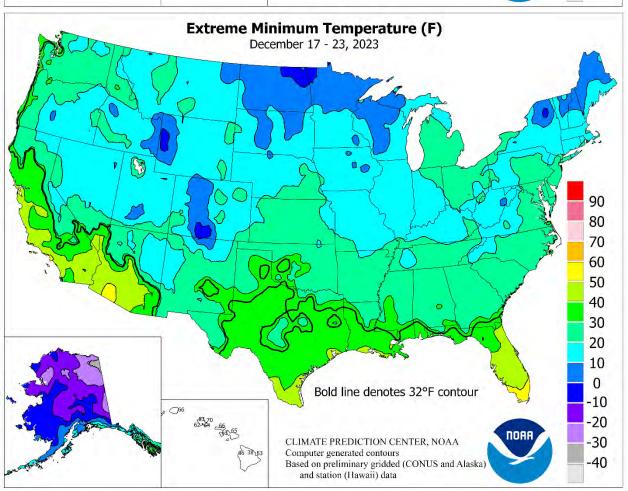
arly in the week, an **Atlantic** coastal storm pounded portions of the **East Coast States** with heavy rain, high winds, and pounding surf, with areas from the **Carolinas to New England** taking the most significant hit. Once-in-ageneration flooding struck parts of **Maine**, with water rising to the highest levels since April 1987 along portions of the **Androscoggin and Kennebec Rivers**. In addition, tens of thousands of customers in **Maine** lost electrical service at the height of the storm. Much of the remainder of the country received little or no precipitation, although

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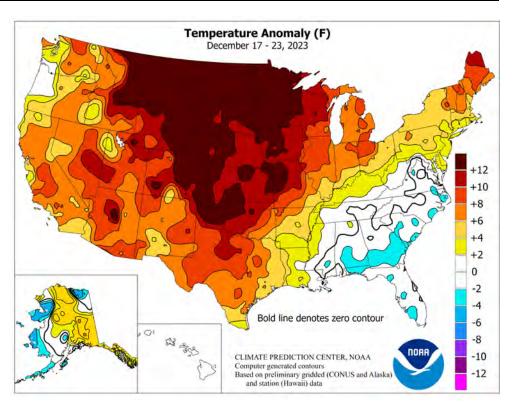


### (Continued from front cover)

heavy rain (and high-elevation snow) grazed California and eventually pushed inland across the Southwest. Still, the average water equivalency of the Sierra Nevada snowpack barely topped 2 inches by end of the week, according to the California Department of Water Resources, less than one-third of the late-December average. As the week ended, a complex storm system evolved across the nation's mid-section, preceded by unusually mild weather—and accompanied increasingly showery weather. Through December 23, only spotty precipitation developed across the Plains and Midwest, with more substantial rain, snow, and wind occurring on December 24-25. Weekly temperatures averaged at least 10 to 15°F above normal throughout the Plains and upper Midwest, while significant warmth also covered much of the West and Northeast. In contrast, readings averaged as much as 5°F below normal in the Southeast, with the coolest weather, relative to normal. focused across Georgia and environs.

A storm system passing near the Atlantic

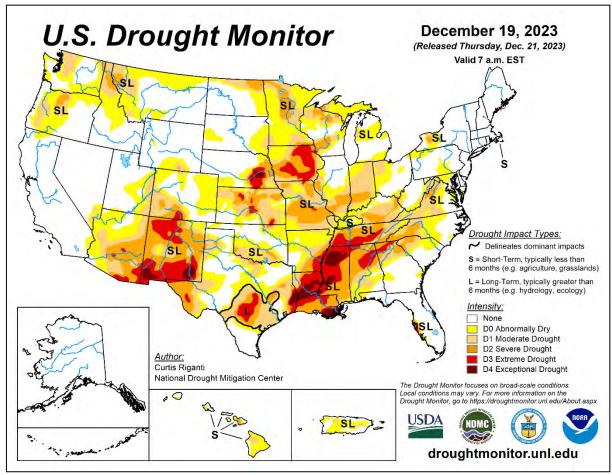
Seaboard early in the week generated an impressive storm surge. On December 17 in South Carolina, Charleston Harbor experienced its fourth-highest water level on record-2.86 feet above flood stagebehind only the hurricane-induced high-water marks of September 22, 1989 (Hugo); August 11, 1940 (unnamed hurricane); and September 11, 2017 (Irma). Meanwhile, daily-record rainfall totals for the 17th ranged from 3 to 4 inches or more in locations such as Lumberton, NC (4.08 inches); downtown Charleston, SC (3.92 inches); Wilmington, NC (3.23 inches); and Savannah, GA (3.16 inches). For Lumberton, it was the wettest December day on record, topping 3.30 inches on December 26, 1943. **Downtown Charleston** also had a historically wet day, edging the monthly record of 3.82 inches, originally set on December 18, 2009. For the second time this month, **Richmond**, **VA**, experienced its wettest December day on record. Richmond netted 2.73 and 2.74 inches, respectively, on December 10 and 17. Prior to this year, Richmond's wettest December day had occurred in 2008, when 2.62 inches fell on the 11th. In North Carolina, peak wind gusts on December 17 were clocked to 66 mph on Cherry Point and 64 mph at Billy Mitchell Airport, near Cape Hatteras. The following day, the 18th, Northeastern peak gusts included 81 mph in Eastport, ME; 71 mph in Bangor, ME; 68 mph in Boston, MA; and 63 mph in Providence, RI. On December 17-18, Salisbury, MD, netted 5.18 inches of rain and reported a wind gust to 59 mph. With 4.04 inches on the 18th, it was also Salisbury's wettest December day (previously, 3.56 inches on December 18, 1977). Elsewhere on the 18th, daily-record totals included 3.00 inches in Mount Pocono, PA; 2.83 inches in Worcester, MA; 2.75 inches in Newark, NJ; 2.73 inches in Concord, NH; 2.52 inches in Bangor, ME; and 2.43 inches in Providence, RI. Farther west, storminess clipping California produced daily-record totals on December 18 in Redding (2.45 inches) and Red Bluff (2.05 inches). By December 20, heavy showers shifted into southern California, where daily-record amounts reached 1.68 inches in Santa Maria and 1.37 inches in Paso Robles. Southern California's wet weather continued through December 21, when dailyrecord amounts included 2.78 inches in Oxnard and 2.60 inches in Santa Barbara. Parts of southern Arizona received more than an inch of rain on December 22-23, with 2-day totals reaching 1.27 inches in Tucson, 1.19 inches in Safford, and 1.15 inches in Nogales. Farther east, late-

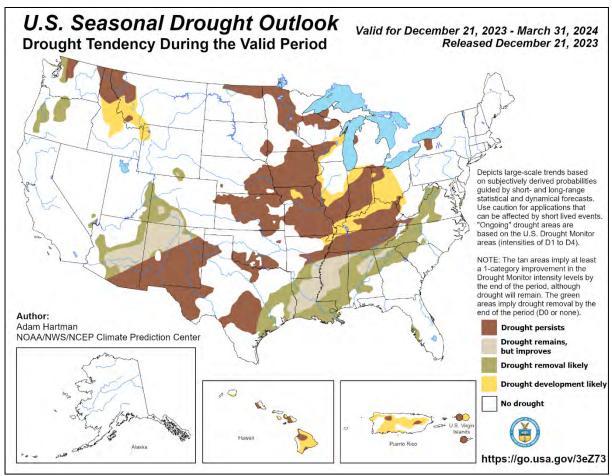


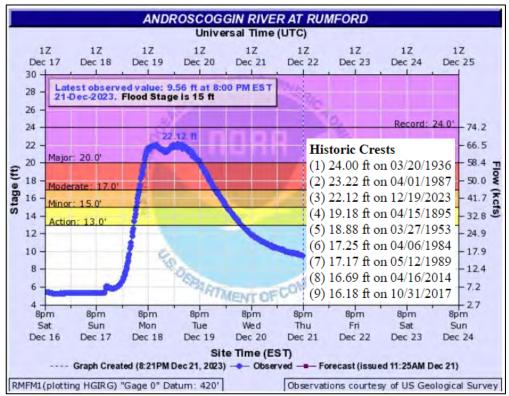
week, daily-record amounts included 0.77 inch (on the 22nd) in **Ottumwa, IA**, and 0.57 inch (on the 23rd) in **Pueblo, CO**.

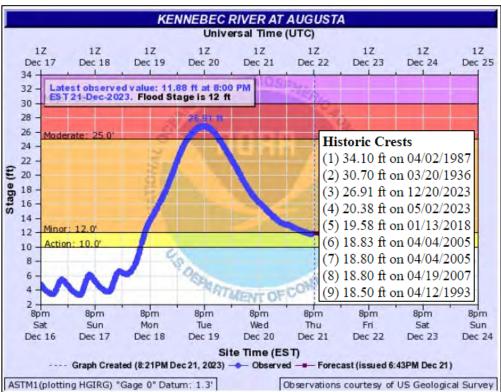
A surge of warmth accompanied the early-week **Eastern** storminess, with daily-record highs for December 18 soaring to 64°F in **Hartford**, **CT**; 63°F in **Boston**, **MA**; 62°F in **Concord**, **NH**, and 61°F in **Bangor**, **ME**. Meanwhile, warmth in the **Pacific Coast States** expanded eastward. In **California**, daily-record highs rose to 78°F (on the 17th) in **Santa Barbara** and 71°F (on the 18th) in **Hanford**. By December 19 on the **High Plains**, daily-record highs topped the 65-degree mark in locations such as **Goodland**, **KS** (68°F); **Denver**, **CO** (67°F); and **Sidney**, **NE** (66°F). During the second half of the week, rampant warmth prevailed in advance of a **Western** storm system. On December 21, **Phoenix**, **AZ**, logged a daily-record high of 78°F. From December 20-22, **Livington**, **MT**, tallied a trio of daily-record highs (56, 57, and 56°F). At week's end, warmth shifted further into the **Midwest**, where daily-record highs for the 23rd reached 56°F in **Aberdeen**, **SD**, and 52°F in **Waterloo**, **IA**.

Generally light precipitation accompanied variable temperatures across the Alaskan mainland, while heavy precipitation fell across the state's southern tier. The snow depth in Anchorage stood at 26 inches on December 20 and 21, boosted by 4- to 6-inch daily totals on December 7, 9, 12, 15, and 19. Through the 23rd, month-to-date snowfall in Anchorage totaled 34.8 inches, approaching the December 1955 record of 41.6 inches. In southeastern Alaska, December 1-23 precipitation totaled 14.38 inches (136 percent of normal) in Yakutat and 13.53 inches (210 percent) in Sitka. On the 23rd, Yakutat reported 1.56 inches of rain and clocked a peak wind gust to 62 mph. Farther south, relatively wet weather in Hawaii led to further drought erosion. In Lihue, Kauai, the December 17-23 rainfall total of 2.23 inches included a daily-record sum of 1.66 inches on the 20th. On the **Big Island**, **Hilo** received more than an inch of rain on December 20 and 22. Despite the rain, the December 1-23 total in Lihue—3.64 inches—was just 103 percent of normal, while month-to-date amounts were still substantially below normal in Kahului, Maui (0.45 inch, or 22 percent of normal), and Honolulu, Oahu (0.88 inch, or 56 percent).









In the wake of heavy rain associated with an Atlantic coastal storm, flooding broadly developed across New England for the second time this year. (On July 10-11, 2023, some of the worst flooding since the remnants of Hurricane Irene struck in late-August 2011 had unfolded in parts of Vermont and environs.) Given the storm's warmth, even New England's highest elevations received mostly rain, resulting in impressive runoff. Mount Washington, NH, New England's highest peak, received precipitation totaling 4.10 inches (0.1 inch of snow) on December 17-18. Elsewhere, daily-record rainfall totals for December 18 approached 3 inches in locations such as Worcester, MA (2.83 inches); Concord, NE (2.73 inches); and Bangor, ME (2.52 inches). Elsewhere in Maine, the worst flooding since April 1987 developed along portions of the Androscoggin and Kennebec Rivers, with the latter waterway rising 14.91 feet above flood stage in Augusta on the night of December 19-20. River flooding was reported as far south as northeastern Florida, while Atlantic coastal impacts included high winds and an impressive storm surge. In South Carolina, the seawater level in Charleston Harbor climbed 2.86 feet above flood stage on December 17, the highest-ever reading not associated with a hurricane. Higher water levels in Charleston were observed with Hurricane Hugo on September 22, 1989; an unnamed hurricane on August 11, 1940; and Hurricane Irma on September 11, 2017.

### National Weather Data for Selected Cities

Weather Data for the Week Ending December 23, 2023
Data Provided by Climate Prediction Center

	Data i iov				ided by Climate Prediction Center							REL	ATIVE	NUMBER OF DAYS						
	TEMPERATURE °F					PRECIPITATION								IDITY	TEM	IP. °F	PRECIP			
	STATES			ı								ı			FER	CENT		1.		
	AND	ÿE M	N K	∉E	4E	36	IRE RMAL	> ≧	IRE RMAL	Y X	.č. ⊼.	MAL C 1	× × ×	MAL N 1	ä≅	ΝË	OVE	AND BELOW	표	표
5	STATIONS	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	ARTL NOF	WEEKLY TOTAL, IN.	ARTL NOF	1TES OUR,	AL, I	NOR E DE	'AL, I	NOR.	AVERAGE MAXIMUM	AVERAGE MINIMUM	D AB	D BE	.01 INCH OR MORE	.50 INCH OR MORE
		AVI	AVI	EX	EX	AVI	DEPARTURE FROM NORMAL	TOT	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN	PCT. NORMAL SINCE JAN 1	AVA	AVI	90 AND ABOVE	32 AN	.0. OR	.50 OR
AK	ANCHORAGE	27	17	35	8	22	3	0.55	0.29	0.28	1.62	179	25.48	157	92	77	0	7	4	0
AIX	BARROW	3	-3	9	-11	0	0	0.00	-0.04	0.00	0.00	0	4.59	87	87	76	0	7	0	0
	FAIRBANKS	11	-7	24	-14	2	7	0.08	-0.05	0.03	0.89	212	10.37	90	83	70	0	7	4	0
	JUNEAU KODIAK	38 36	31 21	44 40	24 13	34 29	4 -3	1.39 1.14	-0.02 -0.91	0.63 0.56	7.61 5.52	151 85	72.72 63.79	111 84	93 93	77 73	0	4 7	5 4	1 1
	NOME	10	-5	20	-19	2	-6	0.07	-0.16	0.06	0.32	40	21.72	128	82	65	0	7	2	0
AL	BIRMINGHAM	58	35	68	27	46	-1	0.22	-0.91	0.22	2.61	72	46.14	83	78	38	0	3	1	0
	HUNTSVILLE MOBILE	56 65	33 42	67 72	24 36	44 53	0 1	0.30 0.01	-1.04 -1.30	0.30 0.01	3.64 4.47	81 115	42.25 54.29	79 82	88 83	41 44	0	4 0	1	0
	MONTGOMERY	61	34	71	29	47	-2	0.01	-1.18	0.01	0.45	12	45.22	90	86	41	0	3	1	0
AR	FORT SMITH	58	38	69	27	48	6	0.04	-0.74	0.03	0.52	19	40.09	86	89	50	0	3	2	0
۸.7	LITTLE ROCK	60 49	37	67	29	48	6	0.00 0.46	-1.14 0.04	0.00 0.43	0.41	10	52.69	107	82 84	45 55	0	2 7	0	0
AZ	FLAGSTAFF PHOENIX	73	25 55	56 81	16 49	37 64	8 9	0.46	0.58	0.43	0.54 0.74	39 140	24.41 3.98	122 56	61	31	0	0	2 4	1
	PRESCOTT	59	35	67	26	47	9	0.60	0.39	0.60	0.60	86	9.90	78	75	38	0	2	1	1
C.	TUCSON	72	48	82	44	60	8	1.03	0.82	1.00	1.22	170	9.86	95	54	27	0	0	2	1
CA	BAKERSFIELD EUREKA	64 57	49 45	74 63	44 33	56 51	8 4	0.47 2.02	0.20 0.09	0.29 0.91	0.47 4.69	61 77	9.06 32.89	150 85	88 96	57 75	0	0	3 5	0
	FRESNO	63	50	67	42	56	9	0.51	0.06	0.38	0.51	41	13.33	127	90	62	0	0	3	0
	LOS ANGELES	67	57	72	52	62	5	2.94	2.41	1.19	2.94	197	24.75	215	93	57	0	0	4	3
	REDDING SACRAMENTO	62 61	44 47	67 65	35 39	53 54	7 7	3.41 2.79	1.94 2.00	2.19 1.60	4.57 3.44	97 138	36.91 17.79	115 103	87 97	55 67	0	0	4	3 2
	SAN DIEGO	69	54	73	47	62	4	0.48	0.10	0.47	0.56	47	13.93	150	88	52	0	0	2	0
	SAN FRANCISCO	62	53	65	48	58	7	2.32	1.34	1.29	2.45	80	23.79	128	87	63	0	0	4	2
00	STOCKTON	62	47	67	37	54	7	1.38	0.81	0.41	1.48	84	15.42	120	98	65	0	0 7	4	0
СО	ALAMOSA CO SPRINGS	36 59	9 31	41 67	-6 25	23 45	6 14	0.04 0.01	-0.04 -0.04	0.04 0.01	0.39 0.58	149 336	4.23 25.46	57 160	96 67	59 25	0	4	1	0
	DENVER INTL	59	30	67	22	45	14	0.00	-0.08	0.00	0.11	43	18.47	128	64	20	0	5	0	0
	GRAND JUNCTION	47	26	52	19	36	9	0.41	0.28	0.41	0.54	122	7.41	83	85	46	0	7	1	0
СТ	PUEBLO BRIDGEPORT	58 46	27 31	69 61	20 20	43 38	12 3	0.19 2.13	0.13 1.23	0.19 1.68	0.91 6.60	405 216	12.33 49.85	103 115	88 82	31 51	0	7 5	1 2	0
01	HARTFORD	45	26	64	17	35	4	3.05	2.16	2.13	6.10	196	62.61	135	83	50	0	6	2	2
DC	WASHINGTON	50	35	57	29	43	2	2.41	1.65	2.23	5.05	192	34.19	83	82	49	0	3	2	1
DE FL	WILMINGTON DAYTONA BEACH	49 69	30 53	62 74	25	40 61	3 0	2.87 0.77	2.02 0.19	1.60 0.73	6.07	204 246	49.41 59.85	111 118	83 93	51 55	0	5 0	2	2
FL	JACKSONVILLE	64	45	73	46 37	54	-2	3.17	2.50	3.17	4.22 6.06	290	51.29	97	90	56	0	0	2	1
	KEY WEST	75	67	78	63	71	-2	0.12	-0.37	0.12	3.33	202	32.13	80	96	62	0	0	1	0
	MIAMI	76	62	79	55	69	-2 -1	0.26	-0.30	0.14	2.41	125	76.10	113	82	51	0	0	2	0
	ORLANDO PENSACOLA	71 63	53 45	77 70	46 39	62 54	-1 -1	0.10 0.00	-0.52 -1.23	0.10 0.00	3.22 4.06	171 101	48.11 57.18	94 85	92 74	50 40	0	0	1 0	0
	TALLAHASSEE	65	40	75	29	52	-1	1.99	1.04	1.99	10.21	328	58.94	102	91	48	0	2	1	1
	TAMPA	70	54	77	47	62	-2	0.18	-0.48	0.18	3.91	207	35.93	73	86	51	0	0	1	0
GA	WEST PALM BEACH ATHENS	74 57	60 32	79 67	50 22	67 44	-2 -1	0.43 0.04	-0.37 -1.00	0.35 0.04	3.53 1.09	134 34	71.93 45.99	118 96	87 80	55 34	0	0	2	0
0, 1	ATLANTA	56	36	67	29	46	0	0.01	-1.08	0.01	1.66	50	38.72	78	71	36	0	3	1	0
	AUGUSTA	58	33	70	23	45	-4	2.68	1.72	2.68	3.85	138	61.32	142	93	35	0	4	1	1
	COLUMBUS MACON	60 60	36 34	71 72	28 22	48 47	-2 -2	0.01 0.19	-1.11 -0.92	0.01 0.19	1.45 1.63	41 49	46.17 43.28	97 94	85 92	37 37	0	3	1	0
	SAVANNAH	61	39	73	27	50	-3	3.01	2.26	3.01	3.78	158	40.63	85	88	42	0	3	1	1
HI	HILO	75	66	78	63	71	-1	4.16	1.61	1.26	6.92	73	100.17	85	99	79	0	0	6	3
	HONOLULU KAHULUI	78 79	69 69	80 81	64 65	73 74	-2 0	0.35 0.06	-0.20 -0.65	0.24 0.03	0.89 0.46	56 22	13.41 10.93	85 70	93 87	67 59	0	0	3	0
	LIHUE	77	69	78	66	73	-1	2.26	1.15	0.03	3.91	111	42.00	119	90	67	0	0	6	2
IA	BURLINGTON	46	32	56	15	39	10	0.19	-0.23	0.18	1.26	86	26.40	70	89	63	0	3	2	0
	CEDAR RAPIDS DES MOINES	42 46	27 31	53 52	9 17	35 39	11 12	0.16 0.06	-0.19 -0.28	0.16 0.06	0.63 0.22	50 17	17.94 23.46	50 64	91 85	65 59	0	4	1	0
	DUBUQUE	40	27	47	11	34	11	0.06	-0.23	0.06	0.86	61	30.24	80	89	66	0	5	1	0
	SIOUX CITY	45	26	54	19	35	13	0.01	-0.21	0.01	0.47	63	23.64	81	96	67	0	7	1	0
ID.	WATERLOO	43	27	52	10	35	11	0.00	-0.32	0.00	0.13	11	21.53	60	85	56 75	0	4	0	0
ID	BOISE LEWISTON	38 45	28 33	43 52	25 28	33 39	2 5	0.05 0.16	-0.30 -0.11	0.04 0.08	1.20 0.98	105 116	10.87 10.41	97 82	96 87	75 64	0	7 4	2	0
	POCATELLO	43	20	47	10	32	7	0.06	-0.19	0.06	1.02	120	14.08	122	96	65	0	7	1	0
IL	CHICAGO/O_HARE	43	32	49	17	37	8	0.51	0.06	0.50	2.21	137	32.51	87	88	61	0	3	2	1
	MOLINE PEORIA	45 45	30 34	55 54	12 16	37 40	10 10	0.48 0.48	0.02 0.00	0.48 0.46	1.76 1.96	112 119	27.85 32.36	73 87	90 86	62 60	0	3	1 2	0
	ROCKFORD	41	29	48	12	35	9	0.46	0.05	0.46	2.17	145	31.03	84	90	65	0	3	1	0
	SPRINGFIELD	46	34	54	16	40	8	0.28	-0.18	0.28	2.05	129	32.80	87	91	64	0	3	1	0
IN	EVANSVILLE FORT WAYNE	53 44	33 32	58 49	19 24	43 38	6 8	0.06 0.72	-0.76	0.03 0.35	1.30	45 77	39.41 32.80	84 84	79 89	43 65	0	4	2	0
	INDIANAPOLIS	44	32	49 51	16	38 39	8 6	0.72	0.17 -0.35	0.35	1.41 0.85	40	32.80	78	89 85	55	0	3	4 3	0
	SOUTH BEND	42	32	49	23	37	8	0.62	0.09	0.43	2.02	115	38.43	99	88	69	0	4	5	0
KS	CONCORDIA	54 56	33	59	26	44 45	14	0.09 0.22	-0.15	0.06	0.83	102	23.24	82 107	89	58 55	0	2	2	0
	DODGE CITY GOODLAND	56 58	33 27	63 68	26 20	45	12 13	0.22	-0.03 -0.11	0.17 0.01	2.23 0.46	311 131	23.29 20.22	107 106	93 88	33	0	6	2	0
	TOPEKA	56	33	61	21	44	12	0.14	-0.18	0.07	1.18	100	21.97	60	90	53	0	3	2	Ō

Based on 1991-2020 normals

Weekly Weather and Crop Bulletin
Weather Data for the Week Ending December 23, 2023

				the Week Ending December 23, 2023							RELATIVE		NUI	AYS						
	TEMPERATURE °F					PRECIPITATION								HUMIDITY PERCENT		TEMP. °F		CIP		
	AND						E AL		E AL	T IN	, +	147	. 1	4T 1			VE	MO.		
\$	STATIONS	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMA	GREATEST : 24-HOUR, IN	TOTAL, IN., SINCE DEC	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELC	.01 INCH OR MORE	.50 INCH OR MORE
KY	WICHITA LEXINGTON	55 56	36 36	59 59	26 30	45 46	11 9	0.69 0.05	0.41 -0.74	0.33 0.05	1.63 1.49	172 48	29.41 39.86	86 81	89 68	62 39	0	3	3	0
K I	LOUISVILLE	51	33	59	22	42	3	0.03	-0.74	0.03	1.49	40	37.91	80	73	38	0	4	2	0
	PADUCAH BATON BOUCE	52 69	33	60	20	42 57	4	0.01	-0.94	0.01	1.26	39	53.46	108	84 90	44	0	4 0	1	0
LA	BATON ROUGE LAKE CHARLES	69	45 47	76 74	34 38	58	4 3	0.00 0.13	-1.26 -0.87	0.00 0.13	4.81 1.26	128 39	47.13 41.52	78 71	90 95	44 53	0	0	1	0
	NEW ORLEANS	66	49	75	44	57	1	0.00	-1.14	0.00	7.37	218	37.36	60	90	53	0	0	0	0
	SHREVEPORT	64	44	70	36	54	5	***	***	***	***	***	***	***	84	47	0	0	***	***
MA	BOSTON WORCESTER	48 44	31 27	71 61	21 16	39 35	5 6	2.02 3.26	1.05 2.31	1.58 2.81	4.90 6.63	149 202	46.41 62.35	109 131	82 81	49 48	0	4 5	2 2	1
MD	BALTIMORE	50	33	57	23	41	4	2.69	1.87	2.23	5.34	188	40.11	90	81	51	0	3	2	1
ME	CARIBOU	38	21	58	10	29	11	0.93	0.15	0.91	3.02	110	39.04	98	82	57	0	6	2	1
	PORTLAND ALPENA	44 39	25 30	59 47	16 18	35 35	5 9	2.32 0.23	1.31 -0.16	1.28 0.09	5.59 0.72	163 51	54.07 28.46	115 97	87 92	48 71	0	6 4	2	2
MI	GRAND RAPIDS	40	32	46	26	36	6	0.23	0.04	0.09	1.44	78	34.78	89	91	73	0	4	4	0
	HOUGHTON LAKE	33	24	37	22	28	4	0.04	-0.22	0.04	0.14	15	19.66	89	84	65	0	3	1	0
	LANSING	41	31	46	25	36	7	0.72	0.31	0.38	1.68	119	35.74	108	88	69	0	4	4	0
	MUSKEGON TRAVERSE CITY	43 41	34 32	48 48	27 26	38 36	8 8	0.42 0.06	-0.10 -0.32	0.23 0.06	1.24 0.48	67 35	30.39 23.44	88 81	84 87	66 66	0	4	4 1	0
MN	DULUTH	33	23	41	8	28	12	0.06	-0.32	0.06	1.15	101	32.70	106	88	68	0	5	1	0
	INT_L FALLS	32	20	42	4	26	16	0.01	-0.21	0.01	0.08	10	22.75	90	88	66	0	5	1	0
	MINNEAPOLIS ROCHESTER	39 38	28 24	48 46	16 8	34 31	13 12	0.01 0.00	-0.25 -0.28	0.01 0.00	0.63 0.08	70 8	27.51 28.22	87 82	82 92	58 64	0	5 5	1 0	0
	ST. CLOUD	38	27	45	12	32	16	0.02	-0.18	0.02	0.94	142	25.25	89	85	63	0	5	1	0
MO	COLUMBIA	51	36	59	18	44	10	0.15	-0.32	0.15	1.83	118	32.45	79	87	53	0	2	1	0
	KANSAS CITY	52 52	35 37	57 64	21	43	12 9	0.27 0.18	-0.07 -0.37	0.26 0.18	1.49	121	33.74	86	92 77	61	0	3 2	2	0
	SAINT LOUIS SPRINGFIELD	52 54	35	62	21 20	44 45	8	0.18	-0.37	0.18	1.22 0.45	67 23	31.07 42.13	75 95	89	46 54	0	3	1	0
MS	JACKSON	63	38	72	31	50	2	0.01	-1.20	0.01	1.80	47	38.49	68	87	37	0	1	1	0
	MERIDIAN	59	34	66	28	46	-3	0.00	-1.23	0.00	1.62	42	52.95	95	92	45	0	4	0	0
МТ	TUPELO BILLINGS	58 53	34 31	66 58	24 23	46 42	1 15	0.00 0.23	-1.30 0.10	0.00 0.23	1.46 0.35	31 84	44.96 16.88	79 119	83 69	38 32	0	3	0	0
IVII	BUTTE	44	15	50	9	29	11	0.16	0.06	0.16	0.32	90	17.63	139	87	45	0	7	1	0
	CUT BANK	49	27	55	15	38	16	0.00	-0.07	0.00	0.02	8	7.83	73	83	41	0	5	0	0
	GLASGOW	45 52	22 34	54	15 25	33 43	17 18	0.00	-0.10 -0.11	0.00	0.08	26 21	12.81	96 117	89 70	47 35	0	7	0	0
	GREAT FALLS HAVRE	52 47	21	56 56	25 14	34	14	0.01 0.08	-0.11	0.01 0.08	0.08 0.20	71	17.16 11.32	96	90	35 48	0	7	1	0
	MISSOULA	37	24	44	14	30	7	0.04	-0.21	0.04	0.47	58	12.95	93	96	72	0	7	1	0
NC	ASHEVILLE	55	28	62	19	41	1	0.15	-0.76	0.15	3.67	118	35.33	72	84	34	0	6	1	0
	CHARLOTTE GREENSBORO	56 54	32 31	63 61	23 22	44 42	0 1	1.43 1.87	0.59 1.16	1.43 1.87	3.85 5.32	148 226	42.66 42.91	100 99	78 75	32 31	0	3	1	1
	HATTERAS	57	45	72	39	51	0	1.80	0.69	1.69	4.70	131	47.14	78	91	54	0	0	2	1
	RALEIGH	57	35	62	27	46	2	2.84	2.03	2.84	5.72	230	43.26	95	73	31	0	3	1	1
NID	WILMINGTON BISMARCK	59 40	35 18	69 46	27 9	47 29	-2 13	3.21 0.00	2.35 -0.14	3.20 0.00	4.93 0.22	181 50	54.72 20.17	92 106	86 93	36 61	0	4 7	2	1
ND	DICKINSON	45	21	54	11	33	15	0.00	-0.14	0.00	0.22	115	14.78	95	91	53	0	7	0	0
	FARGO	37	26	45	8	32	18	0.59	0.38	0.59	0.74	113	19.46	82	83	64	0	4	1	1
	GRAND FORKS JAMESTOWN	33	18	39	-1 o	26	14	0.00	-0.15	0.00	0.24	49	14.05	65	86	71	0	6	0	0
NE	GRAND ISLAND	39 50	21 26	51 62	8 20	30 38	16 10	0.00 0.06	-0.08 -0.13	0.00	0.09 0.61	36 95	15.98 14.87	81 56	85 94	60 59	0	7 6	1	0
	LINCOLN	51	24	58	22	38	10	0.00	-0.27	0.00	0.76	84	19.05	65	90	58	0	7	0	0
	NORFOLK	47 56	25	55 62	22 15	36	12	0.14	-0.04	0.14	0.24	37	25.09	94	94	56	0	7	1	0
	NORTH PLATTE OMAHA	56 48	22 27	62 56	15 22	39 37	12 10	0.02 0.01	-0.08 -0.26	0.02 0.01	0.07 0.30	23 31	20.95 23.39	100 74	91 90	38 64	0	7 7	1	0
	SCOTTSBLUFF	58	22	65	17	40	13	0.00	-0.12	0.00	0.08	21	19.53	125	86	32	o	7	0	0
	VALENTINE	54	20	63	9	37	12	0.19	0.10	0.19	0.20	60	31.07	149	91	35	0	7	1	0
NH NJ	CONCORD ATLANTIC CITY	44 49	23 31	62 62	12 25	33 40	6 3	3.37 2.80	2.54 1.75	2.67 2.23	6.14 5.52	218 160	40.72 40.13	99 89	89 81	48 53	0	6 5	2	2
140	NEWARK	49	33	64	25	41	5	3.17	2.22	2.60	5.61	178	48.75	106	76	45	0	5	3	2
NM	ALBUQUERQUE	51	33	54	30	42	6	0.48	0.36	0.46	1.00	243	5.30	60	90	45	0	5	3	0
NV	ELY LAS VEGAS	49 63	22 48	55 67	11 43	36 56	11 8	0.00	-0.15 -0.05	0.00 0.06	0.04 0.06	7 20	11.43 4.21	124 104	77 53	33 28	0	6 0	0	0
	RENO	49	48 32	55	43 25	40	8 5	0.06	0.12	0.06	0.06	49	10.47	104	90	28 54	0	3	2	0
	WINNEMUCCA	50	21	57	11	36	6	0.01	-0.23	0.01	0.28	37	8.33	116	83	40	0	7	1	0
NY	ALBANY	41	25	56	16	33	4	2.45	1.74	2.06	4.90	198	45.81	114	86	54	0	5	2	1
	BINGHAMTON BUFFALO	39 40	25 30	49 50	16 24	32 35	5 5	2.48 0.88	1.82 0.04	1.90 0.54	4.80 2.66	206 95	44.12 38.29	106 96	91 91	66 65	0	6 5	4	1
	ROCHESTER	41	28	54	21	35	4	0.88	-0.13	0.34	1.78	89	35.36	102	85	67	0	6	4	0
	SYRACUSE	39	27	49	17	33	4	1.96	1.24	1.52	3.67	150	42.25	108	86	60	0	5	4	1
ОН	AKRON-CANTON	40 47	30 30	47 53	20 17	35 38	3	0.72	0.09	0.51 0.44	1.45	67 51	35.96	88 86	90 87	60 51	0	4	4	1 0
	CINCINNATI CLEVELAND	47	34	53 50	25	38	4 5	0.52 0.89	-0.31 0.25	0.44	1.43 2.20	51 99	38.45 42.79	86 106	81	51 57	0	3	4	1
	COLUMBUS	45	32	52	23	39	5	1.00	0.30	0.59	2.33	102	40.11	98	90	57	0	4	4	1
	DAYTON MANSEIELD	46	33	53	25	40 36	7	0.52	-0.15	0.28	1.65	74 60	33.85	83	78 97	51 57	0	3	3	0
	MANSFIELD	42	31	49	21	30	6	0.60	-0.07	0.32	1.54	69	40.89	98	87	3/	0	4	3	U

Based on 1991-2020 normals \*\*\* Not Available Weekly Weather and Crop Bulletin
Weather Data for the Week Ending December 23, 2023

					the Week Ending December 23, 2023							RFI A	ATIVE	NUN	/BER	OF D	OF DAYS			
		7	ГЕМБ	PERA	TUR	E °	F	PRECIPITATION							HUM	IDITY	TEMP. °F			CIP
	STATES AND STATIONS		<del>                                     </del>														1			
\$			AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO YOUNGSTOWN	46 41	35 30	52 48	27 19	40 36	9 5	0.57 0.73	0.03 0.02	0.21 0.35	1.41 1.48	78 63	30.49 34.69	88 86	87 87	61 59	0	4	4	0
ОК	OKLAHOMA CITY	60	40	66	28	50	11	0.10	-0.31	0.08	1.05	76	34.10	94	90	55	0	3	3	0
OR	TULSA ASTORIA	58 50	40 37	65 56	25 32	49 44	10 1	0.27 0.94	-0.29 -1.43	0.16 0.58	0.68 10.42	36 132	35.74 55.72	88 82	89 97	53 77	0	3	2	0
OK	BURNS	38	25	49	18	32	7	0.94	-0.10	0.38	1.52	133	13.57	135	92	73	0	7	3	0
	EUGENE	47	38	59	31	42	2	0.50	-1.15	0.37	5.77	105	27.63	70	98	84	0	1	3	0
	MEDFORD	50	36	59	28	43	4	0.19	-0.64	0.15	1.93	72	12.72	72	98	68	0	3	4	0
	PENDLETON PORTLAND	39 48	33 37	43 51	28 30	36 42	2	0.20 0.86	-0.15 -0.44	0.10 0.50	1.27 7.68	114 175	9.80 34.38	78 96	94 90	80 67	0	3	3	0
	SALEM	47	35	58	29	41	0	0.57	-1.00	0.39	6.69	127	35.09	91	99	79	0	2	3	0
PA	ALLENTOWN	46	28	58	21	37	3	3.26	2.43	1.73	6.04	203	43.41	93	82	51	0	6	3	2
	ERIE MIDDLETOWN	42 47	32 34	50 55	26 29	37 40	4 6	0.58 2.62	-0.35 1.87	0.30 2.00	2.27 4.39	73 167	41.00 36.75	97 84	88 76	56 51	0	5 3	4 2	0 2
	PHILADELPHIA	49	33	62	29	41	3	2.89	2.00	1.89	6.07	199	40.00	92	76	50	0	5	2	2
	PITTSBURGH	44	32	54	20	38	6	0.53	-0.09	0.43	1.36	64	29.67	76	84	47	0	4	4	0
	WILKES-BARRE WILLIAMSPORT	42 43	29 30	52 52	21 24	36 37	4 5	2.96 2.16	2.35 1.48	1.82 1.18	4.97 4.13	233 164	44.56 40.26	117 94	86 83	56 54	0	5 4	4 2	2 2
RI	PROVIDENCE	46	28	60	19	37	3	2.16	1.81	2.17	5.65	156	55.49	119	87	50	0	5	2	2
sc	CHARLESTON	62	38	71	27	49	-2	3.10	2.31	3.10	3.41	137	50.09	97	87	37	0	3	1	1
	COLUMBIA FLORENCE	58 58	32 33	68 67	22 25	45 46	-2 -3	2.20 2.08	1.31 1.23	2.20 2.08	3.00 2.78	112 110	53.09 40.19	120 90	95 89	39 37	0	5 4	1	1
	GREENVILLE	58	30	63	22	44	0	0.26	-0.79	0.26	2.76	61	47.62	98	75	27	0	5	1	0
SD	ABERDEEN	45	19	56	10	32	15	0.16	0.02	0.16	0.26	58	22.02	101	89	57	0	7	1	0
	HURON	45	19	51	10	32	13	0.35	0.21	0.35	0.38	77	17.76	76	93	55	0	7	1	0
	RAPID CITY SIOUX FALLS	56 46	24 24	63 54	17 17	40 35	15 14	0.00 0.27	-0.08 0.09	0.00 0.27	0.00 0.31	0 49	20.59 17.12	118 61	76 89	32 54	0	7 7	0	0
TN	BRISTOL	51	27	58	18	39	0	0.09	-0.72	0.06	3.23	112	38.53	89	88	39	0	6	2	0
	CHATTANOOGA	54	31	65	25	42	-1	0.47	-0.67	0.47	4.20	105	44.95	83	83	36	0	5	1	0
	KNOXVILLE MEMPHIS	52 57	30 38	62 66	25 29	41 47	0 4	0.14 0.34	-0.94 -0.87	0.14 0.34	4.91 1.60	128 38	45.30 52.91	89 98	85 77	41 42	0	5 1	1	0
	NASHVILLE	53	33	62	25	43	1	0.36	-0.59	0.32	2.00	58	36.33	73	79	36	0	5	2	0
TX	ABILENE	66	47	71	34	57	10	0.10	-0.20	0.08	1.14	119	22.35	89	88	54	0	0	2	0
	AMARILLO AUSTIN	64 69	35 50	77 72	30 37	50 59	12 6	0.52 0.54	0.35 -0.08	0.52 0.28	1.72 1.07	336 53	17.37 24.16	89 68	88 93	36 58	0	1 0	1	1
	BEAUMONT	70	49	74	37	60	5	0.34	-0.67	0.28	1.37	37	37.11	61	92	53	0	0	1	0
	BROWNSVILLE	78	56	81	45	67	3	0.01	-0.26	0.01	0.11	11	20.86	78	98	54	0	0	1	0
	CORPUS CHRISTI DEL RIO	75 72	54 51	79 75	42 36	65 61	6 8	0.03 0.01	-0.43 -0.15	0.02 0.01	0.51 0.43	35 77	26.23 14.53	83 73	96 87	57	0	0	2	0
	EL PASO	64	40	70	28	52	7	0.01	0.02	0.01	0.43	39	4.21	48	73	51 33	0	2	2	0
	FORT WORTH	65	48	72	37	56	9	1.42	0.77	1.16	2.02	96	26.72	73	90	56	0	0	3	1
	GALVESTON	67	57	72	50	62	5	0.21	-0.69	0.21	2.13	65	27.63	59	93	70	0	0	1	0
	HOUSTON LUBBOCK	70 62	50 38	75 71	40 30	60 50	5 10	0.16 0.00	-0.76 -0.18	0.16 0.00	1.81 0.58	59 103	40.09 16.46	78 90	94 94	58 47	0	0 2	1 0	0
	MIDLAND	64	43	69	33	53	8	0.39	0.26	0.39	0.56	125	7.40	55	96	50	0	0	1	0
	SAN ANGELO	68	43	71	32	55	8	0.66	0.45	0.60	2.03	305	19.03	91	95	50	0	1	2	1
	SAN ANTONIO VICTORIA	70 73	51 50	73 76	36 36	61 62	8 6	0.18 0.44	-0.26 -0.06	0.14 0.28	0.54 0.63	35 36	19.06 29.79	59 74	93 93	55 56	0	0	2	0
1	WACO	67	44	71	28	56	7	0.89	0.22	0.59	1.27	61	27.06	76	96	58	0	2	3	1
	WICHITA FALLS	63	41	71	32	52	9	0.03	-0.30	0.03	1.07	88	21.28	77	91	59	0	1	1	0
UT VA	SALT LAKE CITY LYNCHBURG	44 51	29 28	54 56	22 18	37 40	6 1	0.22 1.44	-0.10 0.70	0.20 1.44	0.96 4.38	91 163	17.56 42.35	115 101	97 85	66 40	0	6 6	2	0
1	NORFOLK	54	37	67	32	46	1	3.79	3.00	2.62	6.06	248	48.17	99	87	52	0	2	2	2
	RICHMOND	53	31	59	26	42	1	2.81	2.02	2.80	7.03	263	41.00	91	84	42	0	5	2	1
	ROANOKE WASH/DULLES	53 48	31 29	59 54	23 22	42 39	2 2	0.63 2.25	0.00 1.52	0.63 2.17	2.42 4.67	102 184	31.24 33.57	74 79	74 83	38 48	0	4 5	1 2	1
VT	BURLINGTON	39	26	53	14	32	6	2.46	1.94	2.19	4.97	264	43.30	117	85	55	0	5	3	1
WA	OLYMPIA	48	37	55	31	43	4	0.52	-1.20	0.21	9.22	159	39.49	81	93	79	0	2	3	0
	QUILLAYUTE SEATTLE-TACOMA	53 48	43 39	56 51	34 33	48 44	7 2	2.02 0.84	-1.06 -0.43	0.91 0.67	12.02 7.37	117 173	78.54 33.50	80 88	87 95	76 71	0	0	5 3	2
	SPOKANE	38	31	43	23	34	6	0.84	-0.43	0.67	3.21	185	13.33	84	96	85	0	3	3	0
1	YAKIMA	41	34	45	24	38	8	0.29	-0.07	0.22	1.27	120	6.78	88	89	72	0	2	2	0
WI	EAU CLAIRE GREEN BAY	39 39	25 28	45 44	11 15	32 34	13 11	0.09 0.00	-0.20 -0.38	0.08	0.49 0.55	46 41	25.17 24.81	77 79	85 89	58 67	0	5 4	2	0
	LA CROSSE	41	28	47	14	35	11	0.00	-0.38	0.00	0.30	26	22.69	79 65	89	58	0	5	0	0
	MADISON	40	26	46	11	33	9	0.00	-0.34	0.00	0.71	55	28.41	77	91	65	0	5	0	0
140 /	MILWAUKEE	43	32	49	18	38	9	0.25	-0.14	0.24	1.59	111	32.40	94	81	59	0	3	2	0
WV	BECKLEY CHARLESTON	47 50	27 29	56 61	15 19	37 39	2 2	0.39 0.19	-0.31 -0.58	0.20 0.14	2.16 1.55	86 56	39.51 34.75	92 76	82 96	41 40	0	5 5	3	0
	ELKINS	46	29	56	9	34	0	0.19	-0.33	0.14	2.02	74	41.49	89	96	48	0	6	4	0
,	HUNTINGTON	52	30	61	19	41	3	0.36	-0.41	0.26	1.01	37	31.37	70	81	37	0	5	2	0
WY	CASPER CHEYENNE	52 55	26 27	55 59	16 21	39 41	15 13	0.03 0.04	-0.11 -0.07	0.03 0.04	0.06 0.07	12 19	15.24 18.72	126 122	73 71	32 24	0	5 6	1	0
1	LANDER	41	23	49	17	32	12	0.55	0.42	0.55	0.58	122	17.63	134	79	52	0	7	1	1
	SHERIDAN	56	24	61	18	40	16	0.02	-0.10	0.02	0.10	25	22.33	150	81	31	0	7	1	0

Based on 1991-2020 normals

## **International Weather and Crop Summary**

# December 17-23, 2023 International Weather and Crop Highlights and Summaries provided by USDA/WAOB

### **HIGHLIGHTS**

**EUROPE:** Unseasonable warmth persisted, with additional rain in central and northern Europe contrasting with drier weather in western and southern growing areas.

**MIDDLE EAST:** Warm and wet weather maintained favorable conditions for winter grains over western and central growing areas.

**NORTHWESTERN AFRICA**: Additional drought-easing rain in the east juxtaposed with intensifying drought in the west.

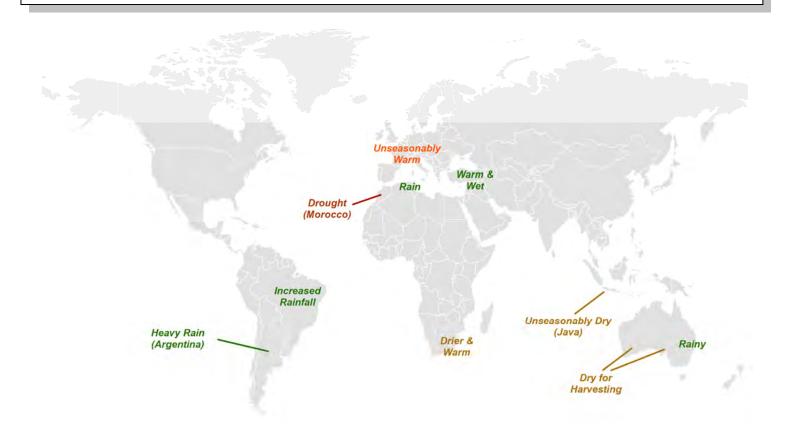
**SOUTHEAST ASIA:** Continued unseasonable dryness in Java, Indonesia, further degraded moisture conditions for rice.

**AUSTRALIA:** Rain in the east benefited summer crops, while dry weather in the south and west aided winter crop harvesting.

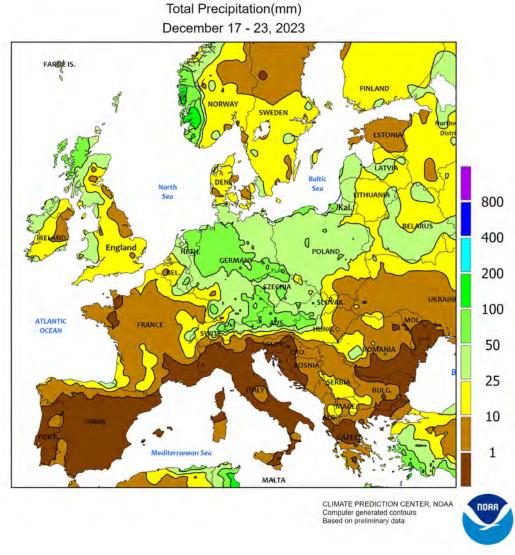
**SOUTH AFRICA**: Following last week's timely showers, warmer, drier weather returned to western sections of the corn belt.

**ARGENTINA**: Moderate to heavy showers maintained favorable prospects for emerging summer crops.

**BRAZIL:** Showers intensified over central and northeastern farming areas, helping to stabilize the condition of immature soybeans.



**EUROPE** 

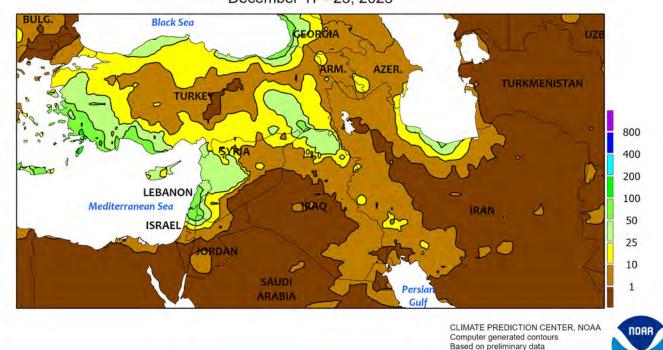


### **EUROPE**

Unseasonable warmth persisted for a second consecutive week, with continued wet weather in central and northern Europe contrasting with drier conditions in the west and south. Temperatures during the monitoring period averaged 2 to 6°C above normal nearly everywhere save for the western Iberian Peninsula (1-4°C below normal). Consequently, most of the continent's primary winter crop areas were devoid of a protective snow cover at week's end except for northeastern Poland and the Baltic States.

Meanwhile, a series of Atlantic storms produced moderate to heavy showers (10-100 mm, locally more) from England and eastern France eastward. The rain continued to hamper late-season fieldwork but maintained abundant moisture reserves for dormant winter grains and oilseeds. Conversely, favorably drier weather across the remainder of France allowed previously delayed fieldwork to resume. Sunny skies also promoted seasonal fieldwork and winter grain development in Portugal, Spain, and Italy.

# MIDDLE EAST Total Precipitation(mm) December 17 - 23, 2023



### **MIDDLE EAST**

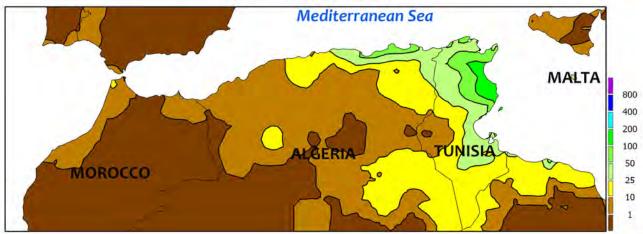
Warm weather prevailed over much of the region, with additional rain observed in western and central growing areas. In Turkey, another week with widespread albeit highly variable showers (5-30 mm on the Anatolian Plateau, but locally more than 50 mm along the country's perimeter) further boosted prospects for winter wheat and barley establishment. Light to moderate showers (2-35 mm) continued along the eastern Mediterranean Coast, though locally excessive rain (50-130 mm) was reported in northern Israel and environs. Showers (1-25 mm) also kept soils favorably moist from northern Iraq into

western Iran. Overall, moisture conditions remained favorable for winter crops after a dry start to the growing campaign. However, drier-than-normal weather lingered in northeastern Iran's Khorasan Province; since October 15, rainfall in this key barley growing area has tallied a meager 43 percent of normal. Temperatures up to 5°C above normal kept winter crops from going dormant in the climatologically colder northern growing areas, although wheat and barley approached dormancy in northern Iran and on Turkey's Anatolian Plateau by the end of the monitoring period.

### NORTHWESTERN AFRICA

Total Precipitation(mm)

December 17 - 23, 2023



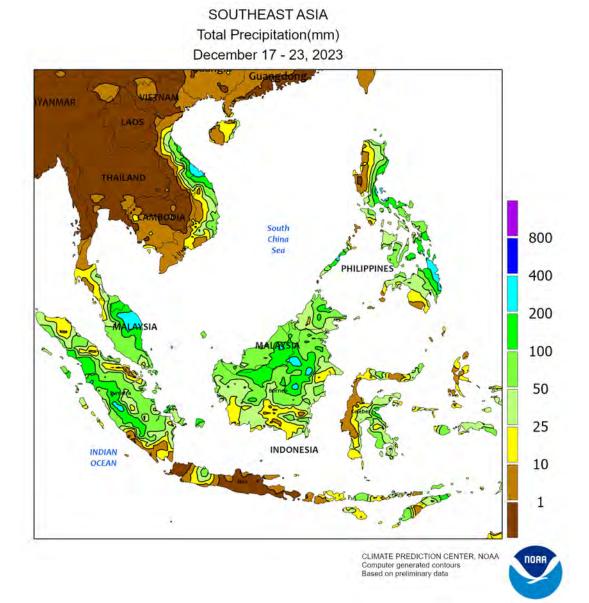
CLIMATE PREDICTION CENTER, NOAA Computer generated contours Based on preliminary data



### **NORTHWESTERN AFRICA**

For the third consecutive week, drought-easing rain in the east juxtaposed with increasing drought in Morocco and western Algeria. Additional moderate to heavy rain (10-75 mm) from north-central Algeria into northern Tunisia further eased drought and improved prospects for winter grain establishment and early development. A pocket of heavy to excessive rainfall (75-135 mm) in east-central Tunisia likely caused localized flooding but fell outside of the country's primary growing areas. Conversely,

dry weather in Morocco ushered the country deeper into drought. As of December 24, rainfall since September 1 in Morocco's primary growing areas slipped below 45 percent of normal and was now the fifth driest of the past 30 years. Likewise, season-to-date rainfall in western Algeria dropped to 45 percent of normal, the driest of the past 30 years. Time is quickly running out for drought-afflicted western growing areas to receive rain for this season's wheat and barley.

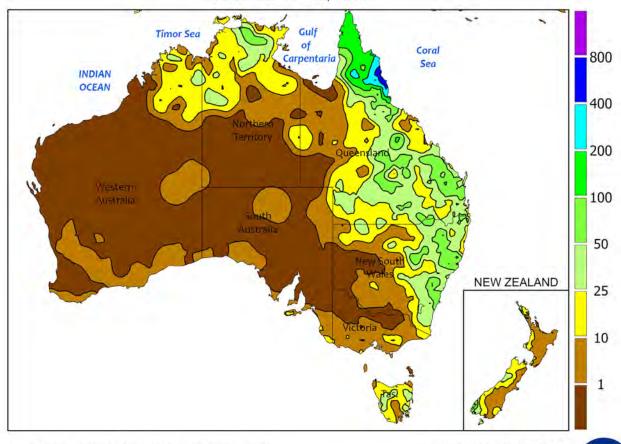


### **SOUTHEAST ASIA**

Unseasonable dryness persisted across Java, Indonesia, with little if any rainfall limiting moisture for rice. The late onset and poor establishment of seasonal rains has resulted in the third driest season to date (beginning August 1) in the last 30 years with little more than half the normal rainfall. More moisture is needed soon to prevent yield declines in rice as well as other crops. In contrast, most oil palm areas of Indonesia and neighboring

Malaysia continued to benefit from consistent albeit somewhat below-average showers (25-100 mm or more). Meanwhile, precipitation overspread nearly all corners of the Philippines with the exception of traditionally drier northwestern- and southwestern-most locales. Most areas recorded well in excess of 25 mm of rain and locally over 200 mm in the northeast. Although some flooding was likely, the moisture helped ease seasonal dryness.

# AUSTRALIA Total Precipitation(mm) December 17 - 23, 2023



Gridded data from the Australian Bureau of Meteorology: www.bom.gov.au/ Creative Commons License found at; https://creativecommons.org/licenses/by/3.0/au/legalcode CLIMATE PREDICTION CENTER, NOAA Computer generated contours Based on preliminary data

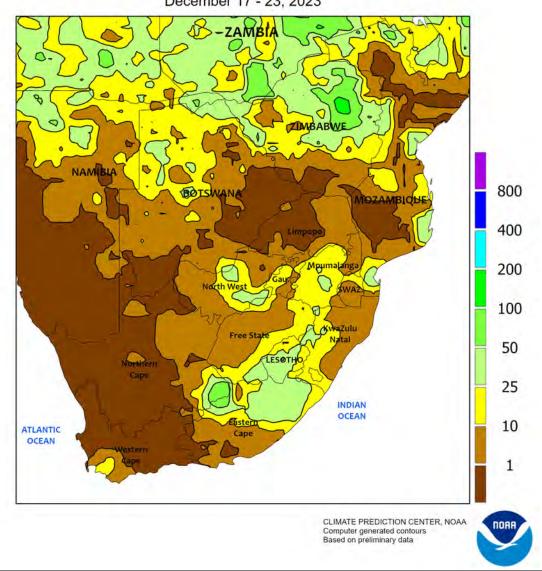


### **AUSTRALIA**

In southern Queensland and northern New South Wales, widespread showers (10-50 mm, locally more) maintained average to above-average root zone soil moisture for cotton, sorghum, and other summer crops. The rain slowed local fieldwork but helped counter relatively large evaporative losses. Maximum temperatures climbed into the upper 30s and lower 40s (degrees C), which elevated evaporation rates and accelerated summer crop development. Elsewhere in the

wheat belt, mostly dry weather in the south and west aided wheat, barley, and canola harvesting. In the wake of last week's soaking rain in the southeast, the drier weather helped winter crop harvesting regain momentum. In Western Australia, the continued dryness favored final winter grain and oilseed harvests. Temperatures averaged near normal in Western Australia but somewhat below normal (about 1°C below normal) in the southeast.

### SOUTH AFRICA Total Precipitation(mm) December 17 - 23, 2023

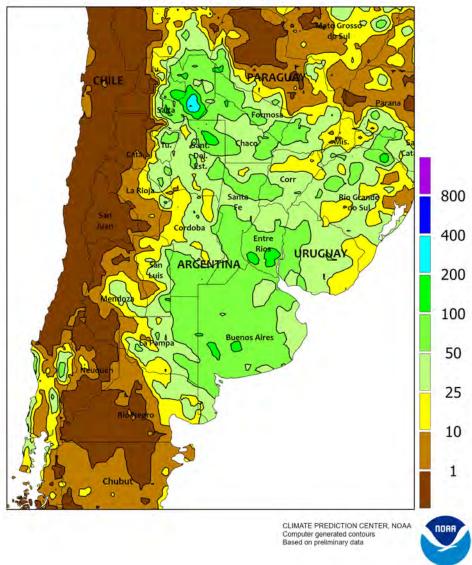


### **SOUTH AFRICA**

Following last week's heavy showers, rainfall tapered off across most of the region, allowing temperatures to return to above-normal levels. Rain was patchy and mostly light across the corn belt (North West and Free State north and eastward through Limpopo and Mpumalanga), with many locations recording less than 10 mm. A similar pattern prevailed in sugarcane areas of KwaZulu-Natal and eastern Mpumalanga. Weekly temperatures averaged 2 to 3°C

above normal throughout the aforementioned eastern farming areas, with highest daytime temperatures ranging from the lower to upper 30s (degrees C). Elsewhere, locally heavy rain (25-50 mm, locally higher) fell in the vicinity of Eastern Cape and southern Free State, increasing moisture in watersheds feeding the Orange River. Meanwhile, seasonably warm, sunny weather benefited growth of tree and vine crops in Western Cape.

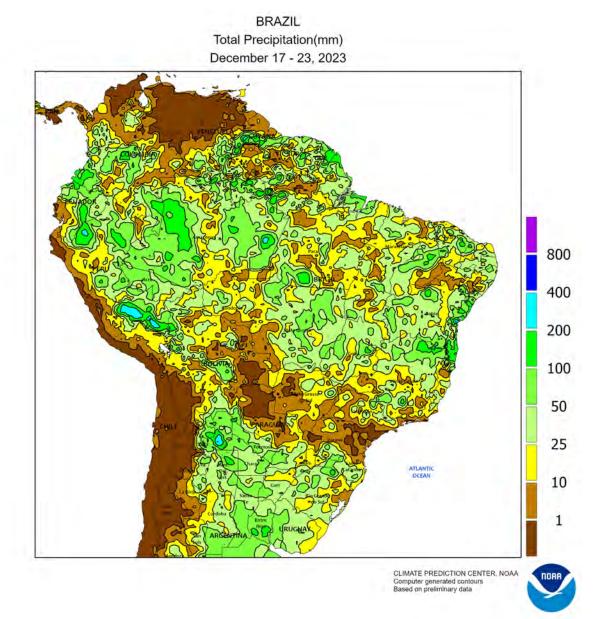




### **ARGENTINA**

Widespread, heavy showers maintained favorable prospects for summer grains, oilseeds, and cotton. Rainfall totaled 25 to 100 mm over most of the region, including previously dry northwestern farming areas (notably Santiago del Estero and Salta); while favorable for germination and establishment of summer crops, the heavy nature of the rain hampered winter grain harvesting and may have caused some lodging. Unseasonably mild weather accompanied the wetness, with weekly temperatures averaging 2 to 4°C below normal as far

north as Santiago del Estero. Despite the generally coolerthan-normal conditions, highest daytime temperatures reached the lower 30s (degrees C) in the cooler southern areas and the lower 40s in traditionally warmer northwestern areas. According to the government of Argentina, corn and soybeans were 69 and 71 percent planted, respectively, as of December 21; cotton was 61 percent planted, compared with 47 percent last year, while wheat was 66 percent harvested, 15 points behind last year's pace.



### BRAZIL

Showers intensified over central and northeastern Brazil, helping to stabilize the condition of soybeans and other crops after another brief outbreak of heat and dryness. Rainfall totaled 10 to 50 mm – locally higher – from Mato Grosso eastward to the Atlantic Coast, although a few pockets of dryness lingered over the northeastern interior. The rain helped to bring temperatures down to more seasonable levels following a warm start to the week (daytime highs reaching 40°C in spots). According to the government of Mato Grosso, soybean harvesting had begun in isolated locations as of December 22, reaching about 1 percent completed in total. Farther south, moderate to heavy showers (10-35 mm, locally exceeding 50 mm) maintained generally favorable conditions

for summer crops in Rio Grande do Sul, while drier weather prevailed to the north, including Paraná, Mato Grosso do Sul, and São Paulo. As in the north, daytime highs reached the upper 30s (degrees C) in some of the drier southern areas as the week began but temperatures moderated despite the dryness. According to the government of Rio Grande do Sul, corn was 89 percent planted as of December 21, with just over 70 percent of the crop currently in the ground ranging from flowering to mature; 90 percent of soybeans were planted, but early planted crops were just beginning to flower. In Paraná, nearly 90 percent of the first-crop corn had reached reproduction as of December 18, as had 70 percent of soybeans.

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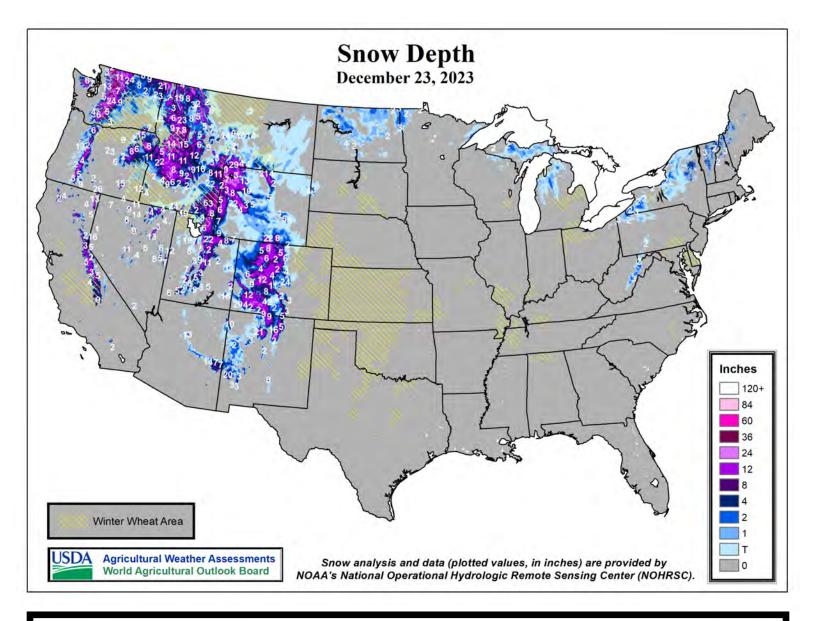
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