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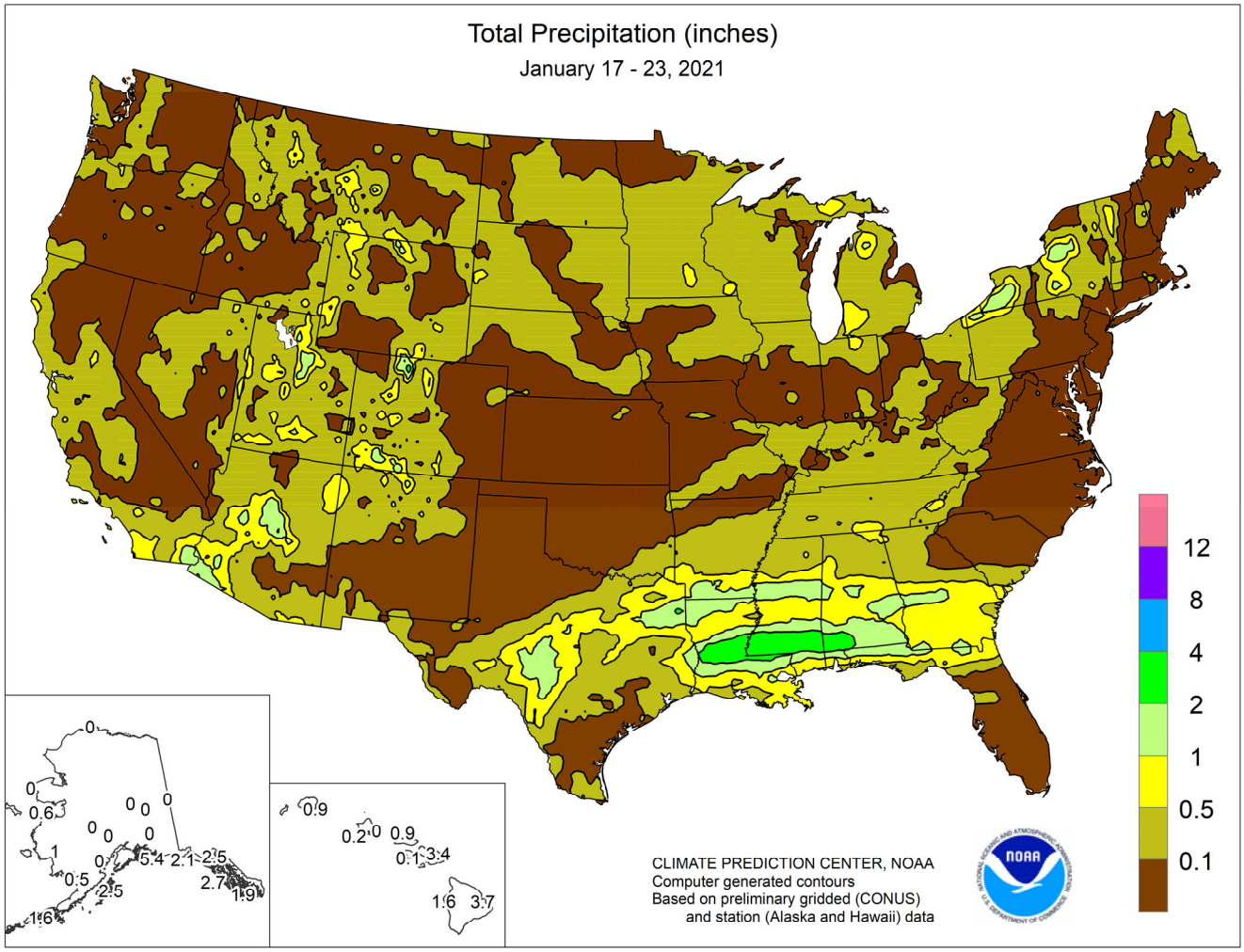
Weekly Weather and Crop Bulletin

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
January 17 – 23, 2021

Highlights provided by USDA/WAOB

Across **California**, the **Great Basin**, and the **Southwest**, cool, showery weather replaced previously warm, dry conditions. Meanwhile, heavy precipitation subsided across the **Pacific Northwest**. Most other areas of the country, including large sections of the **Plains** and **Midwest**, received little or no precipitation. Dry weather also extended into much of the **East**. Across the **South**, however, some rain (locally 2 inches or more) fell during the second half of the week. However, rain's coverage was limited, with higher totals confined to a small area

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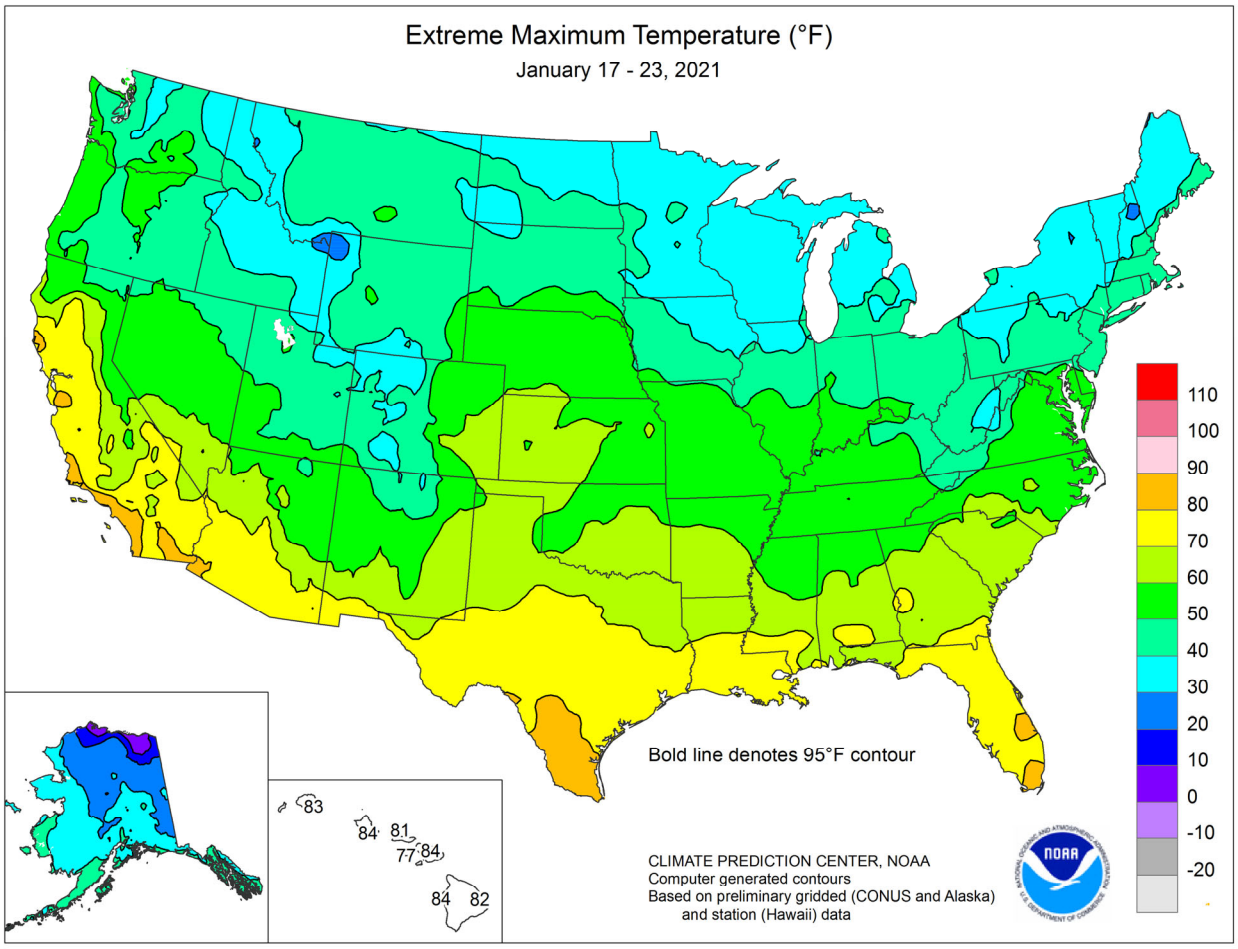
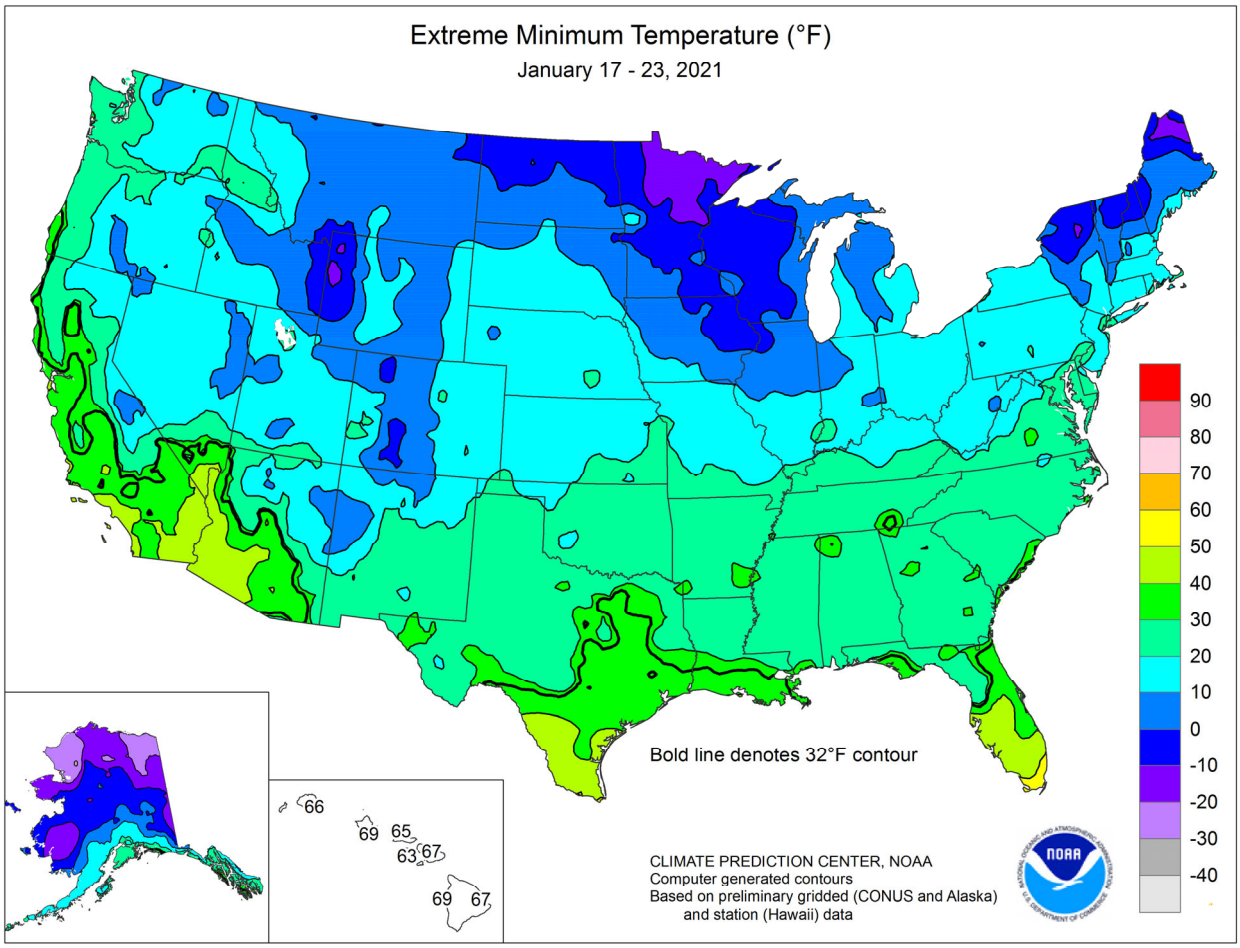
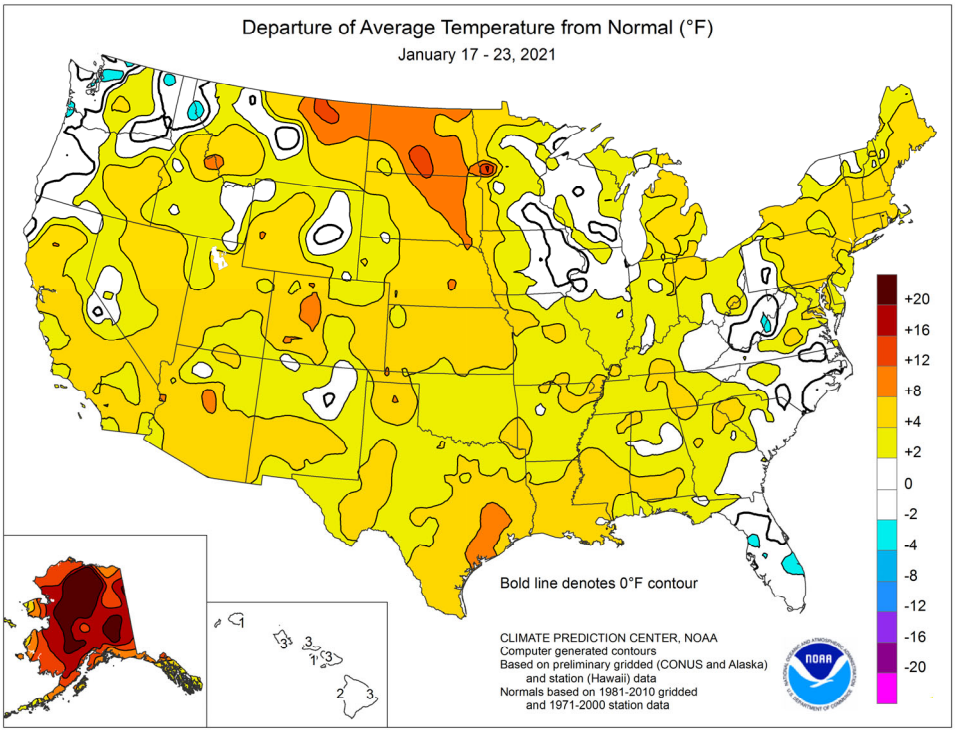

Extreme Maximum Temperature (°F)
January 17 - 23, 2021
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
83
84
81
77
84
84
82
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Extreme Minimum Temperature (°F)
January 17 - 23, 2021
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
66
69
65
63
67
69
67
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data

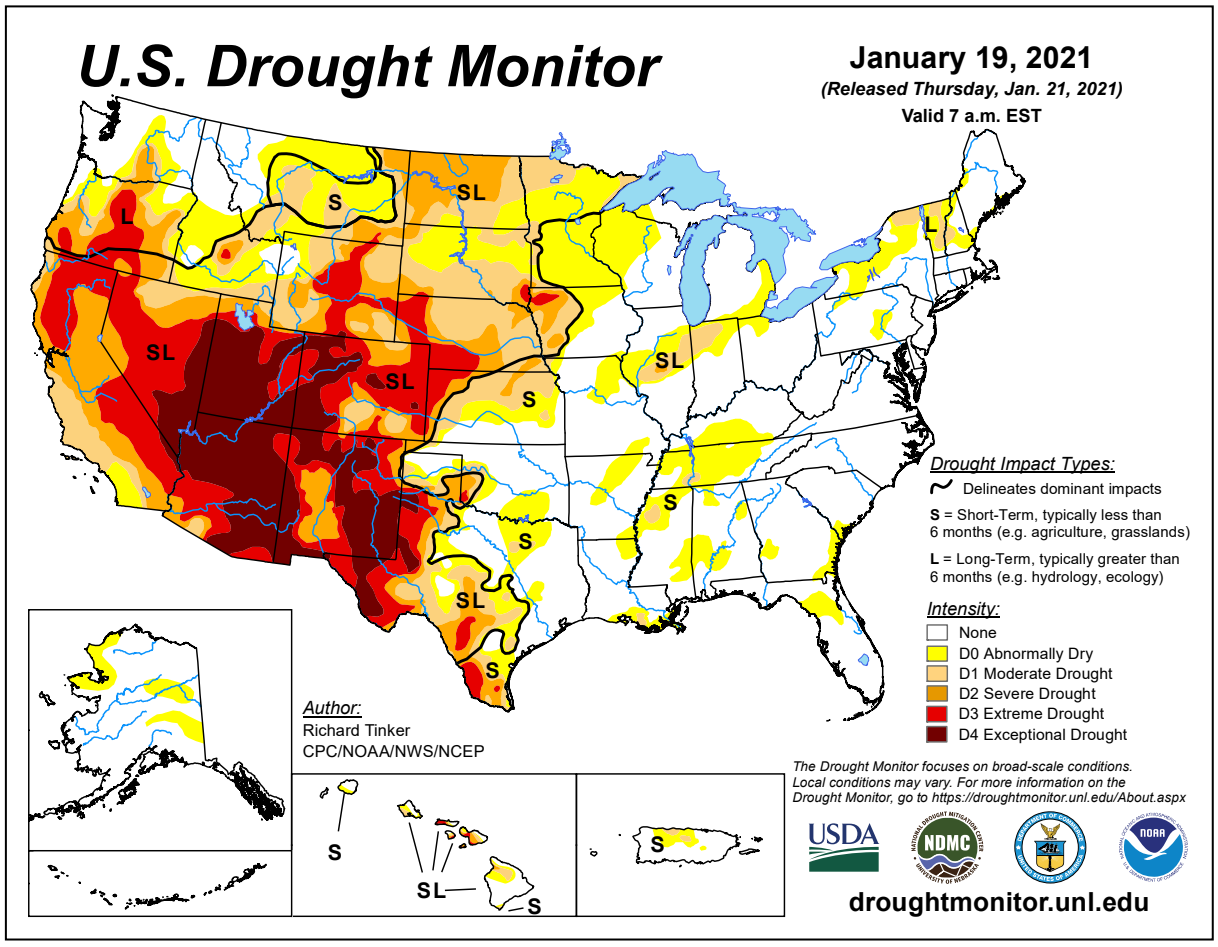
(Continued from front cover)
stretching from **eastern Texas into central and southern Alabama**. Most of the country continued to experience near- or above-normal temperatures, although warmth across the **North** was less pronounced compared to recent weeks. Still, weekly temperatures averaged at least 5 to 10°F above normal in several areas, including large sections of the **Plains** and from the **western Gulf Coast region into the lower Mississippi Valley**. Pockets of cooler-than-normal conditions were generally limited to the **Rockies**, **Southeast**, **Pacific Northwest**, and **upper Midwest**. As the week progressed, however, notably cooler air overspread the **West**. Sub-zero temperatures were mostly limited to the **Rockies** and the **nation's northern tier** from **North Dakota and the upper Mississippi Valley to northern New England**.

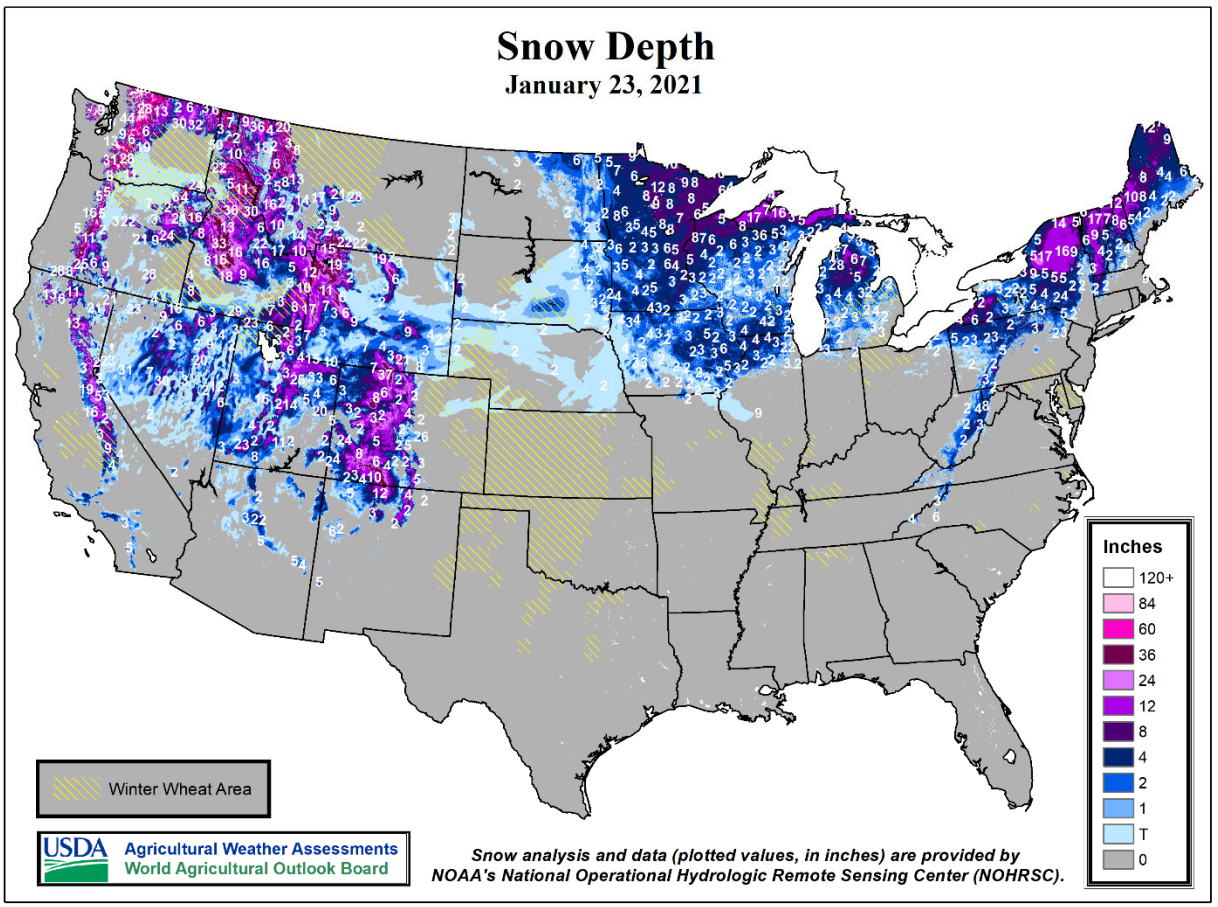


From January 16-20, lingering warmth in **Stockton, CA**, resulted in five consecutive daily-record highs (72, 72, 78, 72, and 68°F). With its January 18 high of 78°F, **Stockton** also set a monthly record (previously, 75°F on January 9, 1953). Elsewhere in **California**, consecutive daily-record highs occurred on January 17-18 in locations such as **Ukiah** (78 and 80°F, respectively) and downtown **San Francisco** (74 and 76°F). The last time **Ukiah** attained an 80-degree reading in January was 1984, when a high of 82°F occurred on January 27. Meanwhile, windy weather accompanied a surge of colder air across the **northern Plains**. On January 19, a gust to 74 mph was clocked in **Cut Bank, MT**. Despite the colder conditions across the **northern Plains**—and later the **Midwest** and **East**—temperatures were not extreme by historical standards. **Duluth, MN**, noted three sub-zero readings during the week (and for the month to date), including a low of -6°F on January 22. However, three sub-zero temperatures in **Duluth** during the first month of the year would represent the second-lowest January total on record (tied with 1889, 1891, and 1932), behind one such day in 2006. Elsewhere, sharply cooler conditions in **California** resulted in **Santa Ana** reporting a January 23 high of 53°F, down from 94°F on January 15.

A tranquil weather pattern began to break down around mid-week, when locally heavy showers developed over the **Desert Southwest**. With a 1.12-inch total on January 20, **Yuma, AZ**, experienced its wettest January day since January 21, 2010, when 1.95 inches fell. The daily sum also accounted for nearly one-third (31 percent) of **Yuma's** normal annual rainfall of 3.56 inches. In 2020, **Yuma** received no measurable rain from April 12 – December 9, a span of 242 days. Late in the week, additional shower activity arrived across the **West**. Modest daily-record totals included 0.21 inch (on January 22) in **Tonopah, NV**, and 0.22 inch (on January 23) in **Casper, WY**. **Casper** also received 3.0 inches of snow on the 23rd. On January 24, near the mid-point of the **Western** winter wet season, the average water equivalency of the high-elevation **Sierra Nevada** snowpack stood at 6 inches, just under 40 percent of normal for this time of year and roughly one-fifth of the April 1 (end-of-season) peak accumulation. By January 23, light snow overspread the **upper Midwest**, where **Mitchell, SD**, reported its first measurable amount (1.8 inches, a daily record for the date) since late December. Farther south, January 21-22 rainfall totaled 2.50 inches in **Alexandria, LA**; 2.49 inches in **McComb, MS**; and 2.48 inches in **Hattiesburg, MS**.

Unusually mild weather dominated **Alaska**, where mainland temperatures averaged some 10 to 20°F above normal. **King Salmon** recorded highs above the 40-degree mark each day from January 20-22, including a reading of 44°F on the 21st. **Kotzebue** notched a daily-record high of 34°F on January 22. Meanwhile, significant precipitation fell across **southern Alaska**. **Kodiak** received measurable precipitation on each of the first 23 days of January, totaling 13.37 inches (211 percent of normal). On January 18, **Alaskan** daily-record totals included 1.95 inches (all rain) in **Juneau** and 0.44 inch in **Anchorage**. Later, colder air arrived in **southeastern Alaska**, where **Juneau** received 2.7 inches of snow on January 22-23. Farther south, stormy weather provided relief in some of **Hawaii's** driest areas, including **Maui County**, while snow blanketed the **Big Island** summits. In **Kahului, Maui**, where 2.76 inches was measured on January 18, it was the wettest day since December 20, 2017, when 6.40 inches fell. It was also **Kahului's** wettest January day since January 3, 2004, when rainfall totaled 3.99 inches. On the **Big Island**, **Hilo** received 3.83 inches of rain from January 18-23.


U.S. Drought Monitor
January 19, 2021
(Released Thursday, Jan. 21, 2021)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
droughtmonitor.unl.edu


Snow Depth
January 23, 2021
Inches
120+
84
60
36
24
12
8
4
2
1
T
0
Winter Wheat Area
USDA Agricultural Weather Assessments
World Agricultural Outlook Board
Snow analysis and data (plotted values, in inches) are provided by NOAA's National Operational Hydrologic Remote Sensing Center (NOHRSC).

National Weather Data for Selected Cities

Weather Data for the Week Ending January 23, 2021

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	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
AK	ANCHORAGE	37	26	41	21	32	15	0.52	0.37	0.35	2.04	123	0.59	109	91	63	0	7	3	0
	BARROW	3	-6	8	-15	-2	0	0.05	0.01	0.01	0.80	281	0.06	50	80	73	0	7	4	0
	FAIRBANKS	19	-1	32	-3	9	0	0.00	-0.12	0.00	0.23	21	0.00	0	84	70	0	7	0	0
	JUNEAU	38	33	44	27	36	8	2.46	1.24	1.58	18.60	189	5.70	142	90	78	0	3	5	1
	KODIAK	42	32	43	22	37	7	2.49	0.57	1.05	25.54	169	12.50	196	94	62	0	3	7	2
	NOME	22	9	34	-13	15	11	0.61	0.40	0.28	1.97	108	0.66	90	87	73	0	7	4	0
AL	BIRMINGHAM	56	35	60	29	46	2	0.45	-0.70	0.22	5.23	65	1.43	40	87	38	0	2	4	0
	HUNTSVILLE	52	33	56	28	43	1	0.36	-0.75	0.27	6.00	63	1.42	38	89	48	0	3	3	0
	MOBILE	66	42	69	27	54	3	0.35	-0.97	0.31	5.61	60	1.04	24	98	46	0	2	2	0
	MONTGOMERY	62	39	66	26	51	4	0.91	-0.20	0.79	4.10	50	2.22	67	87	39	0	3	2	1
AR	FORT SMITH	53	33	63	26	43	4	0.08	-0.57	0.08	5.00	94	1.36	66	88	44	0	3	1	0
	LITTLE ROCK	55	35	62	28	44	4	0.15	-0.61	0.14	6.09	79	1.34	50	83	39	0	3	2	0
AZ	FLAGSTAFF	43	23	61	13	33	3	1.79	1.36	0.80	2.13	62	1.79	114	83	52	0	7	5	1
	PHOENIX	71	53	77	44	62	5	0.02	-0.19	0.01	0.47	28	0.02	3	56	27	0	0	2	0
	PRESCOTT	53	32	66	23	43	4	0.41	0.18	0.18	0.48	25	0.41	48	79	35	0	2	3	0
	TUCSON	73	45	80	39	59	6	0.07	-0.15	0.06	0.32	18	0.07	9	61	22	0	0	2	0
CA	BAKERSFIELD	65	44	70	41	55	6	0.20	-0.05	0.16	0.54	28	0.20	23	69	31	0	0	2	0
	EUREKA	55	39	62	35	47	-2	0.25	-1.17	0.24	6.83	52	3.03	61	87	65	0	0	2	0
	FRESNO	64	43	70	39	54	7	0.52	0.06	0.39	1.66	48	0.52	32	81	34	0	0	2	0
	LOS ANGELES	69	53	84	47	61	4	0.18	-0.40	0.18	1.81	44	0.18	8	75	32	0	0	1	0
	REDDING	64	44	76	33	54	8	0.00	-1.33	0.00	4.10	38	1.74	38	57	25	0	0	0	0
	SACRAMENTO	64	41	73	33	53	6	0.18	-0.61	0.18	2.00	33	0.46	17	79	34	0	0	1	0
	SAN DIEGO	70	54	81	49	62	5	0.42	-0.01	0.41	1.02	34	0.42	28	78	40	0	0	2	0
	SAN FRANCISCO	64	47	74	43	56	5	0.07	-0.81	0.07	1.94	27	0.57	18	76	36	0	0	1	0
	STOCKTON	66	42	77	36	54	8	0.69	0.09	0.66	2.65	63	0.85	42	79	33	0	0	2	1
CO	ALAMOSA	37	5	46	1	21	5	0.05	-0.03	0.05	0.43	69	0.06	28	93	51	0	7	1	0
	CO SPRINGS	46	20	59	16	33	2	0.00	-0.09	0.00	0.71	108	0.19	70	74	31	0	7	0	0
	DENVER INTL	47	22	59	20	35	4	0.00	-0.10	0.00	0.68	93	0.16	49	72	30	0	7	0	0
	GRAND JUNCTION	45	23	47	20	34	7	0.07	-0.05	0.07	0.38	37	0.07	16	77	39	0	7	1	0
	PUEBLO	51	17	63	15	34	3	0.05	-0.04	0.04	0.40	56	0.24	81	82	29	0	7	2	0
CT	BRIDGEPORT	43	29	47	20	36	6	0.01	-0.67	0.01	5.28	93	1.23	52	74	39	0	4	1	0
	HARTFORD	40	22	45	16	31	6	0.00	-0.75	0.00	6.90	119	2.12	88	75	43	0	7	0	0
DC	WASHINGTON	49	31	55	26	40	4	0.00	-0.64	0.00	5.99	116	1.27	60	73	32	0	3	0	0
DE	WILMINGTON	45	28	49	23	36	4	0.00	-0.67	0.00	6.72	118	1.56	70	68	35	0	5	0	0
FL	DAYTONA BEACH	68	44	77	35	56	-2	0.00	-0.61	0.00	0.70	15	0.13	6	96	46	0	0	0	0
	JACKSONVILLE	65	40	74	28	53	-1	0.60	-0.19	0.59	2.70	52	1.16	49	96	45	0	2	2	1
	KEY WEST	74	63	78	61	68	-1	0.03	-0.46	0.03	2.29	61	0.85	55	89	64	0	0	1	0
	MIAMI	76	57	81	52	66	-2	0.01	-0.37	0.01	2.07	63	0.50	41	87	46	0	0	1	0
	ORLANDO	70	47	78	40	58	-2	0.07	-0.44	0.07	1.33	31	0.29	16	95	47	0	0	1	0
	PENSACOLA	66	45	71	30	56	4	0.37	-0.72	0.36	6.16	77	1.39	41	96	49	0	1	2	0
	TALLAHASSEE	66	40	72	26	53	2	0.27	-0.76	0.27	8.15	116	5.03	162	95	43	0	3	1	0
	TAMPA	70	52	76	44	61	0	0.00	-0.48	0.00	3.21	79	0.54	34	86	48	0	0	0	0
	WEST PALM BEACH	74	52	79	47	63	-2	0.01	-0.65	0.01	2.54	44	0.30	12	92	47	0	0	1	0
GA	ATHENS	59	37	65	29	47	4	0.04	-0.89	0.04	5.24	79	2.21	76	77	31	0	3	1	0
	ATLANTA	57	38	63	32	47	4	0.16	-0.81	0.09	4.17	60	1.89	63	78	34	0	1	2	0
	AUGUSTA	61	33	67	26	47	2	0.11	-0.76	0.11	6.18	99	3.09	108	90	31	0	4	1	0
	COLUMBUS	63	38	78	26	50	3	0.57	-0.27	0.41	6.27	89	3.16	115	83	37	0	3	2	0
	MACON	61	35	66	24	48	2	1.00	0.02	0.86	4.33	60	2.07	66	86	36	0	4	2	1
	SAVANNAH	64	40	70	29	52	3	0.48	-0.41	0.48	3.14	56	1.42	53	85	38	0	2	1	0
HI	HILO	80	68	82	67	74	3	3.67	1.48	1.82	20.24	111	5.95	90	89	58	0	0	6	2
	HONOLULU	82	71	84	69	76	3	0.37	-0.08	0.28	0.71	14	0.41	22	80	49	0	0	3	0
	KAHULUI	81	70	84	67	75	3	3.43	2.80	2.82	3.69	67	3.54	163	82	55	0	0	2	2
	LIHUE	77	69	83	66	73	1	0.91	0.10	0.49	3.17	39	1.13	40	95	70	0	0	7	0
IA	BURLINGTON	35	15	44	7	25	-1	0.01	-0.25	0.01	2.13	70	0.31	33	89	54	0	7	1	0
	CEDAR RAPIDS	28	6	37	-3	17	-2	0.02	-0.18	0.02	0.76	35	0.09	13	90	68	0	7	1	0
	DES MOINES	34	16	44	11	25	3	0.07	-0.15	0.04	2.27	104	0.35	47	84	52	0	7	3	0
	DUBUQUE	29	6	35	-7	18	-1	0.06	-0.18	0.05	1.66	61	0.39	46	84	63	0	7	2	0
	SIOUX CITY	37	15	52	11	26	6	0.04	-0.09	0.04	1.15	90	0.79	173	89	54	0	7	1	0
	WATERLOO	30	7	40	-3	19	0	0.14	-0.05	0.10	1.49	80	0.67	107	84	60	0	7	2	0
ID	BOISE	42	26	45	21	34	3	0.04	-0.22	0.03	1.62	63	1.07	109	94	55	0	7	2	0
	LEWISTON	41	31	48	27	36	0	0.06	-0.19	0.04	1.13	61	0.51	61	93	68	0	4	2	0
	POCATELLO	39	18	44	6	28	4	0.01	-0.20	0.01	0.59	29	0.19	24	89	52	0	7	1	0
IL	CHICAGO/O_HARE	32	19	39	10	26	2	0.10	-0.27	0.05	3.30	92	0.75	56	78	57	0	7	2	0
	MOLINE	34	13	42	2	24	1	0.08	-0.23	0.08	3.60	109	0.84	74	81	56	0	7	1	0
	PEORIA	36	18	48	8	27	2	0.04	-0.35	0.04	2.34	61	1.10	80	81	50	0	7	1	0
	ROCKFORD	32	15	40	2	24	3	0.09	-0.18	0.08	2.70	89	0.96	91	75	55	0	7	2	0
	SPRINGFIELD	39	20	52	11	30	3	0.02	-0.37	0.02	2.17	55	1.11	80	81	51	0	7	1	0
IN	EVANSVILLE	44	27	53	17	36	3	0.04	-0.65	0.03	2.83	47	0.85	38	79	40	0	6	2	0
	FORT WAYNE	35	23	44	12	29	4	0.08	-0.40	0.04	2.19	48	0.94	54	81	59	0	7	2	0
	INDIANAPOLIS	37	22	49	12	29	2	0.04	-0.51	0.04	2.41	46	0.99	49	84	51	0	7	1	0
	SOUTH BEND	33	22	42	12	28	4	0.27	-0.22	0.13	4.04	92	1.50	84	80	60	0	7	3	0
KS	CONCORDIA	47	24	58	18	35	7	0.05	-0.10	0.05	0.75	58	0.07	18	78	36	0	7	1	0
	DODGE CITY	53	23	63	17	38	6	0.00	-0.13	0.00	1.05	81	0.00	0	78	30	0	7	0	0
	GOODLAND	47	17	60	14	32	2	0.00	-0.10	0.00	0.80	101	0.04	14	81	31	0	7	0	0
	TOPEKA	49	22	60	21	35	6	0.00	-0.21	0.00	1.93	98	0.64	107	83	34	0	7	0	0

Based on 1981-2010 normals ***** Not Available**

Weather Data for the Week Ending January 23, 2021

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	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
	WICHITA	51	24	58	22	38	6	0.00	-0.20	0.00	1.93	108	0.28	48	81	37	0	7	0	0
KY	LEXINGTON	39	26	48	14	33	0	0.09	-0.61	0.06	4.23	67	1.66	71	86	55	0	6	3	0
	LOUISVILLE	44	30	52	20	37	2	0.13	-0.56	0.13	3.77	61	1.30	54	82	46	0	5	1	0
	PADUCAH	48	30	51	24	39	4	0.14	-0.67	0.08	3.50	48	0.97	36	84	42	0	4	2	0
LA	BATON ROUGE	68	47	75	30	58	4	0.71	-0.58	0.71	6.98	85	2.76	73	92	53	0	2	1	1
	LAKE CHARLES	66	49	72	32	58	6	0.49	-0.70	0.33	6.66	76	2.29	57	100	66	0	1	2	0
	NEW ORLEANS	68	49	76	36	59	6	0.64	-0.53	0.58	5.94	65	1.92	50	88	53	0	0	2	1
	SHREVEPORT	58	44	68	29	51	5	0.85	-0.13	0.49	10.62	136	2.58	85	86	57	0	1	3	0
MA	BOSTON	40	26	45	17	33	4	0.00	-0.75	0.00	5.14	81	1.67	66	69	42	0	6	0	0
	WORCESTER	35	22	41	12	29	5	0.04	-0.76	0.02	8.32	130	2.28	88	76	51	0	7	2	0
MD	BALTIMORE	48	27	53	20	37	5	0.01	-0.67	0.01	6.02	107	1.50	67	66	32	0	6	1	0
ME	CARIBOU	22	6	33	-8	14	5	0.27	-0.35	0.11	3.41	64	1.00	48	84	62	0	7	5	0
	PORTLAND	36	20	41	12	28	6	0.00	-0.76	0.00	5.75	87	1.78	70	86	49	0	6	0	0
MI	ALPENA	30	18	41	5	24	6	0.18	-0.19	0.08	1.77	58	0.53	41	88	59	0	7	4	0
	GRAND RAPIDS	33	22	40	11	28	4	0.19	-0.25	0.09	2.85	69	0.77	47	87	65	0	7	3	0
	HOUGHTON LAKE	28	17	35	4	22	5	0.12	-0.20	0.06	2.67	93	0.91	77	88	68	0	7	4	0
	LANSING	32	20	40	8	26	3	0.22	-0.13	0.12	3.24	103	1.21	94	89	65	0	7	4	0
	MUSKEGON	33	24	39	18	28	3	0.33	-0.09	0.14	3.53	86	1.13	72	78	58	0	7	3	0
	TRAVERSE CITY	31	21	38	11	26	5	0.11	-0.52	0.06	1.04	22	0.38	17	83	62	0	7	4	0
MN	DULUTH	25	2	50	-6	14	4	0.13	-0.08	0.13	1.17	58	0.35	45	81	54	0	7	1	0
	INT_L FALLS	20	-2	34	-16	9	5	0.18	0.05	0.06	1.19	89	0.33	68	88	70	0	7	5	0
	MINNEAPOLIS	25	8	37	1	17	1	0.34	0.13	0.31	1.56	82	0.81	112	83	60	0	7	2	0
	ROCHESTER	23	3	35	-8	13	0	0.20	-0.01	0.10	0.88	45	0.74	111	85	68	0	7	3	0
	ST. CLOUD	24	5	40	-4	15	4	0.23	0.09	0.20	1.04	76	0.59	116	81	62	0	7	3	0
MO	COLUMBIA	43	24	55	18	33	4	0.02	-0.41	0.01	1.77	45	1.13	79	85	45	0	7	2	0
	KANSAS CITY	46	24	60	21	35	6	0.00	-0.25	0.00	2.29	99	1.04	134	83	39	0	7	0	0
	SAINT LOUIS	44	26	54	18	35	3	0.06	-0.47	0.04	2.64	56	1.06	58	80	41	0	6	2	0
	SPRINGFIELD	46	25	53	20	36	3	0.03	-0.50	0.03	3.07	62	1.58	84	87	43	0	7	1	0
MS	JACKSON	61	42	64	28	52	6	0.86	-0.30	0.44	7.16	82	2.17	60	90	50	0	2	4	0
	MERIDIAN	62	39	65	26	51	6	0.83	-0.42	0.66	5.16	59	1.56	42	87	43	0	3	2	1
	TUPELO	56	37	59	30	46	5	0.24	-0.77	0.19	6.31	65	1.26	37	85	40	0	2	3	0
MT	BILLINGS	38	23	51	12	31	3	0.03	-0.08	0.02	0.58	65	0.22	60	80	43	0	7	2	0
	BUTTE	34	17	40	3	26	5	0.02	-0.09	0.02	0.21	23	0.11	28	82	45	0	7	1	0
	CUT BANK	36	14	46	3	25	3	0.00	-0.05	0.00	0.22	49	0.01	6	82	42	0	7	0	0
	GLASGOW	35	19	44	7	27	14	0.02	-0.07	0.02	0.07	9	0.06	18	80	53	0	7	1	0
	GREAT FALLS	38	16	48	5	27	1	0.00	-0.11	0.00	0.28	30	0.18	46	75	37	0	7	0	0
	HAVRE	38	13	46	3	26	7	0.00	-0.07	0.00	0.10	14	0.02	6	84	46	0	7	0	0
	MISSOULA	36	22	40	14	29	2	0.11	-0.07	0.10	0.89	51	0.46	68	96	65	0	7	2	0
NC	ASHEVILLE	48	29	55	24	38	1	0.01	-0.85	0.01	5.91	94	1.91	71	86	36	0	6	1	0
	CHARLOTTE	56	32	61	25	44	4	0.00	-0.77	0.00	4.57	79	1.65	64	81	30	0	4	0	0
	GREENSBORO	52	29	58	26	40	2	0.01	-0.67	0.01	4.89	93	0.93	40	75	30	0	6	1	0
	HATTERAS	54	39	60	33	47	1	0.00	-1.18	0.00	9.99	121	3.32	84	81	47	0	0	0	0
	RALEIGH	53	29	60	25	41	0	0.01	-0.78	0.01	8.47	150	2.90	112	81	32	0	6	1	0
	WILMINGTON	58	32	63	30	45	-1	0.01	-0.82	0.01	4.74	74	1.99	72	85	31	0	5	1	0
ND	BISMARCK	34	18	42	9	26	14	0.08	-0.02	0.07	0.49	56	0.23	65	83	56	0	7	2	0
	DICKINSON	32	16	39	7	24	8	0.00	-0.07	0.00	0.00	0	0.00	0	83	57	0	7	0	0
	FARGO	23	5	39	-2	14	5	0.15	0.00	0.05	0.86	60	0.28	50	84	70	0	7	3	0
	GRAND FORKS	24	4	39	-4	14	7	0.06	-0.07	0.02	0.59	58	0.19	44	81	64	0	7	4	0
	JAMESTOWN	30	11	41	4	20	11	0.05	-0.06	0.04	0.47	58	0.21	56	83	61	0	7	2	0
NE	GRAND ISLAND	43	24	59	21	34	9	0.05	-0.08	0.04	1.12	109	0.28	72	78	41	0	7	2	0
	LINCOLN	42	19	54	14	30	6	0.13	-0.01	0.13	1.30	91	0.21	46	84	43	0	7	1	0
	NORFOLK	40	20	56	17	30	8	0.03	-0.11	0.03	0.72	60	0.24	55	80	44	0	7	1	0
	NORTH PLATTE	45	19	58	12	32	6	0.03	-0.05	0.03	0.77	104	0.04	15	82	35	0	7	1	0
	OMAHA	39	20	51	17	30	6	0.04	-0.13	0.04	1.56	98	0.44	83	88	51	0	7	1	0
	SCOTTSBLUFF	44	20	55	15	32	4	0.11	0.01	0.07	0.56	65	0.15	47	76	36	0	7	2	0
	VALENTINE	41	20	55	16	31	7	0.17	0.10	0.07	0.70	109	0.29	129	80	48	0	7	3	0
NH	CONCORD	36	19	43	12	27	7	0.01	-0.61	0.01	5.41	104	1.72	85	80	48	0	6	1	0
NJ	ATLANTIC_CITY	45	27	49	17	36	3	0.00	-0.71	0.00	6.93	114	1.88	78	75	35	0	5	0	0
	NEWARK	43	28	48	22	36	5	0.01	-0.77	0.01	5.89	91	2.22	83	73	38	0	6	1	0
NM	ALBUQUERQUE	51	29	57	26	40	3	0.01	-0.08	0.01	0.22	26	0.01	3	72	35	0	6	1	0
NV	ELY	44	16	55	8	30	5	0.03	-0.11	0.03	0.46	41	0.09	18	82	35	0	7	1	0
	LAS VEGAS	62	46	68	43	54	5	0.01	-0.09	0.01	0.05	5	0.01	2	50	25	0	0	1	0
	RENO	49	27	60	20	38	3	0.04	-0.18	0.04	0.39	21	0.12	15	74	28	0	7	1	0
	WINNEMUCCA	48	21	54	14	35	4	0.28	0.08	0.23	0.83	51	0.44	67	82	34	0	7	2	0
NY	ALBANY	32	19	36	10	26	3	0.05	-0.55	0.02	4.99	103	1.30	68	92	62	0	7	3	0
	BINGHAMTON	30	19	34	13	25	3	0.23	-0.32	0.06	7.24	156	1.44	80	90	62	0	7	7	0
	BUFFALO	34	25	41	19	29	5	0.40	-0.30	0.28	5.12	81	1.37	56	84	59	0	7	4	0
	ROCHESTER	33	24	39	17	28	4	0.37	-0.17	0.16	3.28	74	1.40	77	94	62	0	7	5	0
	SYRACUSE	34	23	39	13	29	5	0.60	0.06	0.20	4.71	92	2.10	109	87	60	0	7	6	0
OH	AKRON-CANTON	34	24	42	16	29	3	0.25	-0.33	0.11	3.84	80	1.41	72	81	62	0	7	5	0
	CINCINNATI	40	26	51	13	33	2	0.09	-0.56	0.09	3.18	57	1.43	64	79	48	0	6	1	0
	CLEVELAND	34	25	42	17	29	2	0.23	-0.35	0.11	3.93	76	1.36	65	84	64	0	7	3	0
	COLUMBUS	37	25	48	16	31	2	0.09	-0.52	0.07	3.69	73	1.48	71	81	55	0	7	2	0
	DAYTON	38	24	48	13	31	3	0.08	-0.49	0.07	2.42	46	1.52	73	88	54	0	7	2	0
	MANSFIELD	34	24	42	14	29	3	0.20	-0.42	0.11	2.86	52	0.96	44	83	62	0	7	5	0

Based on 1981-2010 normals ***** Not Available**

Weather Data for the Week Ending January 23, 2021

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	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	35	24	44	12	30	5	0.12	-0.30	0.08	2.36	55	1.10	70	78	55	0	7	2	0
	YOUNGSTOWN	33	23	41	10	28	2	0.32	-0.24	0.15	5.18	105	1.56	80	82	61	0	7	6	0
OK	OKLAHOMA CITY	52	32	61	26	42	2	0.00	-0.35	0.00	3.43	119	0.72	73	86	42	0	4	0	0
	TULSA	51	30	60	25	41	3	0.00	-0.38	0.00	4.24	114	0.92	75	82	42	0	6	0	0
OR	ASTORIA	48	33	52	27	41	-3	0.15	-2.15	0.14	20.78	117	12.75	162	97	70	0	4	2	0
	BURNS	40	23	48	14	32	7	0.04	-0.20	0.04	1.35	54	0.65	69	90	52	0	7	1	0
	EUGENE	49	34	55	27	41	0	0.03	-1.46	0.03	10.61	80	4.26	80	95	68	0	2	1	0
	MEDFORD	49	34	59	27	41	1	0.20	-0.30	0.20	4.59	85	1.67	87	90	54	0	2	1	0
	PENDLETON	41	28	52	22	35	-1	0.23	-0.08	0.20	1.63	62	0.67	59	99	67	0	6	2	0
	PORTLAND	49	35	52	27	42	1	0.17	-0.89	0.13	10.77	116	5.78	154	93	58	0	3	2	0
	SALEM	49	33	52	27	41	-1	0.04	-1.26	0.02	13.16	115	6.80	149	93	62	0	3	2	0
PA	ALLENTOWN	40	25	44	15	33	5	0.01	-0.68	0.01	5.67	98	1.56	70	75	43	0	7	1	0
	ERIE	34	26	41	21	30	3	2.63	1.99	2.04	7.26	121	3.83	168	79	62	0	7	4	1
	MIDDLETOWN	43	29	48	21	36	6	0.00	-0.67	0.00	5.59	104	1.44	66	65	39	0	4	0	0
	PHILADELPHIA	44	28	47	24	36	3	0.00	-0.67	0.00	5.57	96	1.25	56	73	38	0	6	0	0
	PITTSBURGH	35	23	44	16	29	1	0.06	-0.56	0.04	5.25	108	1.44	71	82	59	0	7	2	0
	WILKES-BARRE	37	26	40	17	31	6	0.17	-0.37	0.16	4.78	109	1.28	74	77	51	0	7	2	0
	WILLIAMSPORT	38	25	44	19	32	5	0.01	-0.62	0.01	6.22	126	1.61	80	81	45	0	7	1	0
RI	PROVIDENCE	42	25	47	17	33	5	0.00	-0.86	0.00	9.00	127	1.59	55	76	44	0	6	0	0
SC	CHARLESTON	60	38	67	30	49	1	0.13	-0.71	0.13	3.46	59	1.76	64	83	38	0	2	1	0
	COLUMBIA	58	33	63	25	45	0	0.01	-0.80	0.01	7.13	122	4.28	163	86	33	0	4	1	0
	FLORENCE	57	32	63	27	45	0	0.00	-0.70	0.00	7.15	132	4.18	174	88	35	0	3	0	0
	GREENVILLE	57	34	61	26	45	3	0.00	-0.86	0.00	4.85	69	2.12	75	73	26	0	3	0	0
SD	ABERDEEN	36	13	49	4	24	13	0.18	0.08	0.13	0.83	91	0.52	137	81	53	0	7	3	0
	HURON	35	17	47	13	26	9	0.29	0.18	0.25	0.85	93	0.54	141	90	60	0	7	3	0
	RAPID CITY	38	18	48	17	28	3	0.03	-0.04	0.02	0.31	43	0.03	11	83	44	0	7	2	0
	SIOUX FALLS	33	16	47	9	25	8	0.16	0.03	0.15	1.26	112	0.84	198	84	61	0	7	2	0
TN	BRISTOL	45	27	50	22	36	1	0.12	-0.66	0.12	4.89	84	1.38	55	89	46	0	6	1	0
	CHATTANOOGA	54	37	57	33	45	5	0.34	-0.81	0.34	5.98	69	1.53	41	78	39	0	0	1	0
	KNOXVILLE	48	33	52	27	40	2	0.30	-0.71	0.30	4.99	64	1.39	43	84	48	0	2	1	0
	MEMPHIS	54	36	59	30	45	4	0.43	-0.44	0.24	7.54	86	1.46	49	83	36	0	3	2	0
	NASHVILLE	52	35	61	26	44	6	0.23	-0.63	0.15	4.22	60	0.87	32	75	35	0	2	2	0
TX	ABILENE	58	39	75	28	48	3	0.36	0.11	0.35	2.91	148	1.11	150	87	54	0	1	2	0
	AMARILLO	53	29	65	23	41	4	0.00	-0.20	0.00	0.45	37	0.22	43	78	38	0	5	0	0
	AUSTIN	68	47	78	37	57	5	0.43	-0.08	0.35	3.82	94	1.16	69	88	53	0	0	4	0
	BEAUMONT	68	51	74	34	59	7	0.16	-1.03	0.12	8.00	85	2.29	57	99	66	0	0	2	0
	BROWNSVILLE	77	60	81	52	69	7	0.04	-0.27	0.02	1.53	74	0.49	54	92	66	0	0	2	0
	CORPUS CHRISTI	72	56	79	43	64	7	0.09	-0.25	0.04	3.09	103	1.39	119	98	72	0	0	3	0
	DEL RIO	68	46	81	35	57	5	0.19	0.02	0.13	1.56	132	0.32	60	88	47	0	0	3	0
	EL PASO	60	37	72	26	49	3	0.10	0.00	0.06	0.13	11	0.10	32	63	35	0	1	2	0
	FORT WORTH	56	43	68	33	49	3	0.48	-0.04	0.41	3.58	87	0.62	41	91	59	0	0	4	0
	GALVESTON	67	56	70	44	62	6	0.16	0.00	0.14	4.79	0	0.81	0	91	70	0	0	2	0
	HOUSTON	69	52	78	35	60	7	0.26	-0.53	0.21	6.93	112	2.48	100	92	64	0	0	3	0
	LUBBOCK	55	35	67	24	45	5	0.00	-0.16	0.00	0.74	60	0.67	147	76	43	0	1	0	0
	MIDLAND	60	37	73	25	48	4	0.06	-0.08	0.06	0.86	86	0.35	87	84	38	0	2	1	0
	SAN ANGELO	60	39	76	28	49	3	0.58	0.35	0.35	2.16	138	1.14	167	91	57	0	2	3	0
	SAN ANTONIO	68	47	79	38	57	5	0.12	-0.29	0.05	1.80	56	0.96	75	92	59	0	0	4	0
	VICTORIA	73	51	79	35	62	8	0.13	-0.45	0.04	3.69	87	1.14	60	95	61	0	0	5	0
	WACO	61	43	71	29	52	5	1.15	0.65	1.04	6.28	147	1.84	121	91	59	0	2	5	1
	WICHITA FALLS	55	37	63	29	46	4	0.01	-0.25	0.01	1.39	56	0.19	22	87	50	0	1	1	0
UT	SALT LAKE CITY	44	24	50	21	34	5	0.30	0.02	0.29	0.70	29	0.37	39	88	46	0	7	2	0
VA	LYNCHBURG	50	27	55	21	38	3	0.00	-0.72	0.00	6.06	109	1.23	53	72	34	0	6	0	0
	NORFOLK	53	33	57	29	43	3	0.00	-0.76	0.00	5.46	94	1.28	50	73	32	0	4	0	0
	RICHMOND	51	27	58	24	39	2	0.00	-0.67	0.00	8.44	154	1.77	79	81	33	0	7	0	0
	ROANOKE	48	32	55	26	40	4	0.00	-0.67	0.00	4.75	93	1.14	52	65	36	0	3	0	0
	WASH/DULLES	47	25	54	19	36	3	0.01	-0.61	0.01	7.04	143	1.26	65	75	34	0	7	1	0
VT	BURLINGTON	31	13	37	3	22	4	0.35	-0.12	0.12	2.82	72	1.64	106	84	59	0	7	7	0
WA	OLYMPIA	46	31	50	22	39	-2	0.16	-1.65	0.09	17.08	127	9.85	164	98	68	0	4	2	0
	QUILLAYUTE	48	33	52	25	40	-2	0.21	-3.15	0.15	27.86	115	12.14	109	94	62	0	3	2	0
	SEATTLE-TACOMA	46	36	51	29	41	-1	0.09	-1.17	0.04	14.25	147	7.69	179	91	66	0	1	2	0
	SPOKANE	34	25	36	15	29	-1	0.03	-0.35	0.03	4.86	131	2.58	186	92	69	0	6	1	0
	YAKIMA	43	26	52	18	35	3	0.14	-0.11	0.14	1.41	57	0.83	92	87	53	0	7	1	0
WI	EAU CLAIRE	26	7	37	-4	17	2	0.00	-0.22	0.00	0.53	31	0.35	50	79	55	0	7	0	0
	GREEN BAY	28	14	38	7	21	5	0.01	-0.24	0.01	0.79	33	0.35	40	76	54	0	7	1	0
	LA CROSSE	29	11	39	3	20	3	0.12	-0.14	0.08	0.81	37	0.52	63	77	55	0	7	2	0
	MADISON	28	11	39	0	20	1	0.10	-0.16	0.06	1.60	60	0.48	52	84	57	0	7	3	0
	MILWAUKEE	32	17	41	10	25	3	0.04	-0.33	0.04	2.98	89	0.86	65	73	51	0	7	1	0
WV	BECKLEY	35	25	40	16	30	-1	0.19	-0.43	0.10	14.22	280	1.00	47	89	58	0	7	3	0
	CHARLESTON	39	28	44	19	33	-1	0.07	-0.59	0.06	4.52	83	0.81	36	90	56	0	6	2	0
	ELKINS	35	18	38	9	26	-3	0.20	-0.54	0.08	5.01	89	1.30	54	78	50	0	7	4	0
	HUNTINGTON	40	28	47	18	34	1	0.10	-0.56	0.07	4.66	85	0.72	33	81	52	0	6	2	0
WY	CASPER	33	16	42	5	24	-1	0.23	0.11	0.21	1.15	128	0.46	119	83	54	0	7	3	0
	CHEYENNE	39	20	49	14	30	1	0.06	-0.02	0.05	0.59	74	0.11	40	78	39	0	7	2	0
	LANDER	38	16	51	12	27	5	0.09	0.00	0.09	0.69	74	0.09	28	81	40	0	7	1	0
	SHERIDAN	36	18	48	6	27	3	0.15	0.02	0.05	0.69	71	0.42	102	84	52	0	7	4	0

Based on 1981-2010 normals ***** Not Available**

2020 U.S. Weather Review

Annual "Weather Review" provided by USDA/WAOB; rankings provided by National Centers for Environmental Information.

La Niña developed during the second half of the year, enhancing tropical activity in the Atlantic Basin, suppressing tropical storm intensification over the eastern North Pacific, and likely contributing to drought development in the United States, particularly from the Pacific Coast to the High Plains. In fact, a record-setting number of tropical cyclones—30 named storms—formed in the Atlantic Basin, breaking the 2005 record of 28. A record was also broken in 2020 for the number of tropical cyclones making a U.S. landfall (12; previously, nine in 1916). In addition, six hurricanes (Hanna, Isaias, Laura, Sally, Delta, and Zeta) struck the U.S. mainland, tying the annual record set in 1886 and 1985. Meanwhile, 16 named storms—but only four hurricanes—formed in 2020 over the eastern Pacific Ocean between the International Dateline and the western coast of Northern and Central America.

Despite many tropical cyclones prowling the Atlantic Basin and drought across much of the northeastern and western U.S., many row crops experienced a favorable growing season. Namely, extreme summer heat was largely absent from key corn and soybean production areas of the Plains and Midwest, allowing crops to reach maturity without significant thermal stress. Many crops in the nation's heartland—especially in the western Corn Belt—also benefited from a much more favorable (drier) planting season, compared to 2019. However, drought in portions of the western Corn Belt, along with a high-wind event (derecho) on August 10, trimmed corn and soybean yield prospects in Iowa and environs.

Farther south, a variety of factors were detrimental to optimal cotton production. On the southern High Plains, heat and drought severely stressed the dryland portion of the crop. In the Southeast, repeated late-summer and autumn rainfall events, including several hurricanes and tropical storms, damaged some cotton and delayed harvest for a variety of summer crops. Excessively wet conditions persisted through the end of the harvest season in portions of the Atlantic Coast States, including Virginia and North Carolina.

In eastern North Dakota and neighboring areas, the 2020 growing season ended ahead of schedule with an early-September freeze. However, crops in other areas of the Plains and Midwest were largely mature when season-ending freezes struck, roughly on schedule, starting in late September and early October. Meanwhile, intensifying drought from the High Plains westward resulted in national rangeland and pasture condition ratings falling to their lowest levels in 8 years. Nearly one-half (46 percent) of the U.S. rangeland and pastures were rated in very poor to poor condition on September 6, with that number improving only slightly to 43 percent by the end of the growing season.

The western U.S. dealt not only with drought, but also an extremely active wildfire season. The Western wildfire crisis reached a peak in early to mid-September, with at least 18 blazes actively burning that had scorched at least 100,000 acres of vegetation. Although activity waned late in the year, U.S. wildfires charred nearly 10.3 million acres of vegetation (more than 150 percent of the 10-year average), despite a minimal contribution (less than 0.2 million acres) from Alaska. Previously in the modern era, U.S. wildfires had burned more than 10 million acres only twice: 2015 (10.13 million acres) and 2017 (10.03 million acres).

During 2020, the nation's drought coverage ranged from 9.56 percent on February 18 to 49.58 percent on December 22, according to the *U.S. Drought Monitor*—a five-fold increase in just 10 months. The latter figure, showing nearly one-half of the Lower 48 States in drought, represented the greatest U.S. coverage since September 2013. In the Southwest, the effects of an abysmal monsoon and a slow start to the winter wet season were aggravated by record-setting high temperatures.

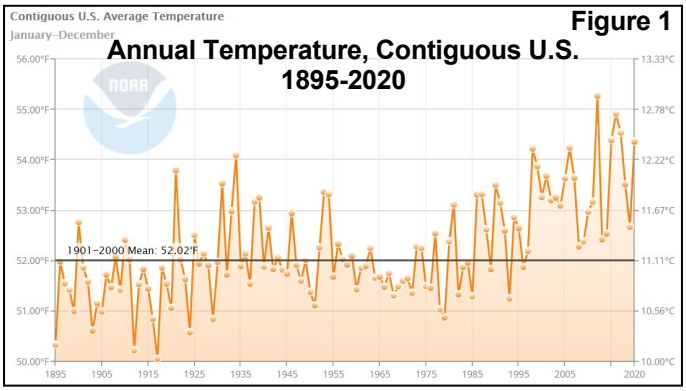


Figure 1

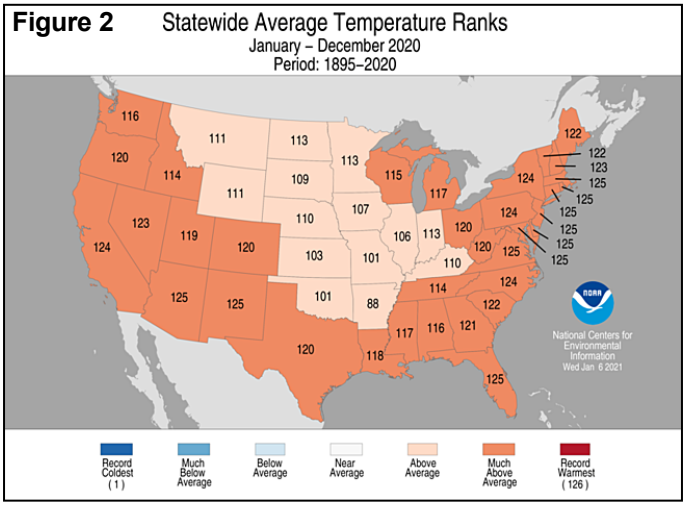
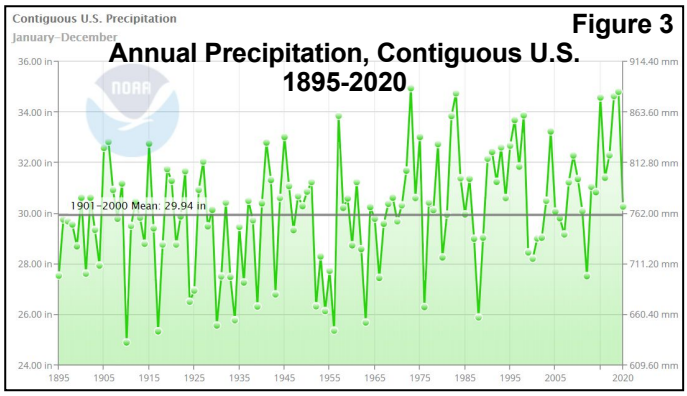
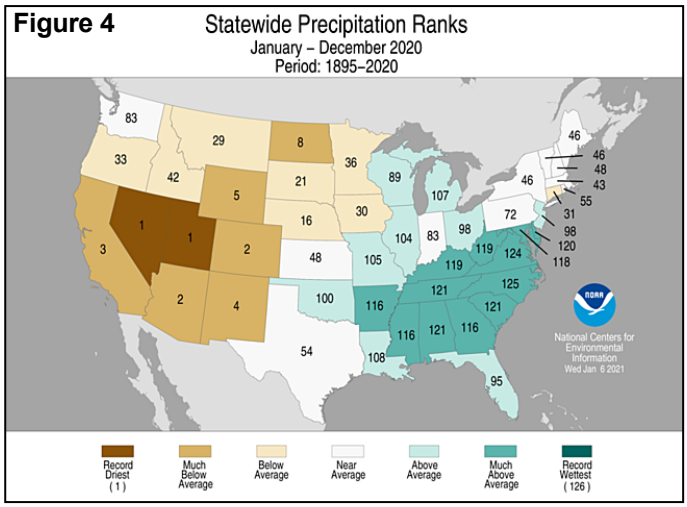


Figure 2

According to the National Centers for Environmental Information (NCEI), the contiguous U.S. completed its fifth-warmest, 63rd-wettest year on record. The nation's 2020 annual average temperature of 54.4°F was 2.4°F above the 1901-2000 mean. All five of the warmest years on record have occurred in the last decade: 2012, 2015, 2016, and 2017 (figure 1). During 2020, all states ranked on the warm side of the historical distribution; Arkansas, with its 39th-warmest year, was the "coolest" state (figure 2). Meanwhile, top-ten rankings for annual warmth occurred in 29 states spread across the southern, western, and eastern U.S. It was the second-warmest year on record in eight Atlantic Coast States, as well as Arizona and New Mexico.

Annual precipitation averaged 30.28 inches (101 percent of the 20th century mean). However, it was the nation's driest year since 2012 (figure 3). There was a remarkable contrast between dryness in much of the West and wet conditions in the Southeast. In fact, it was the driest year during the 126-year period of record in Nevada and Utah—and among the ten driest in Arizona, California, Colorado, New Mexico, North Dakota, and Wyoming (figure 4). In Utah, the annual record for dryness had stood since 1956. Farther east, however, it was among the ten wettest years in nine states across the mid-Atlantic and Southeast.





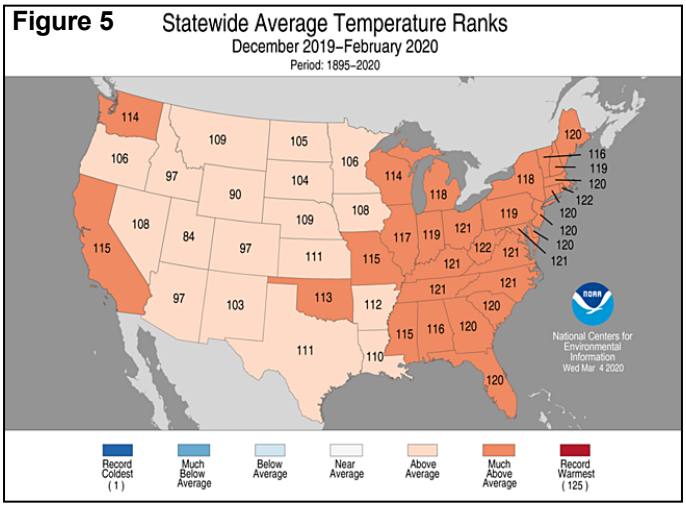
Winter (December 2019 – February 2020)

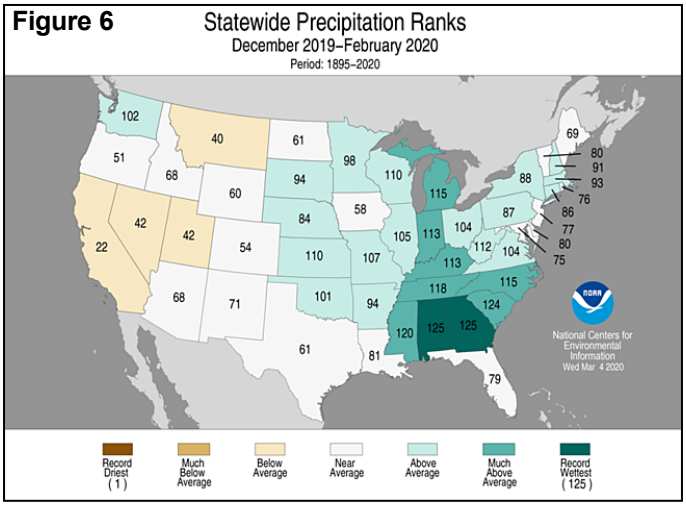
Despite fleeting cold outbreaks, warmth dominated the country during the winter of 2019-2020. Above-normal temperatures were especially notable east of the Mississippi River, leading to one of the ten warmest winters on record in most states. Meanwhile, wet weather persisted through another season in much of the central and eastern U.S., leading to pockets of mid- to late-winter flooding. Much of the Southeast was especially wet, with Alabama and Georgia reporting record-high winter precipitation. However, parts of the Deep South, mostly from southern Texas to peninsular Florida, experienced drier-than-normal weather. In fact, drought appreciably intensified during the winter in the western Gulf Coast region, including Deep South Texas.

In California, a promising start to the winter wet season faded into a protracted stretch of dry weather. Aside from a brief period of precipitation in January, the last 2 months of winter were almost completely dry in California's key watershed areas. By February 29, the average water equivalency of the Sierra Nevada snowpack stood at 11 inches—just 45 percent of the end-of-winter normal, according to the California Department of Water Resources. A different scenario unfolded across the Northwest, where a slow start to the winter wet season was replaced by extremely wet conditions—and even some flooding—in January. Elsewhere, the Southwest experienced several periods of significant winter precipitation, but dealt with chronically low reservoir levels—especially in New Mexico—and premature melting of high-elevation snowpack.

Winter wheat did not suffer major calamities during the winter months, although several factors contributed to less-than-ideal crop conditions in some areas. On the central and southern High Plains, pockets of drought and harsh autumn cold snaps led to locally poor winter wheat stands as the crop entered dormancy. By March 1, at least one-fifth of the wheat was rated in very poor to poor condition in Texas (23 percent) and Kansas (20 percent). Elsewhere, 22 percent of Michigan's winter wheat was rated very poor to poor in late February, partly due to late planting, poor establishment, and excessive wetness.

According to NCEI, the meteorological winter of 2019-20 was generally mild and wet. It was the nation's sixth-warmest, 19th-wettest winter during the 125-year period of record. The country's winter average temperature of 36.0°F was 3.8°F above the 1901-2000 mean, while precipitation averaged 7.71 inches (114 percent of normal). All Lower 48 states had a December-February ranking on the "warm" side of the historical distribution; Utah, with its 42nd-warmest winter, was the "coolest" state (figure 5). Meanwhile, top-ten rankings for winter warmth were observed in 24 of 26 states east of the Mississippi River—all but Mississippi and Wisconsin. Statewide precipitation rankings ranged from the 22nd-driest winter in California to the wettest winter on record in Alabama and Georgia (figure 6). It was also among the ten wettest winters in Mississippi, South Carolina, and Tennessee.





Spring (March-May)

Cold outbreaks from mid-April to mid-May highlighted a variable spring. The cold weather and attendant freezes damaged a variety of crops—including fruits, winter wheat, and emerged summer

crops—across portions of the Plains, Midwest, mid-South, and Intermountain West. Ironically, most of the country experienced a mild spring, on average, with warmth concentrated across the West and Deep South, as well as the Atlantic Coast States. Meanwhile, spring wetness was focused in parts of the South, East, and lower Midwest. Although flooding occurred in several regions, the overall magnitude of high-water impacts on agriculture was far less than a year ago, when delayed corn and soybean planting plagued the Midwest. In fact, U.S. corn planting passed the halfway mark (and was 51 percent complete) on May 3, about 17 days faster than 2019. Similarly, U.S. soybeans were more than one-half planted by May 16, some 21 days faster than last year. Nevertheless, spring planting delays were noted in parts of the central and eastern Corn Belt due to wetness; in eastern North Dakota and environs due to lingering muddy conditions and ongoing harvesting of the 2019 corn crop; and across the remainder of the northern Plains due to several weeks of persistently cool weather.

In northern and central California, March precipitation provided temporary relief from an otherwise disappointing 2019-2020 wet season. By the end of spring, drought extended into many other areas of the West, eastward across the Great Basin and into the Four Corners region, and northward into parts of the Northwest. Farther east, winter wheat across the southern half of the Plains was hurt not only by April freezes, but also by developing or intensifying drought. By June 1, nearly one-fifth (19 percent) of the U.S. winter wheat was rated in very poor to poor condition, led by Colorado (41 percent very poor to poor), Kansas (25 percent), Oregon (24 percent), and Texas (22 percent).

Meanwhile, early tropical activity—including Tropical Storms Arthur and Bertha—contributed to a wet pattern in the Southeast. Arthur grazed North Carolina's Outer Banks on May 18, followed by Bertha's arrival in South Carolina on May 27. Although May featured few tornadoes, March and April were very active, with multiple severe-weather outbreaks. In fact, there were 25 tornado-related fatalities in March and 40 in April; with 74 deaths through May, this year has already become the deadliest year for tornado fatalities since 2011.

According to NCEI, the meteorological spring of 2020 was warm and showery, on average. It was the nation's 20th-warmest, 36th-wettest spring during the 126-year period of record. The country's spring average temperature of 52.6°F was 1.7°F above the 1901-2000 mean, while precipitation averaged 8.40 inches (106 percent of normal). Most states had a March-May ranking on the "warm" side of the historical distribution; Montana and North Dakota, with a 61st-coolest spring, were the "coolest" states (figure 7). Meanwhile, top-ten rankings for spring warmth were observed in Florida, Louisiana, and New Mexico. For Florida, where the average temperature of 73.3°F was 3.8°F above normal, it was the second-warmest spring behind 74.0°F in 2015. Statewide precipitation rankings ranged from the ninth-driest spring in Colorado and North Dakota to the eighth-wettest spring in South Carolina (figure 8). North Carolina reported its tenth-wettest spring.

Summer (June-August)

An early start to the Atlantic tropical season (Tropical Storm Arthur formed on May 16) culminated in Category 4 Hurricane Laura smashing into southwestern Louisiana on August 27. Other Atlantic tropical systems affecting the country during the summer included Tropical Storm Cristobal (landfall on June 7 in southeastern Louisiana), Tropical Storm Fay (July 10 in New Jersey), Hurricane Hanna (July 25 in southern Texas), and Hurricane Isaias (August 3 in North Carolina).

Figure 7 Statewide Average Temperature Ranks
March – May 2020
Period: 1895–2020

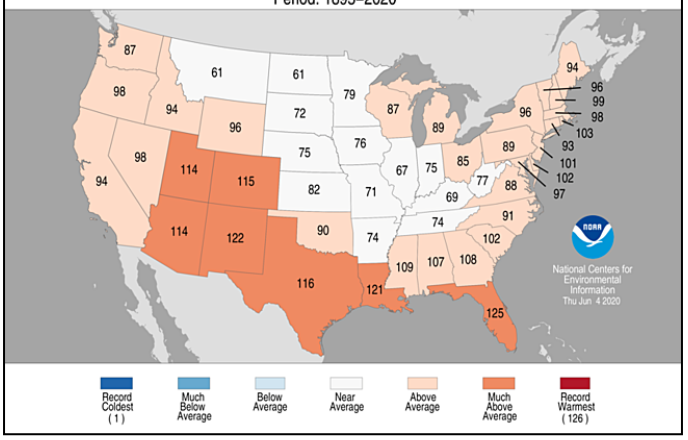
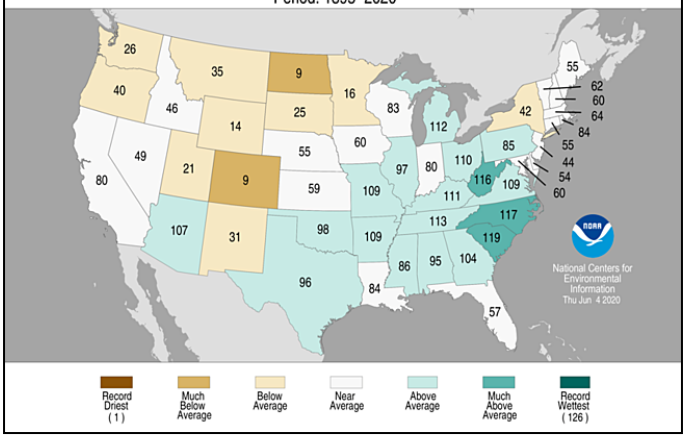


Figure 8 Statewide Precipitation Ranks
March – May 2020
Period: 1895–2020



Meanwhile, remnant moisture from eastern Pacific Hurricane Elida and Tropical Storm Fausto was drawn northeastward across the western U.S. in mid-August, contributing to swarms of lightning strikes in the Pacific Coast States. Following a relatively quiet start to the Western wildfire season, the lightning ignited hundreds of blazes, which consolidated into dozens of large fires. The Western crisis worsened in early to mid-September, with 18 wildfires active at one point that had scorched at least 100,000 acres of vegetation. Another notable summer disaster was the windstorm (derecho) that struck the Midwest on August 10. Iowa, hardest hit by the high winds (locally exceeding 100 mph), also endured a localized drought that adversely affected corn, soybeans, and pastures.

According to the *U.S. Drought Monitor*, drought coverage across the Lower 48 States nearly doubled from 19.9 to 39.4 percent between June 2 and September 1. Although drought was concentrated across the western half of the country, from the Pacific Coast to the High Plains, with profound impacts on rangeland and pastures, notable drought pockets were observed in the Midwest and Northeast. In fact, the Northeast noted its second major drought in 5 years, following the dry summer of 2016.

According to NCEI, the summer of 2020 was hot and often dry, becoming the nation's fourth-hottest 33rd-driest June-August period during the 126-year period of record. The nation's summer average temperature of 73.6°F was 2.2°F above the 20th century mean, while precipitation averaged 7.99 inches (96 percent of normal). It was the country's hottest summer since 2012 and the driest since

2011. State temperature rankings ranged from the 54th-coolest summer in Arkansas to the hottest on record in Arizona, Connecticut, Massachusetts, and Rhode Island (figure 9). Nineteen other states (four in the West, three on the Plains, two in the Midwest, and ten along the Atlantic Coast) experienced one of their ten hottest summers. Meanwhile, state precipitation rankings ranged from the driest summer in Arizona to the tenth-wettest summer in Virginia (figure 10). It was among the ten driest summers in California, Colorado, New Mexico, and Rhode Island. Drought-stricken Arizona achieved its hottest, driest summer on record, highlighting the poor performance of the 2020 monsoon circulation over the American Southwest.

Figure 9 Statewide Average Temperature Ranks
June – August 2020
Period: 1895–2020

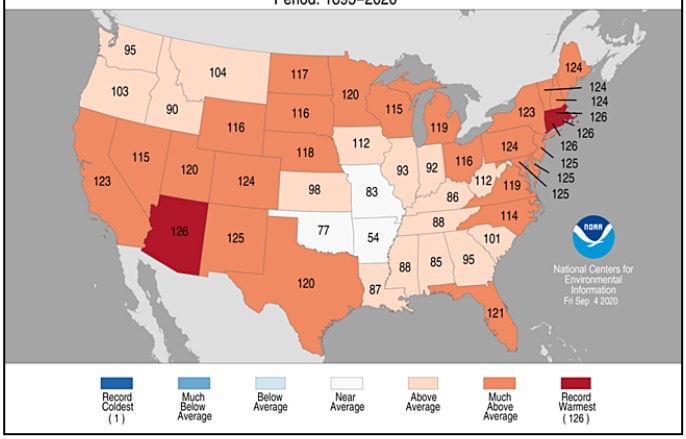
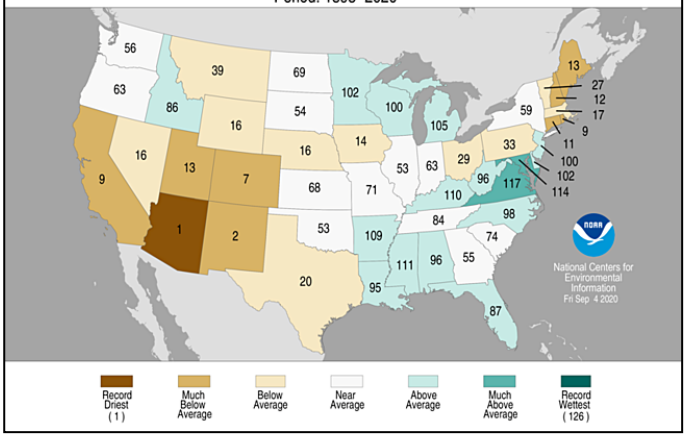


Figure 10 Statewide Precipitation Ranks
June – August 2020
Period: 1895–2020



Autumn

Five tropical cyclones—three hurricanes and two tropical storms—hit the U.S. mainland in autumn 2020, boosting the seasonal total to a record-shattering twelve storms. The previous record of nine U.S. tropical cyclone landfalls in a single season was set in 1916. The record for U.S. hurricane landfalls, previously set in 1886 and 1985, was tied. Six 2020 hurricanes (Hanna, Isaias, Laura, Sally, Delta, and Zeta) moved ashore in the U.S., with all but Isaias striking from Texas to Alabama; when the barrage of hurricanes hit the country in 1886, all struck the Gulf Coast. This year's most frequent target was Louisiana, which endured Hurricanes Laura (August 27), Delta (October 9), and Zeta (October 28). The last tropical cyclone of the season to hit the U.S. was former Hurricane Eta, which twice (on November 8 and 12) struck Florida as a tropical storm.

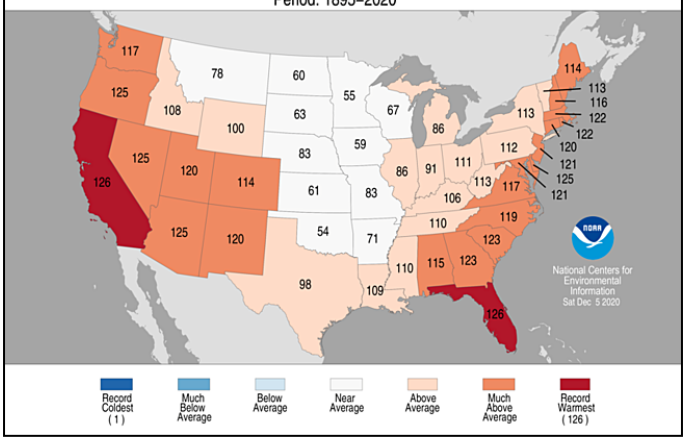
Much of the South remained wet due to frequent bouts with tropical rainfall, while drought's footprint expanded and intensified in many areas from the Pacific Coast to the High Plains. Between September 1 and December 1, drought coverage across the Lower 48 States increased from 39.4 to 48.0 percent, according to the *U.S. Drought Monitor*. During the same 3-month period, drought coverage in the 11-state Western region grew from 67.6 to 75.6 percent, despite modest Northwestern improvement.

Autumn dryness extending as far east as the Plains stressed a portion of the newly planted winter wheat crop. By November 29, dry conditions across the central and southern Plains left more than one-fifth of the winter wheat rated in very poor to poor condition in Colorado (38 percent), Texas (34 percent), Nebraska (26 percent), and Kansas (22 percent). However, autumn dryness also favored a rapid harvest pace for a variety of summer crops across the Plains and western Corn Belt. In contrast, producers struggled to harvest crops such as cotton, peanuts, and soybeans in wetter areas of the Southeast.

Though autumn temperatures were consistently above normal in the East and West, periods of cold, snowy weather were common across the nation's mid-section. The Plains' most dramatic temperature shift occurred in late October and early November, when some locations noted monthly record lows followed within a week by monthly record highs.

According to NCEI, the autumn of 2020 was warm with variable precipitation. It was the nation's 11th-warmest, 44th-driest autumn during the 126-year period of record. The autumn average temperature of 55.5°F was 2.0°F above the 20th century mean, while precipitation averaged 6.52 inches (95 percent of normal). State temperature rankings ranged from the 54th-coolest autumn in Oklahoma to the warmest on record in California and Florida (figure 11). Top-ten rankings for autumn warmth were observed in Nevada, Oregon, Washington, three of the Four Corners States, and eleven of the fifteen Atlantic Coast States. Meanwhile, state precipitation rankings ranged from the driest September-November period on record in Arizona and Utah to the fourth-wettest autumn in Virginia (figure 12). In addition, top-ten rankings for autumn dryness were observed in California, Colorado, Nebraska, Nevada, and North Dakota, while top-ten rankings for autumn wetness were noted in Delaware, Florida, and North Carolina.

Figure 11 Statewide Average Temperature Ranks
September – November 2020
Period: 1895–2020



(Continued on back cover)

National Weather Data for Selected Cities

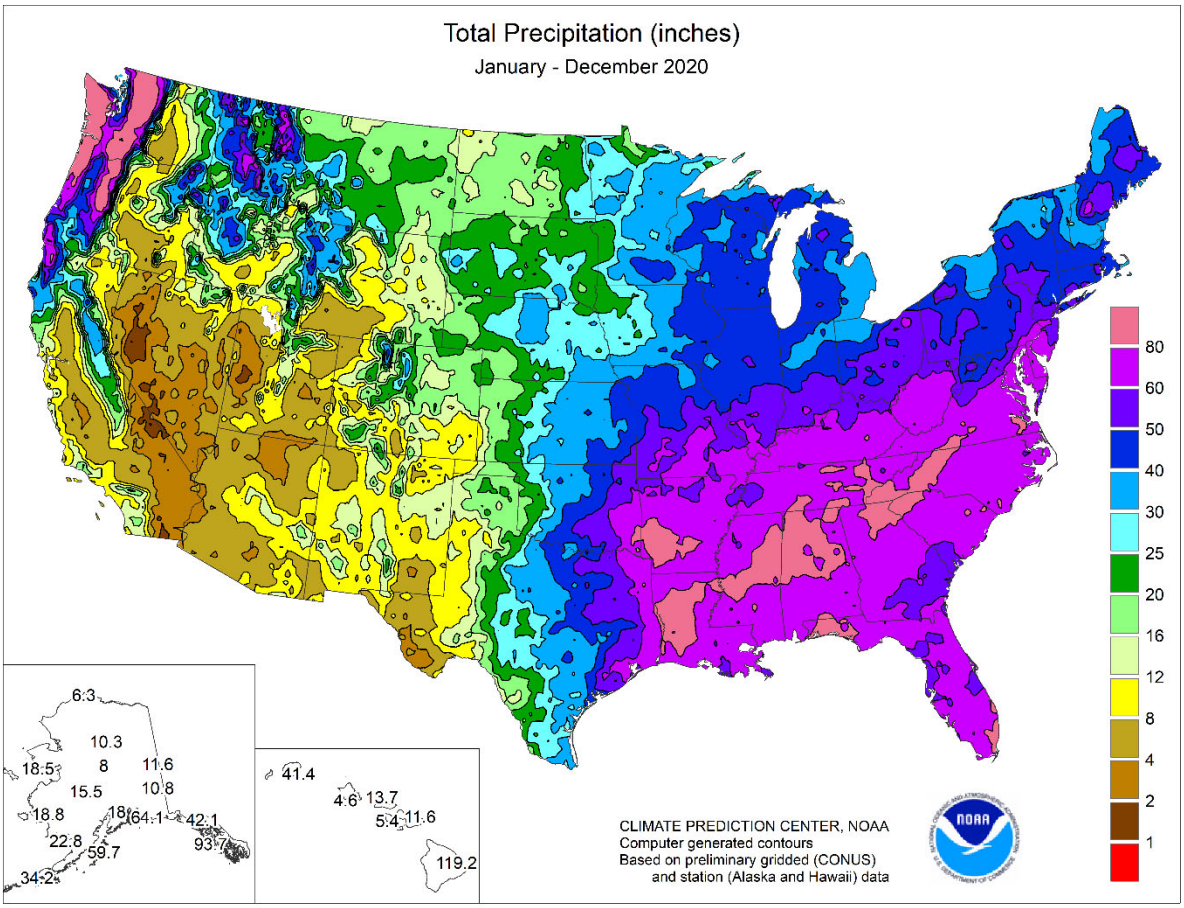
2020

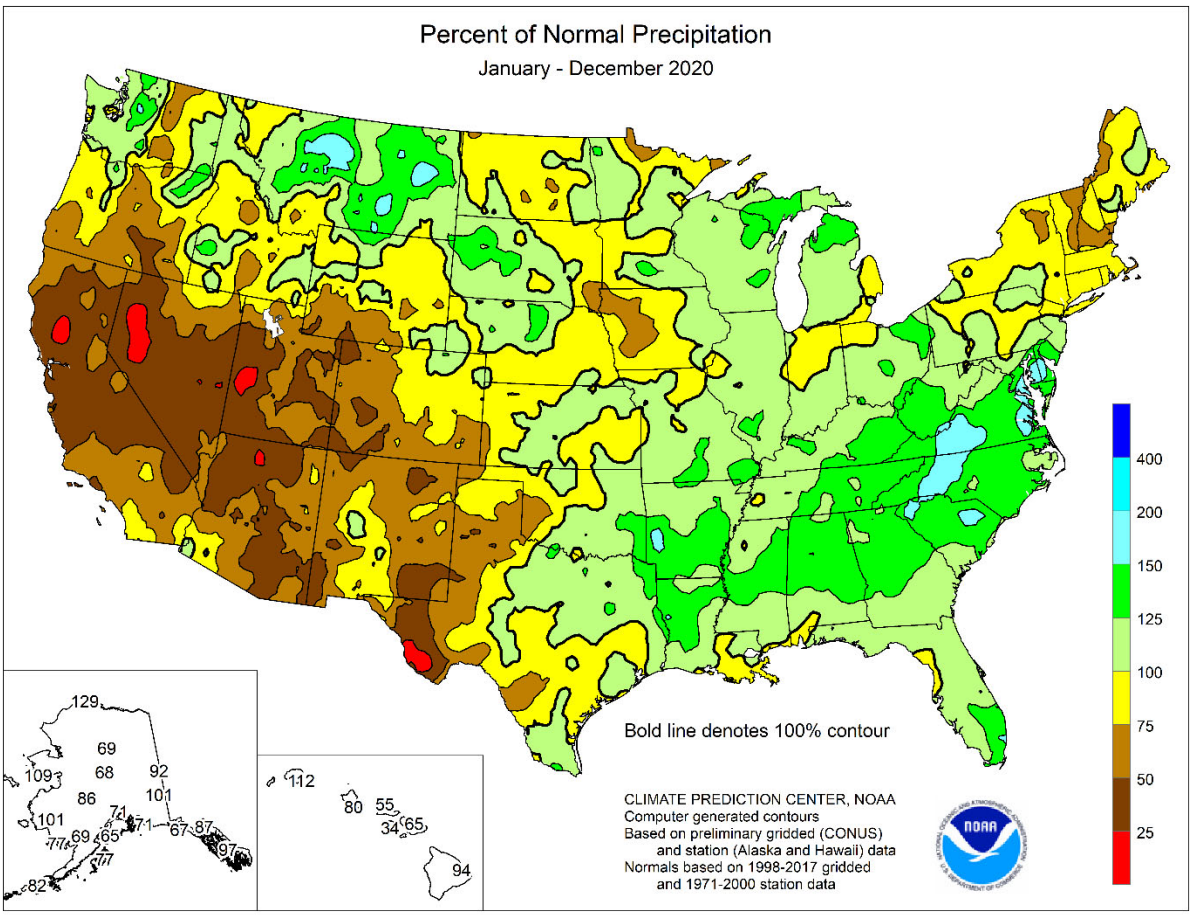
Data Provided by Climate Prediction Center

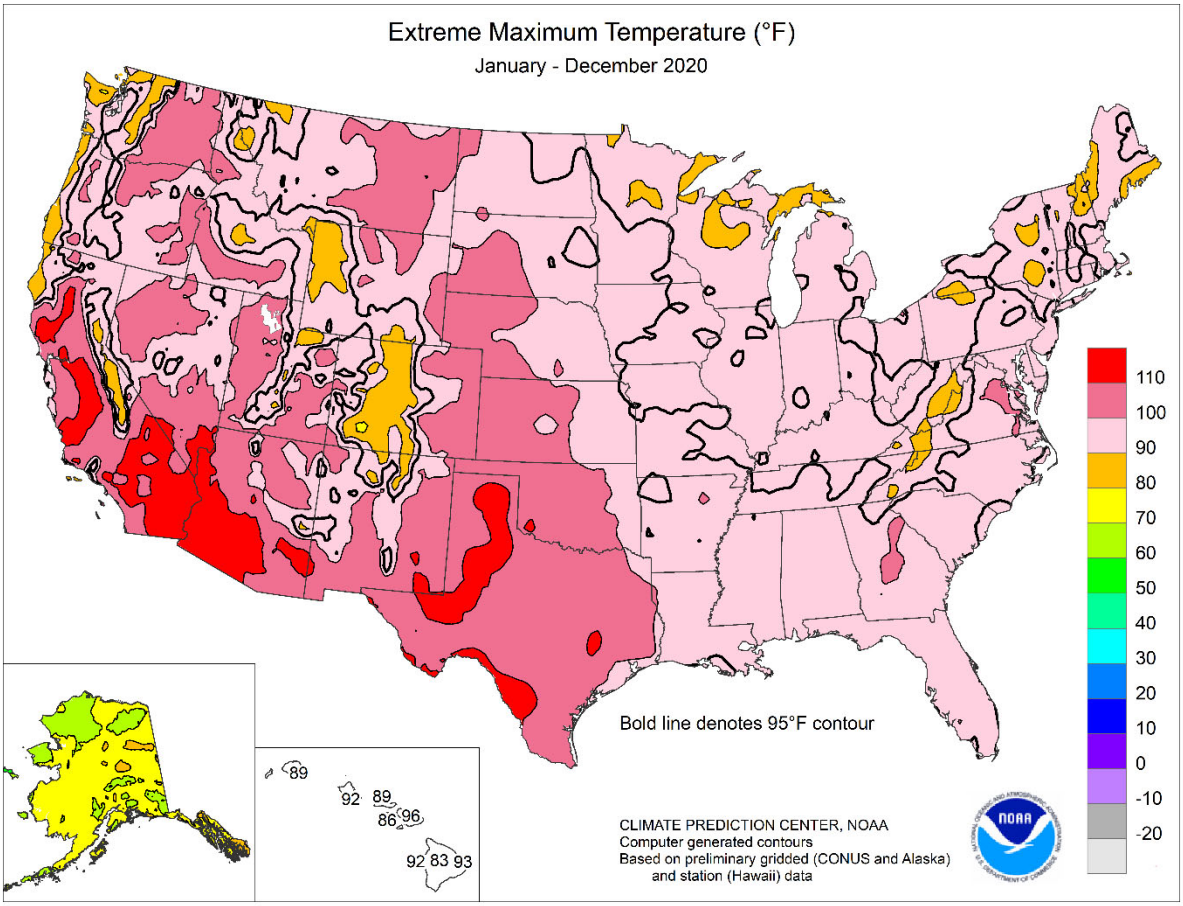
STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AK ANCHORAGE	37	0	18.03	1.42	WICHITA	58	1	28.31	-4.28	TOLEDO	53	3	30.55	-3.49
BARROW	15	3	6.25	1.40	KY LEXINGTON	56	0	47.92	2.85	YOUNGSTOWN	52	3	49.33	10.57
FAIRBANKS	27	-1	13.05	2.07	LOUISVILLE	60	2	53.17	8.34	OK OKLAHOMA CITY	60	-1	34.56	-1.94
JUNEAU	43	0	77.63	15.39	PADUCAH	59	1	58.80	9.69	TULSA	62	1	46.23	5.35
KODIAK	42	1	59.73	-18.34	LA BATON ROUGE	70	0	67.14	7.61	OR ASTORIA	52	0	65.26	-2.03
NOME	30	3	18.46	1.52	LAKE CHARLES	69	1	48.73	-8.10	BURNS	47	3	7.96	-3.20
AL BIRMINGHAM	65	2	73.15	19.31	NEW ORLEANS	73	3	72.15	9.62	EUGENE	55	2	33.67	-12.50
HUNTSVILLE	63	0	71.15	16.79	SHREVEPORT	67	2	60.67	9.19	MEDFORD	57	2	14.56	-3.89
MOBILE	68	1	58.91	-7.24	MA BOSTON	53	2	35.65	-7.98	PENDLETON	54	2	13.50	0.69
MONTGOMERY	68	3	65.70	12.68	WORCESTER	51	3	46.25	-1.82	PORTLAND	56	2	33.10	-2.92
AR FORT SMITH	63	1	61.73	16.28	MD BALTIMORE	59	3	58.00	16.30	SALEM	54	1	34.46	-5.28
LITTLE ROCK	62	0	57.68	7.92	ME CARIBOU	43	3	33.12	-5.15	PA ALLENTOWN	54	3	45.32	0.08
AZ FLAGSTAFF	48	2	9.74	-12.11	PORTLAND	49	3	39.31	-7.90	ERIE	53	3	42.31	0.33
PHOENIX	77	2	5.09	-3.13	MI ALPENA	46	2	33.98	5.93	MIDDLETOWN	56	3	37.45	-3.08
PRESCOTT	58	2	6.71	-7.45	GRAND RAPIDS	50	1	35.80	-2.30	PHILADELPHIA	58	2	50.23	8.92
TUCSON	73	3	4.25	-7.58	HOUGHTON LAKE	45	2	26.09	-1.43	PITTSBURGH	53	2	37.63	-0.44
CA BAKERSFIELD	67	2	5.49	-1.13	LANSING	50	1	36.47	4.83	WILKES-BARRE	53	4	50.72	12.59
EUREKA	52	-1	24.82	-15.61	MUSKEGON	51	2	36.39	3.05	WILLIAMSPORT	53	3	37.28	-3.91
FRESNO	67	3	6.07	-5.62	TRAVERSE CITY	48	3	33.41	0.55	RI PROVIDENCE	54	2	44.98	-2.14
LOS ANGELES	64	2	9.10	-3.84	MN DULUTH	41	2	21.59	-9.35	SC CHARLESTON	68	2	53.18	2.32
REDDING	65	3	18.02	-16.62	INT_L FALLS	39	1	21.50	-2.72	COLUMBIA	66	2	54.37	9.88
SACRAMENTO	64	3	6.83	-11.70	MINNEAPOLIS	48	2	29.87	-0.76	FLORENCE	66	2	58.75	15.97
SAN DIEGO	66	2	8.01	-2.44	ROCHESTER	46	0	30.96	-2.12	GREENVILLE	62	0	72.54	25.45
SAN FRANCISCO	60	2	5.98	-14.80	ST. CLOUD	44	1	25.74	-1.98	SD ABERDEEN	46	3	15.64	-6.07
STOCKTON	65	4	6.02	-8.11	MO COLUMBIA	56	2	47.93	5.33	HURON	47	1	17.04	-5.90
CO ALAMOSA	44	3	4.65	-2.71	KANSAS CITY	56	1	33.61	-5.24	RAPID CITY	48	1	12.90	-3.52
CO SPRINGS	52	3	9.84	-6.89	SAINT LOUIS	58	1	50.53	9.67	SIOUX FALLS	49	3	17.41	-8.91
DENVER INTL	52	2	8.79	-5.70	SPRINGFIELD	57	1	50.36	4.84	TN BRISTOL	58	2	56.28	15.42
GRAND JUNCTION	54	1	5.31	-4.30	MS JACKSON	67	2	72.68	18.44	CHATTANOOGA	64	3	68.56	16.01
PUEBLO	55	3	5.56	-7.24	MERIDIAN	67	3	70.73	14.53	KNOXVILLE	61	1	66.23	18.32
CT BRIDGEPORT	55	3	41.70	-0.76	TUPELO	65	2	70.48	15.45	MEMPHIS	64	0	55.31	1.65
HARTFORD	53	2	39.46	-6.26	MT BILLINGS	49	1	13.30	-0.46	NASHVILLE	62	2	51.35	4.20
DC WASHINGTON	60	2	56.62	17.02	BUTTE	41	1	9.89	-2.98	TX ABILENE	66	2	20.12	-4.65
DE WILMINGTON	57	2	52.41	9.46	CUT BANK	42	0	7.34	-3.78	AMARILLO	59	2	13.61	-6.75
FL DAYTONA BEACH	73	2	46.67	-2.87	GLASGOW	45	2	11.50	-0.40	AUSTIN	72	2	31.83	-2.44
JACKSONVILLE	71	2	53.03	0.72	GREAT FALLS	46	1	14.59	-0.22	BEAUMONT	71	2	57.09	-3.36
KEY WEST	80	2	52.27	12.44	HAVRE	44	1	9.47	-1.94	BROWNSVILLE	77	3	17.96	-9.49
MIAMI	79	2	83.79	21.91	MISSOULA	46	0	14.44	0.14	CORPUS CHRISTI	74	2	24.41	-7.27
ORLANDO	75	2	53.12	2.48	NC ASHEVILLE	58	2	65.26	19.74	DEL RIO	74	4	12.86	-6.56
PENSACOLA	71	3	59.82	-5.56	CHARLOTTE	63	3	56.28	14.84	EL PASO	68	4	5.99	-3.92
TALLAHASSEE	70	3	61.12	1.97	GREENSBORO	60	1	63.30	21.36	FORT WORTH	67	1	43.26	7.16
TAMPA	76	3	45.74	-0.59	HATTERAS	67	4	71.94	13.85	GALVESTON	74	3	40.36	-10.29
WEST PALM BEACH	78	3	71.08	8.76	RALEIGH	62	2	55.78	12.60	HOUSTON	72	2	45.05	-4.61
GA ATHENS	65	2	62.83	16.57	WILMINGTON	66	2	73.06	15.52	LUBBOCK	63	2	10.06	-9.11
ATLANTA	65	2	67.41	17.74	ND BISMARCK	46	3	8.70	-9.21	MIDLAND	67	3	7.98	-6.64
AUGUSTA	67	3	56.67	13.16	DICKINSON	45	2	7.94	-8.07	SAN ANGELO	68	2	18.93	-2.39
COLUMBUS	67	2	67.87	21.20	FARGO	43	0	19.31	-3.27	SAN ANTONIO	72	2	20.11	-12.12
MACON	67	2	60.09	14.41	GRAND FORKS	41	1	14.64	-6.20	VICTORIA	73	3	30.33	-10.84
SAVANNAH	70	3	49.94	2.12	JAMESTOWN	43	2	11.30	-7.54	WACO	68	1	45.85	11.24
HI HILO	77	3	119.21	-7.50	NE GRAND ISLAND	53	2	21.11	-5.57	WICHITA FALLS	64	1	35.99	7.13
HONOLULU	79	1	13.71	-3.43	LINCOLN	53	1	23.13	-5.81	UT SALT LAKE CITY	56	3	9.16	-7.05
KAHULUI	79	3	11.62	-6.32	NORFOLK	51	2	18.90	-8.52	VA LYNCHBURG	59	4	66.60	25.25
LIHUE	77	1	41.44	4.41	NORTH PLATTE	51	3	15.01	-5.34	NORFOLK	64	4	54.63	8.21
IA BURLINGTON	53	0	28.46	-10.02	OMAHA	53	2	17.73	-12.89	RICHMOND	61	2	64.10	20.59
CEDAR RAPIDS	49	0	29.67	-4.99	SCOTTSBLUFF	51	2	8.94	-6.89	ROANOKE	59	2	63.19	22.12
DES MOINES	52	1	33.30	-2.76	VALENTINE	51	3	17.09	-2.79	WASH/DULLES	58	2	50.12	8.78
DUBUQUE	48	1	37.88	1.60	NH CONCORD	49	3	31.52	-8.81	VT BURLINGTON	49	3	31.15	-5.56
SIOUX CITY	50	1	19.83	-7.84	NJ ATLANTIC_CITY	57	3	53.72	12.13	WA OLYMPIA	52	1	52.52	2.47
WATERLOO	50	2	36.00	1.30	NEWARK	57	2	46.96	0.82	QUILLAYUTE	50	1	101.78	3.80
ID BOISE	54	2	13.50	1.59	NM ALBUQUERQUE	59	2	6.06	-3.52	SEATTLE-TACOMA	54	2	41.41	3.96
LEWISTON	55	2	14.78	2.31	NV ELY	47	2	5.24	-4.80	SPOKANE	50	2	15.33	-1.31
POCATELLO	48	1	10.47	-1.78	LAS VEGAS	72	2	2.39	-2.14	YAKIMA	53	3	4.84	-3.66
IL CHICAGO/O_HARE	53	3	38.21	1.50	RENO	56	2	2.76	-4.88	WI EAU CLAIRE	46	1	27.19	-3.80
MOLINE	52	2	33.72	-4.22	WINNEMUCCA	52	3	6.90	-1.65	GREEN BAY	47	3	33.06	3.64
PEORIA	53	1	40.58	4.26	NY ALBANY	50	2	36.25	-2.91	LA CROSSE	50	2	29.94	-3.13
ROCKFORD	51	2	34.29	-1.91	BINGHAMTON	48	2	50.26	11.18	MADISON	48	2	39.36	4.98
SPRINGFIELD	54	1	37.70	0.37	BUFFALO	51	3	38.28	-2.02	MILWAUKEE	51	3	36.97	2.34
IN EVANSVILLE	58	1	60.97	15.76	ROCHESTER	50	2	31.08	-2.99	WV BECKLEY	54	2	61.23	20.17
FORT WAYNE	52	1	35.23	-3.05	SYRACUSE	51	3	37.15	-1.08	CHARLESTON	57	1	49.37	5.46
INDIANAPOLIS	55	1	44.51	2.20	OH AKRON-CANTON	53	3	40.11	0.65	ELKINS	53	3	57.41	11.60
SOUTH BEND	52	2	39.56	1.77	CINCINNATI	56	2	47.68	5.32	HUNTINGTON	57	2	45.14	2.70
KS CONCORDIA	57	3	26.35	-1.62	CLEVELAND	53	1	53.26	14.37	WY CASPER	46	0	6.06	-6.58
DODGE CITY	57	1	22.90	1.33	COLUMBUS	55	1	49.70	10.52	CHEYENNE	48	2	9.17	-6.90
GOODLAND	53	2	16.33	-3.39	DAYTON	55	3	39.60	-1.33	LANDER	46	1	6.78	-6.05
TOPEKA	56	1	35.95	-0.53	MANSFIELD	53	3	40.81	-3.40	SHERIDAN	47	2	11.11	-3.09

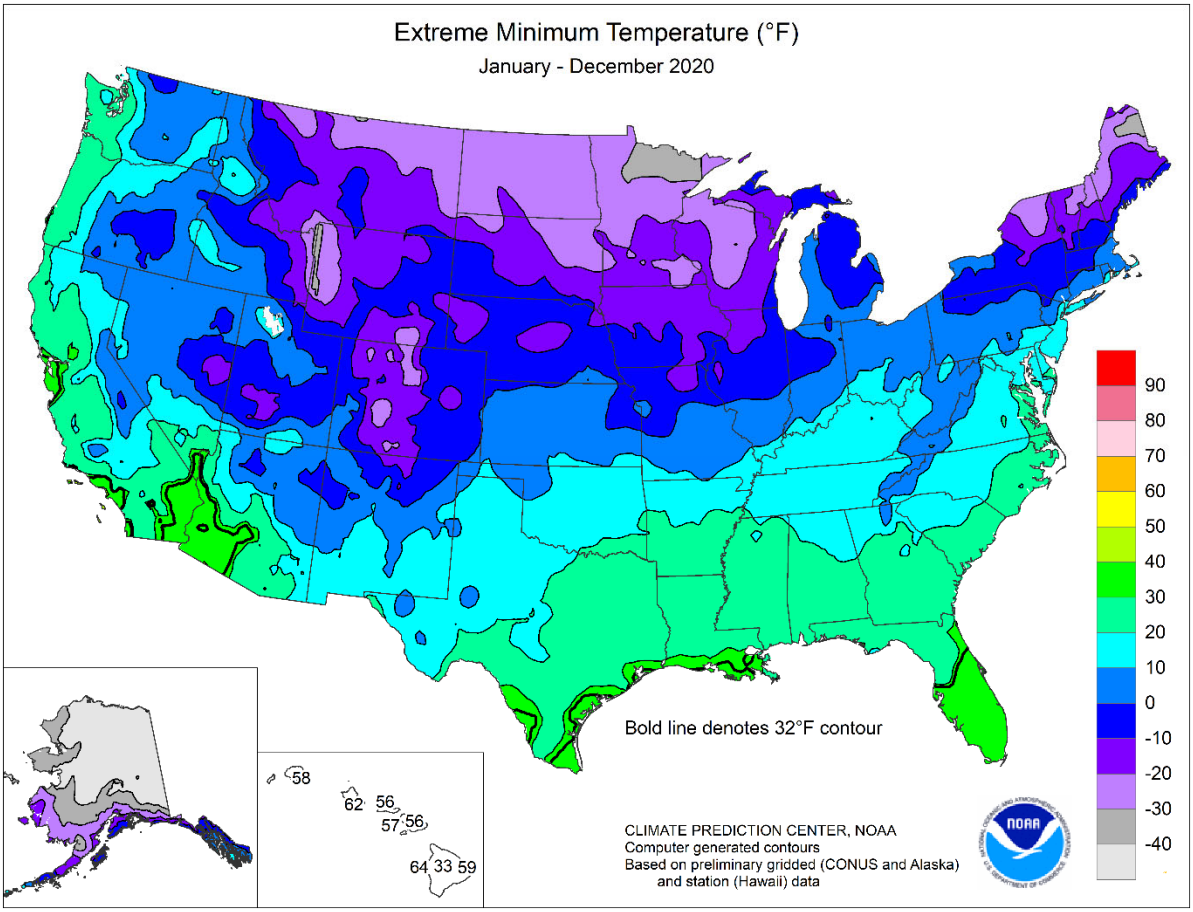
Based on 1981-2010 normals

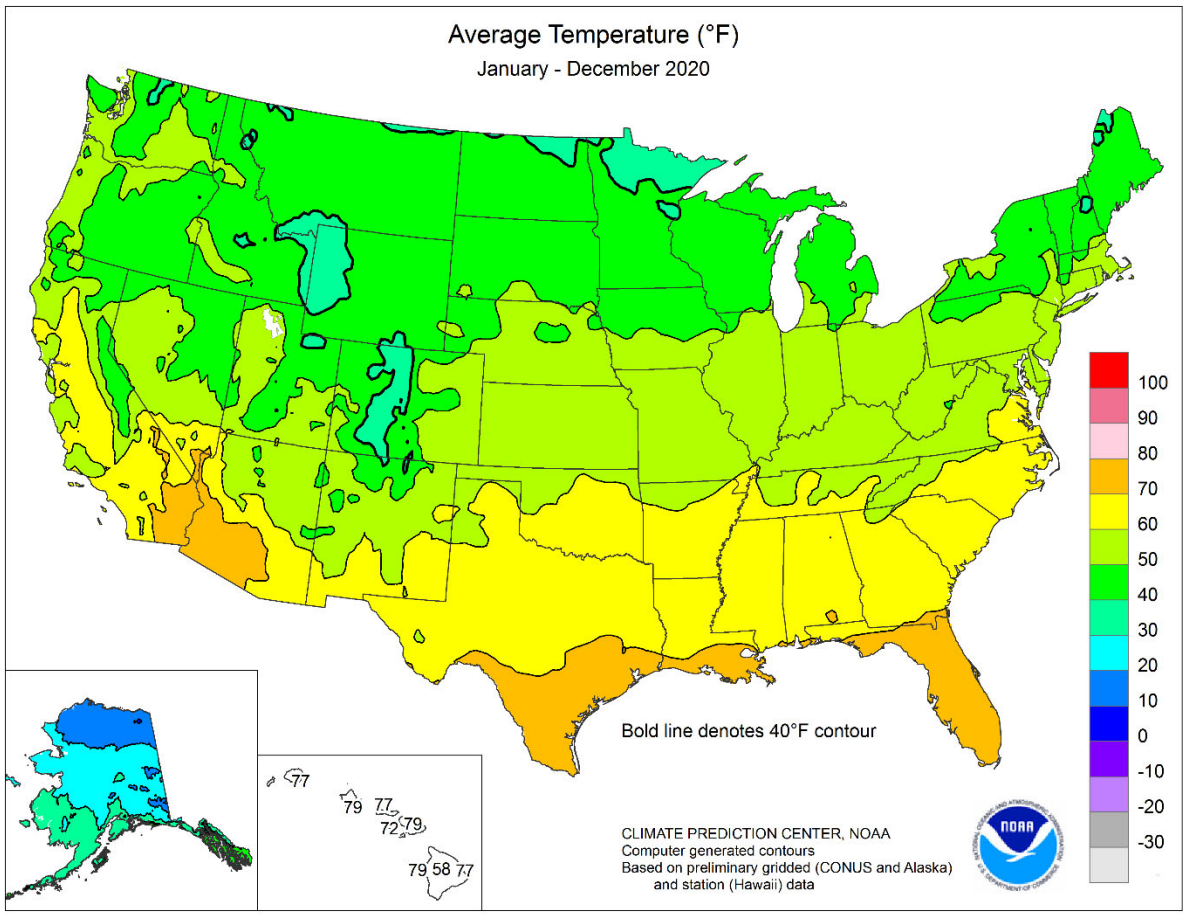
***** Not Available**

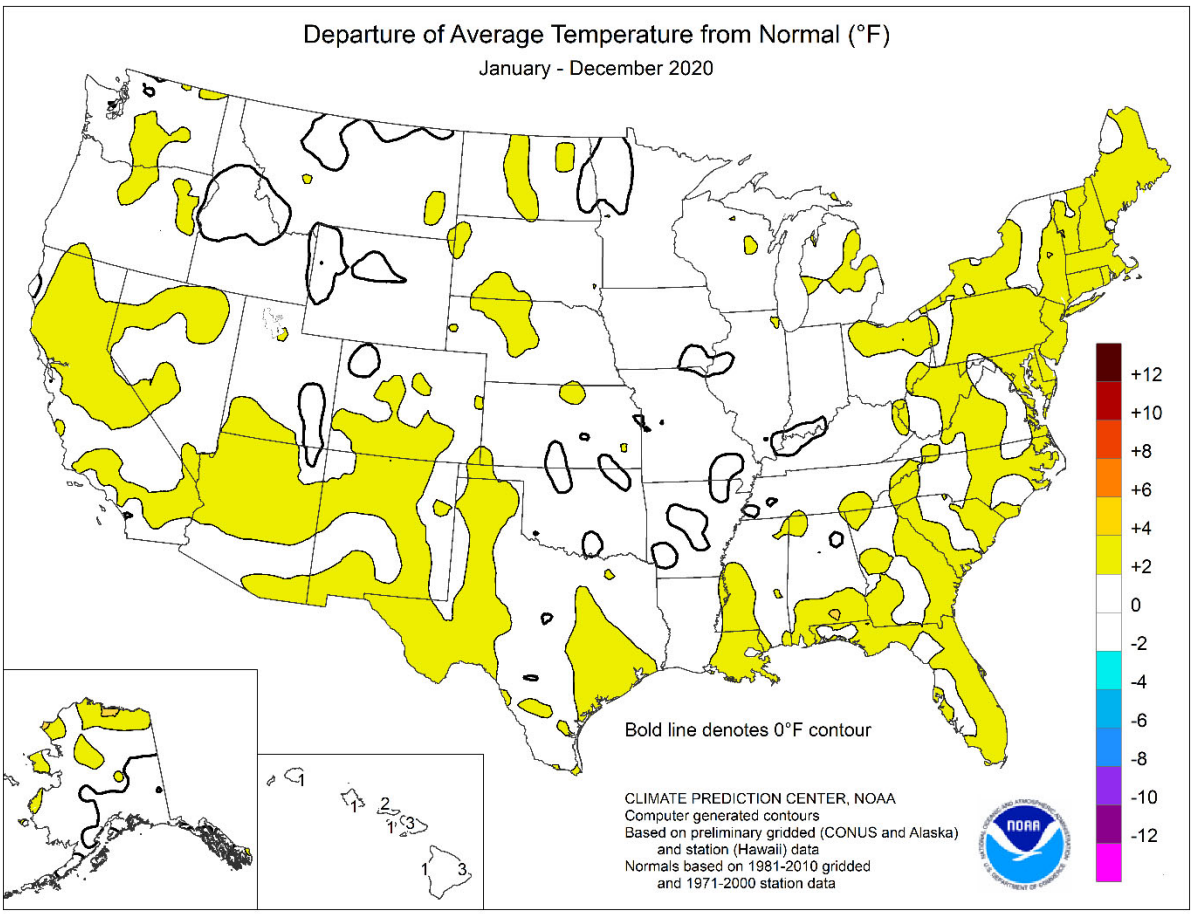

Total Precipitation (inches)
January - December 2020
80
60
50
40
30
25
20
16
12
8
4
2
1
6.3
10.3
18.5
8
11.6
15.5
10.8
18.8
18
64.1
42.1
22.8
59.7
93
34.2
41.4
4.6
13.7
5.4
11.6
119.2
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
NOAA


Percent of Normal Precipitation
January - December 2020
400
200
150
125
100
75
50
25
129
69
109
68
92
86
101
101
71
69
65
71
67
87
97
82
112
80
55
34
65
94
Bold line denotes 100% contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
Normals based on 1998-2017 gridded
and 1971-2000 station data
NOAA


Extreme Maximum Temperature (°F)
January - December 2020
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
89
92 89
86 96
92 83 93
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Extreme Minimum Temperature (°F)
January - December 2020
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
58
62 56
57 56
64 33 59
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Average Temperature (°F)
January - December 2020
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
Bold line denotes 40°F contour
77
79 77
72 79
79 58 77
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Departure of Average Temperature from Normal (°F)
January - December 2020
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
Bold line denotes 0°F contour
1
2 1 3
1 3
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
Normals based on 1981-2010 gridded
and 1971-2000 station data

2020 U.S. Fieldwork Highlights

Highlights, released on January 12, 2021, were provided by USDA/NASS.

April: Temperatures were below normal for most of the Corn Belt, Great Lakes, Great Plains, mid-Atlantic, and New England. On the northern Great Plains, temperatures averaged 5°F or more below normal in many areas. In contrast, above-normal temperatures prevailed in Florida, California, the Gulf Coast region, Pacific Northwest, and Southwest. Readings in parts of central and southern Florida averaged 6°F or more above normal. Most of the eastern half of the nation received above-average April precipitation. The most significant rain fell in the mid-Atlantic, Mississippi Valley, and Southeast. Parts of Alabama, Georgia, Louisiana, and Mississippi received more than 10 inches of rain. However, most of the western half of the U.S., received below-normal precipitation. Exceptions included central and southern California and pockets of the Southwest and northern Rocky Mountains.

By April 12, producers had planted 3 percent of the nation's corn acreage, equal to the previous year but 1 percentage point behind the 5-year average. The planting pace picked up during the week ending April 26, when producers had planted 27 percent of the acreage—15 percentage points ahead of the previous year and 7 points ahead of average. By April 26, thirteen percent of the nation's cotton acreage was planted, 3 percentage points ahead of the previous year and 2 points ahead of average.

May: Temperatures were below normal for most of the eastern half of the nation and the Great Plains, with temperatures averaging 4°F or more below normal in many locations. In contrast, most of the western half of the U.S. generally experienced above-average May temperatures. Parts of the southern Rockies and Southwest saw temperatures 4°F or more above normal. Meanwhile, the western half of the nation remained dry, except in Idaho, Montana, and the Pacific Northwest, portions of which received 4 or more inches of rain. The highest rainfall amounts were observed in the southern Great Plains, lower Mississippi Valley, and Southeast, where some areas received May rainfall totaling 10 inches or more.

By May 17, producers had planted 80 percent of the nation's corn acreage, 36 percentage points ahead of the previous year and 9 points ahead of the 5-year average. Forty-three percent of the nation's corn had emerged by May 17, twenty-seven percentage points ahead of the previous year and 3 points ahead of average. Nationwide, 44 percent of the cotton acreage was planted by May 17, five percentage points ahead of the previous year and 4 points ahead of average. Thirty-two percent of the nation's sorghum was planted by May 17, seven percentage points ahead of the previous year but 2 points behind average. Seventy-two percent of the nation's barley was planted by May 17, one percentage point ahead of the previous year but 10 points behind average. Seventy-five percent of the nation's soybean acreage was planted by May 31, thirty-nine percentage points ahead of the previous year and 7 points ahead of average. As of May 31, ninety-one percent of the nation's spring wheat had been seeded, 1 percentage point ahead of the previous year but 5 points behind average.

June: Temperatures were above average for most of California, Florida, the Great Plains, Corn Belt, Great Lakes, and New England. Most of the central and northern Great Plains saw temperatures 3°F or more above normal. In contrast, below-normal temperatures occurred in much of the Mississippi Valley, northern Rockies, and Southeast. Meanwhile, most of California, the Great Plains, Northeast, and Southwest were drier than normal. Elsewhere, large parts of the mid-Atlantic, Mississippi Valley, Pacific Northwest, northern Rockies, and Southeast received above-normal rainfall.

By May 31, producers had planted 93 percent of the nation's corn acreage, 29 percentage points ahead of the previous year and 4 points ahead of the 5-year average. Ninety-three percent of the nation's barley was planted by May 31, one percentage point ahead of the previous year but 3 points behind average. Nationally, producers had planted 95 percent of the 2020 peanut acreage by June 14, two percentage points ahead of the previous year but equal to the average. As of June 14, ninety-five percent of the nation's spring wheat had emerged, 3 percentage points ahead of the previous year but 2 points behind average. By June 14, ninety-three percent of the nation's rice had emerged, 1 percentage point ahead of the previous year but 4 points behind average. Ninety-five percent of the nation's corn had emerged by June 14, twenty-one percentage points ahead of the previous year and 3 points ahead of the average. Ninety-four percent of the nation's barley had emerged by June 14, four percentage points ahead of the previous year but 1 point behind average. Nationwide, 89 percent of the cotton was planted by June 14, four percentage points ahead of the previous year but 2 points behind average. Ninety-three percent of the soybeans were planted by June 14, twenty-one percentage points ahead of the previous year and 5 points ahead of average. Ninety-five percent of the soybeans had emerged by June 28, fifteen percentage points ahead of the previous year and 4 points ahead of average. Ninety-six percent of the nation's sorghum was planted by June 28, five percentage points ahead of the previous year and 1 point ahead of average.

July: July was warmer than average for most of the nation. Parts of the Great Lakes, mid-Atlantic, Northeast, Southwest, and Texas recorded temperatures 4°F or more above normal. In contrast, pockets in the central Great Plains, Pacific Northwest, and the northern Rockies were cooler than normal. Meanwhile, most of the West remained drier than normal, but much of Florida and the Great Lakes, Great Plains, Gulf Coast, and Mississippi Valley received above-normal rainfall. Parts of Florida, Kansas, Missouri, Oklahoma, Wisconsin, and the Gulf Coast received more than 10 inches of July rainfall.

Eighty-five percent of the nation's oat acreage was headed by July 5, sixteen percentage points ahead of the previous year but 1 point behind the 5-year average. Sixty percent of the nation's barley had reached the headed stage by July 5, twelve percentage points ahead of the previous year but 7 points behind average. By July 5, sixty-three percent of the nation's spring wheat had headed, 16 percentage points ahead of the previous year but 5 points behind average. By July 19, sixty-four percent of the nation's soybeans had reached the blooming stage, 29 percentage points ahead of the previous year and 7 points ahead of average. By July 19, thirty-two percent of the nation's rice had headed, 3 percentage points ahead of the previous year but 7 points behind average. Nationally, 25 percent of the nation's soybeans had begun setting pods by July 19, nineteen percentage points ahead of the previous year and 4 points ahead of average. Ninety-one percent of the nation's cotton had reached the squaring stage by August 2, one percentage point behind the previous year but equal to the average. By August 2, fifty-four percent of the nation's cotton had begun setting bolls, 1 percentage point behind both the previous year and the average. By August 2, ninety-two percent of the nation's corn had reached the silking stage, 20 percentage points ahead of the previous year and 5 points ahead of average. By August 2, fifty-five percent of the nation's sorghum had headed, 13 percentage points ahead of the previous year but 1 point behind average. By August 2, ninety percent of the nation's peanut acreage had reached the pegging stage, equal to the previous year but 1 percentage point ahead of average.

August: August was warm for much of the U.S. Parts of the Pacific Northwest, Rockies, and Southwest recorded monthly temperatures 4°F or more above normal. In contrast, the Midwest, Mississippi Valley, and southern Great Plains were cooler than normal. Meanwhile, most of the West was drier than normal. However, above-normal precipitation fell in parts of the Great Lakes, mid-Atlantic, Mississippi Valley, Northeast, northern Great Plains, and Southeast. Due in part to the effects of Tropical Storm Marco and Hurricane Laura, parts of the Delta, Gulf Coast, and mid-Atlantic recorded at least 10 inches of rain.

By August 2, ninety-two percent of the corn was silking, 20 percentage points ahead of the previous year and 5 points ahead of the 5-year average. By August 2, thirty-nine percent of the corn was at or beyond the dough stage, 19 percentage points ahead of the previous year and 6 points ahead of average. By August 16, producers had harvested 34 percent of the barley, 8 percentage points ahead of the previous year but 19 points behind average. On August 16, seventy-seven percent of the barley was rated good to excellent, 4 percentage points above the same time in 2019. By August 16, thirty percent of the spring wheat had been harvested, 16 percentage points ahead of the previous year but 13 points behind average. On August 16, seventy percent of the spring wheat was rated good to excellent, unchanged from the same time in 2019. By August 16, eighty-three percent of the sorghum was headed, 12 percentage points ahead of the previous year and 3 points ahead of average. By August 16, eighty-six percent of the rice was headed, 1 percentage point ahead of the previous year but 5 points behind average. Seventy-four percent of the oats had been harvested by August 16, seventeen percentage points ahead of the previous year and 1 point ahead of average. By August 16, ninety-six percent of the soybeans were blooming, 8 percentage points ahead of the previous year and 2 points ahead of average. By August 30, ninety-five percent of the soybeans were setting pods, 11 percentage points ahead of the 2019 and 2 points ahead of average. By August 30, ninety-three percent of the cotton was setting bolls, 2 percentage points behind both the previous year and the 5-year average.

September: September was warm across most of the western one-third of the U.S. Parts of California, the Pacific Northwest, northern Rockies, and Southwest recorded monthly temperatures averaging at least 4°F above normal. In contrast, portions of the Great Lakes, Great Plains, and mid-Atlantic were cooler than normal. Pockets in Kansas, Oklahoma, and Texas noted temperatures averaging 4°F or more below normal. Most of the western half of the U.S., as well as the Northeast, was drier than normal. However, above-normal rain fell in parts of the Corn Belt, Southeast, Mississippi Delta, southern Plains, and mid-Atlantic. Due to Hurricane Sally, parts of the Florida Panhandle recorded rainfall totaling 15 inches or more.

By September 6, seventy-nine percent of the corn was denting, 28 percentage points ahead of the previous year and 8 points ahead of the 5-year average. Fifty-nine percent of the corn was mature by September 20, thirty-three percentage points ahead of the previous year and 10 points ahead of average. By September 6, barley producers had harvested 85 percent of the nation's crop, 6 percentage points ahead of the previous year but 5 points behind average. By September 6, eighty-two percent of the spring wheat was harvested, 16 percentage points ahead of the previous year but 5 points behind average. Ninety-six percent of the oats were harvested by September 6, eight percentage points ahead of the previous year and 2 points ahead of average. Nationally, 47 percent of the rice was harvested by September 20, eight percentage points behind the previous year and 12 points behind average. On September 20, seventy-four percent of the rice was rated good to excellent, 5 percentage points above the same time in 2019. Soybean leaves dropping advanced to 59 percent complete by September 20, thirty percentage points ahead of the previous year and 9 points ahead of average. Ninety-two percent of the sorghum was at or beyond the coloring stage by September 20, five percentage points ahead of the previous year and 3 points ahead of average. Producers had sown 35 percent of the 2021 winter wheat acreage by September 27, one percentage point ahead of the previous year and 2 points ahead of average. By September 20, fifty-seven percent of the cotton had open bolls, 4 percentage points behind last year but 2 points ahead of average.

October: Most of the nation's mid-section was cooler than normal in October. Parts of the Great Lakes, northern Plains, and northern Rockies recorded temperatures 6°F or more below normal. In contrast, most of the western U.S. experienced above-normal temperatures. Parts of California, the Pacific Northwest, and Southwest recorded temperatures 6°F or more above normal. In the eastern one-third of the U.S., generally above-normal temperatures were observed. Parts of the mid-Atlantic and Southeast recorded temperatures 4°F or more above normal. Except in the Pacific Northwest and northern Rockies, the western half of the nation noted drier-than-normal weather. Farther east, Hurricanes Delta and Zeta—both making landfall in coastal Louisiana—contributed to above-normal rainfall in the mid-Atlantic, Mississippi Valley, and Southeast. Parts of these regions received rainfall totaling 7 inches or more.

Soybean harvest was 75 percent complete by October 18, thirty-five percentage points ahead of the previous year and 17 points ahead of the 5-year average. Forty-one percent of the peanuts were harvested by October 18, twenty-three percentage points behind the previous year and 14 points behind average. On October 25, sixty-four percent of the peanuts were rated good to excellent, 10 percentage points above the same time in 2019. Nationally, 91 percent of the rice had been harvested by October 18, equal to the previous year but 2 percentage points behind average. Sixty percent of the corn had been harvested by October 18, thirty-two percentage points ahead of the previous year and 17 points ahead of average. On October 18, sixty-one percent of the corn was rated good to excellent, 5 percentage points above the same time in 2019. Sixty-three percent of the sorghum had been harvested by October 18, seventeen percentage points ahead of the previous year and 12 points ahead of average. Producers had sown 77 percent of the 2021 winter wheat acreage by October 18, three percentage points ahead of the previous year and 5 points ahead of average. By November 1, fifty-two percent of the cotton had been harvested, 1 percentage point ahead of the previous year and 3 points ahead of average. On November 1, thirty-seven percent of the cotton was rated good to excellent, 3 percentage points below the same time in 2019. By October 18, sugarbeet producers had harvested 83 percent of the nation's crop, 44 percentage points ahead of the previous year and 21 points ahead of average.

November: Most of the U.S. was warmer than normal. Parts of the Great Lakes, northern Plains, Rockies, Southeast, and Texas recorded monthly temperatures 6°F or more above normal. In contrast, Idaho and the Pacific Northwest were slightly cooler than normal. Much of the U.S. was drier than normal, but above-normal precipitation was noted in parts of the Great Lakes, mid-Atlantic, Southeast, Midwest, and Northwest. Parts of southern Florida, the mid-Atlantic, and the Pacific Northwest received precipitation totaling 7 inches or more.

Producers had sown 96 percent of the intended 2021 winter wheat acreage by November 15, two percentage points ahead of both last year and the 5-year average. Nationally, 85 percent of the wheat had emerged by November 15, three percentage points ahead of last year and 1 point ahead of average. On November 29, forty-six percent of the winter wheat was reported in good to excellent condition, 6 percentage points below the same time in 2019. By November 1, sugarbeet producers had harvested 95 percent of the nation's crop, 28 percentage points ahead of the previous year and 11 points ahead of average. Soybean harvest was 96 percent complete by November 15, seven percentage points ahead of the previous year and 3 points ahead of average. Eighty-five percent of the peanuts had been harvested by November 15, seven percentage points behind the previous year and 4 points behind average. Ninety-five percent of the corn had been harvested by November 15, twenty-two percentage points ahead of the previous year and 8 points ahead of average. Ninety-seven percent of the sorghum had been harvested by November 22, one percentage point ahead of the previous year and 5 points ahead of average. By November 29, eighty-four per-cent of the cotton had been harvested, 2 percentage points ahead of last year and 5 points ahead of average. By November 29, ninety-seven percent of the sunflowers had been harvested, 35 percentage points ahead of the previous year and 10 points ahead of average.

2020 U.S. Crop Production Highlights

Highlights, released on January 12, 2021, were provided by USDA/NASS.

Corn: Corn for grain production in the United States was estimated at 14.2 billion bushels, up 4 percent from the 2019 estimate. The average U.S. yield was estimated at 172.0 bushels per acre, 4.5 bushels above the 2019 yield of 167.5 bushels per acre.

Estimated yields in 2020 were up from the previous year across most of the northern Plains and eastern Corn Belt. Record-high yields were estimated in Georgia, Kentucky, New Mexico, Oregon, and South Dakota.

Corn planted area, at 90.8 million acres, was up 1 percent from the 2019 estimate. Area harvested for grain was estimated at 82.5 million acres, up 1 percent from the 2019 estimate.

The 2020 corn objective yield data indicated the fourth-highest number of ears per acre, since 2012, for the combined ten objective yield States: Iowa, Illinois, Indiana, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin.

Corn silage production was estimated at 138 million tons for 2020, up 3 percent from the 2019 estimate. The U.S. silage yield was estimated at 20.5 tons per acre, up 0.3 ton from 2019. Area harvested for silage was estimated at 6.72 million acres, up 2 percent from the 2019 estimate.

Sorghum: Grain production in 2020 was estimated at 373 million bushels, up 9 percent from the 2019 total. Planted area for 2020 was estimated at 5.88 million acres, up 12 percent from 2019. Area harvested for grain, at 5.10 million acres, was up 9 percent from 2019. Grain yield was estimated at 73.2 bushels per acre, up 0.2 bushel from 2019.

Silage production was estimated at 3.13 million tons, down 22 percent from 2019. Area harvested for silage was estimated at 239,000 acres, down 29 percent from the previous year. Silage yield averaged 13.1 tons per acre, up 1.2 ton per acre from 2019.

Oats: Production in 2020 was estimated at 65.4 million bushels, up 23 percent from 2019. Yield was estimated at 65.1 bushels per acre, up 0.8 bushel from the previous year. Harvested area, at 1.00 million acres, was 21 percent above 2019. Record-low acres were harvested in Ohio.

A record-high yield was estimated in Idaho.

Barley: Production was estimated at 165 million bushels, down 4 percent from the revised 2019 total of 172 million bushels. The average yield, at 77.5 bushels per acre, was down 0.2 bushel from the previous year. Producers seeded 2.62 million acres in 2020, down 5 percent from 2019. Harvested area, at 2.13 million acres, was down 4 percent from 2019.

Record-high yields were estimated in Colorado, Idaho, Montana, New York, and Washington.

All wheat: Production totaled 1.83 billion bushels in 2020, down 5 percent from the 2019 total of 1.93 billion bushels. Area harvested for grain totaled 36.7 million acres, down 2 percent from the previous year. The U.S. yield was estimated at 49.7 bushels per acre, down 2.0 bushels from the previous year. The levels of production and changes from 2019 by type were: winter wheat, 1.17 billion bushels, down 11 percent; other spring wheat, 586 million bushels, up 4 percent; and Durum wheat, 68.8 million bushels, up 28 percent.

Winter wheat: Winter wheat production for 2020 totaled 1.17 billion bushels, down 11 percent from the 2019 total of 1.32 billion bushels. The U.S. yield, at 50.9 bushels per acre, was down 2.7 bushels from 2019. Area harvested for grain was estimated at a record-low 23.0 million acres, down 6 percent from the previous year. A record-low harvested acreage is estimated in California. Record-high winter wheat yields were estimated for 2020 in Idaho, Montana, New Jersey, Oklahoma, and South Dakota.

Compared with 2019, harvested acreage was down 11 percent in the major Hard Red Winter (HRW) growing states, the primary winter wheat-producing area. HRW production totaled 659 million bushels, down 22 percent from 2019.

In the Soft Red Winter (SRW) growing area, planted and harvested acreage increased from 2019. SRW production totaled 266 million bushels, up 11 percent from 2019.

White winter wheat production totaled 246 million bushels, up 6 percent from the previous year. Harvested acreage in the Pacific Northwest (Idaho, Oregon, and Washington) was up 1 percent from 2019. Yields were up in Idaho and Washington but down in Oregon compared with the previous year.

Other spring wheat: Production for 2020 was estimated at 586 million bushels, up 4 percent from the revised 2019 total of 561 million bushels. Harvested area totaled 12.1 million acres, up 4 percent from 2019. The U.S. yield was estimated at a record-high 48.6 bushels per acre, up 0.3 bushel from the previous record of 48.3 bushels per acre in 2019. A record-high yield was estimated in 2020 for Montana and North Dakota. Of the total production, 530 million bushels were Hard Red Spring wheat, up 2 percent from the 2019 total.

Durum wheat: Production for 2020 was estimated at 68.8 million bushels, up 28 percent from the 2019 total of 54.0 million bushels. Production in North Dakota, the largest Durum wheat-producing state, was up 36 percent from 2019. Area harvested for grain totaled 1.66 million acres, up 41 percent from the previous year. The U.S. yield was estimated at 41.4 bushels per acre, down 4.4 bushels from the 2019 yield. Record-high yields were estimated in 2020 for Idaho.

Rice: Production in 2020 totaled 228 million cwt, up 23 percent from the 2019 total. Planted area for 2020 was estimated at 3.04 million acres, up 19 percent from 2019. Area harvested, at 2.99 million acres, was up 21 percent from the previous crop year. The average yield for all rice across the nation was estimated at 7,619 pounds per acre, up 146 pounds from the 2019 average yield of 7,473 pounds per acre.

Yields increased from the previous year in all states except Missouri. A record-high yield was estimated for Mississippi.

All hay: Production of all dry hay for 2020 was estimated at 126.8 million tons, down 2 percent from the 2019 total. Area harvested was estimated at 52.2 million acres, down less than 1 percent from 2019. The average yield, at 2.43 tons per acre, was down 0.03 ton from 2019.

The Four Corners region started the year rather dry. As the year progressed, the drought expanded in area and severity, covering a region of the country reaching from Texas to Washington. Meanwhile, the eastern half of the nation set a record with twelve tropical cyclones making landfall in 2020. Six of those twelve storms crossed the coast as hurricanes. Tropical precipitation covered a large swath of the United States stretching from Texas to Virginia.

Alfalfa and alfalfa mixtures: Production in 2020 was estimated at 53.1 million tons, down 3 percent from the 2019 total. Harvested area, at 16.2 million acres, was 3 percent below 2019. Harvested area has been trending lower—but has leveled off in recent years. Average yield was estimated at 3.27 tons per acre, down 0.01 ton from 2019.

Record-high yields were estimated in California and Idaho. A record-low yield was estimated in Massachusetts.

All other hay: Production in 2020 totaled 73.7 million tons, down less than 1 percent from the 2019 total. Harvested area, at 36.0 million acres, was up 1 percent from 2019. Average yield was estimated at 2.05 tons per acre, down 0.02 ton from 2019. This is the fifth-highest U.S. yield on record, with four of the five occurring in the last 6 years.

Record-high yields were estimated in Alabama, Arizona, Georgia, Idaho, Nevada, and Utah.

Forage: In 2020, seventeen states were included in the forage estimation program, which measures annual production of forage crops. Haylage and greenchop production was converted to 13 percent moisture and combined with dry hay production to derive the total forage production. The total 2020 all haylage and greenchop production was 29.3 million tons, of which 18.7 million tons were from alfalfa and alfalfa mixtures. The 17-state total for all forage production was 82.3 million tons. Of this total, 42.0 million tons were produced from alfalfa and alfalfa mixtures.

Peanuts: Production was estimated at 6.13 billion pounds, up 12 percent from 2019. Planted area was estimated at 1.66 million acres, up 16 percent from 2019. Harvested area was estimated at 1.62 million acres, up 16 percent from 2019. The U.S. average yield was estimated at 3,796 pounds per acre, down 138 pounds from 2019.

Record-high production was estimated in Arkansas. Record-high yields were estimated in Mississippi and Oklahoma.

Canola: Production in 2020 was estimated at 3.45 billion pounds, up 2 percent from 2019. This represents the second-highest U.S. production total on record. The average yield, at a record-high 1,931 pounds per acre, is up 150 pounds from last year's average. Planted area was estimated at 1.83 million acres, 11 percent below the previous year's acreage. Harvested area, at 1.79 million acres, was down 6 percent from 2019.

Production in North Dakota, the leading canola-producing state, was estimated at 2.92 billion pounds. This represents the second-largest production for North Dakota, trailing 2018's record production by 6 percent. Planted and harvested area in North Dakota were down 11 and 7 percent, respectively, from 2019's record-high planted and harvested area.

Planted and harvested area in Montana and Washington for 2020 were both record highs. In contrast, planted and harvested area in Kansas and Oklahoma were both record lows. Record-high yields were estimated in North Dakota and Washington.

Sunflower: The 2020 sunflower production totaled 2.98 billion pounds, up 52 percent from 2019. The U.S. average yield per acre of 1,790 pounds increased 230 pounds from 2019. Planted area, at 1.72 million acres, was 27 percent above the previous year. Area harvested increased 33 percent from 2019 to 1.67 million acres.

North Dakota, the leading sunflower-producing state during 2020, produced 1.34 billion pounds, an increase of 79 percent from 2019. Compared with 2019, planted area in North Dakota increased 37 percent and yield increased 356 pounds to 1,872 pounds per acre. Meanwhile, production in South Dakota increased 40 percent from 2019 to 1.17 billion pounds. Planted acreage in South Dakota, at 622 million acres, increased 17 percent from the previous year. The average yield in South Dakota increased 216 pounds from 2019 to 1,910 pounds per acre.

U.S. production of oil-type sunflower varieties, at 2.62 billion pounds, increased 48 percent from 2019. Compared with the previous year, harvested acres were up 28 percent and the average yield increased by 241 pounds to 1,802 pounds per acre.

Production of non-oil sunflower varieties was estimated at 365 million pounds, an increase of 92 percent from 2019. Area harvested, at 213,200 acres, was up 74 percent from 2019. The average yield increased by 157 pounds from 2019 to 1,712 pounds per acre.

Soybeans: Production in 2020 totaled 4.14 billion bushels, up 16 percent from 2019. The average yield was estimated at 50.2 bushels per acre, 2.8 bushels above 2019. Planted area for the nation, at 83.1 million acres, was up 9 percent from the 2019 planted acreage. Soybean growers harvested 82.3 million acres, up 10 percent from 2019.

Record-high yields occurred in Indiana, Kentucky, Mississippi, Missouri, New Jersey, and Tennessee.

The 2020 soybean objective yield survey data indicated that final average pod counts were higher than 2019 in the combined eleven objective-yield states. Compared with final counts for 2019, pod counts were up in ten of the eleven published states. An increase of more than 200 pods per 18 square feet from 2019's final pod count occurred in Illinois, Indiana, Iowa, Minnesota, Nebraska, North Dakota, Ohio, and South Dakota.

Cotton: Upland cotton production was estimated at 14.4 million 480-pound bales, down 25 percent from the previous year. The U.S. yield for Upland cotton is estimated at 813 pounds per acre, up 3 pounds from 2019. Upland planted area, estimated at 11.9 million acres, was down 12 percent from the previous year. Harvested area, at 8.51 million acres, was down 25 percent from the previous year. In Kansas, planted and harvested area were at record highs, while California and New Mexico recorded a record low for harvested acres. Record-high yields were estimated in 2020 for Arkansas.

In the Southeast (Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia), planting was completed by the middle of June. The crop was rated in mostly fair to good condition throughout the growing season. Hurricanes and tropical storms resulted in variable yields for the region.

In the Delta region, a rainy planting season was complete by the end of June. Some areas within the region struggled with excessive moisture from hurricanes and tropical storms throughout the season.

In Texas, hot, windy, and dry conditions hampered planting and crop progress. Overall, many growers reported having a very disappointing crop. Cotton in the Lower Valley was damaged by Hurricane Hanna. Many growers had to make decisions about harvesting dryland acreage.

American Pima producers planted 202,500 acres in 2020, down 11 percent from 2019. Harvested area, at 194,500 acres, was down 13 percent from the previous year. Production was estimated at 552 thousand 480-pound bales, down 19 percent from 2019. The U.S. yield was estimated at 1,362 pounds per acre, down 110 pounds from the previous year.

Ginnings totaled 13,002,950 running bales prior to January 1.

Sugarbeets: Production for 2020 was estimated at 33.6 million tons, up 17 percent from the previous year's revised production. Growers in the 11 major sugarbeet-producing states planted 1.16 million acres, up 3 percent from the 2019 revised area. Harvested area, at 1.14 million acres, was up 17 percent from the previous year. Estimated yield, at 29.4 tons per acre, was up 0.2 ton from last year.

Sugarcane: Production of sugarcane for sugar and seed in 2020 was estimated at 35.5 million tons, of which 33.7 million tons were utilized for sugar and 1.74 million tons for seed. Total production for sugar and seed was up 11 percent from 2019. Sugarcane producers harvested 940,500 acres for sugar and seed in 2020, up 3 percent from the previous year. Yield for sugar and seed was estimated at 37.7 tons per acre, up 2.7 tons from 2019.

January State Agricultural Summaries

These summaries, issued weekly through the summer growing season, provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Crop Progress and Condition Reports published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service. The crop reports are available on the Internet through the NASS Home Page on the World Wide Web at http://www.nass.usda.gov.

ALABAMA: January temperatures were generally on par with historic averages. Total rainfall for the month ranged from 0.8 inch to 5.7 inches. According to the U.S. Drought Monitor, 23 percent of the State was experiencing abnormally dry conditions by month's end, compared to 8 percent at the beginning of the month. As a whole, agricultural activities were normal for the time of year, with no extraordinary events or pest pressure to report. Winter wheat was progressing well, and its condition was average to above average, depending on location. Strawberries were progressing nicely. Cattle remained in mostly good condition. The growth of winter grazing ranged from insufficient to abundant, with southern counties having the best growth. Correspondingly, the quantity of hay and other supplements provided by livestock producers was based on the availability of grazing. Hay stocks remained adequate throughout the State. In addition to normal field activities for this time of year, some producers continued to work on repairing or rebuilding structures that were damaged by Hurricanes Sally and Zeta.

ALASKA: DATA NOT AVAILABLE

ARIZONA: This report for Arizona is for the entire month of January 2021. By the end of the month, 75 percent of barley has been planted and 62 percent has emerged, according to the Mountain Regional Field Office of the National Agricultural Statistics Service, USDA. Sixty percent of Durum wheat has been planted and 50 percent has emerged. Alfalfa conditions were rated mostly excellent to good, depending on location last week with harvesting taking place on more than three-quarters of the alfalfa acreage across the State. For the entire State, pasture and range conditions were rated mostly very poor to poor. Severe to exceptional dryness in the entire State continues to affect pasture and range conditions, forage growth, crop progress, soil moisture, stream water, and stock tanks. Small grain farmers have been facing planting issues due to drought conditions and ranchers have continued to reduce their herds or ship livestock out of state. Some rain was received in multiple areas of the State, but not enough precipitation was received to improve moisture conditions.

ARKANSAS: The month of January had slightly above normal temperatures and above average rainfall. Cattle producers reported cattle were in good condition and hay feeding continued with some facing hay shortages. Some producers reported fieldwork had to be suspended due to large amounts of rain, while other producers in the State reported conditions were good and fertilization for wheat was beginning. Cover crops growth was low in areas with late planting, while doing well in other areas. The State average rainfall was 4.04 inches for the month of January with an average temperature of about 41 degrees. Overall, rainfall has been plentiful for some areas for this time of year in the State and average temperatures are slightly above normal.

CALIFORNIA: Topsoil moisture 45% very short, 30% short, 20% adequate and 5% surplus. Subsoil moisture 20% very short, 50% short, and 30% adequate. Temperatures for the month averaged 51.0 degrees, 4.0 degrees above normal. Statewide average monthly precipitation was 0.7 inch. In almond, walnut and pistachio nut orchards, pruning and field prep continued including installing and repairing irrigation, knocking off mummies and applying gypsum applications. Bees were transported to the State in preparation for the almond pollination. The Winter wheat crop is in need of much needed moisture. With dry conditions, the dry land wheat fields need rainfall to continue growing successfully. Alfalfa was growing slowly with the cooler weather. Deciduous trees and stone fruit groves we pruned. Citrus trees were being irrigated and treated for pests. Wind machines and other crop protection measure were used to protect citrus from freeze damage.

COLORADO: This report for Colorado is for the entire month of January 2021. Topsoil moisture 40% very short, 39% short, 21% adequate. Subsoil moisture 40% very short, 43% short, 17% adequate. Winter wheat condition 18% very poor, 18% poor, 47% fair, 16% good, 1% excellent. Livestock condition 2% very poor, 6% poor, 30% fair, 54% good, 8% excellent. Pasture and range condition 27% very poor, 44% poor, 25% fair, 4% good. Minimal moisture received during the month of January resulted in diminished topsoil moisture supplies across the State. Warm and windy weather, detrimental to winter wheat, was reported. A reporter noted some winter wheat had been chiseled in to prevent blowing. In southwestern counties, a reporter noted winter snowpack was good, which was helping to improve soil moisture conditions. In the San Luis Valley, dry conditions persisted and a reporter noted that hay supplies were minimal. In southeastern counties, conditions were noted as extremely dry and moisture was needed. As of January 21, 2021, snowpack in Colorado was 72 percent measured as percent of median snowfall.

DELAWARE: The State experienced high moisture conditions, which made many fields too wet to get on, while still seeing 2020 corn and soybeans in some fields. One farmer reported buying tracks for his combine so he could harvest his 2020 soybean crop. It dries somewhat - then it rains again. Temperatures go down - then go up - which is not good for anything. A fraction of small grain acreage was not planted this year due to excessive precipitation.

FLORIDA: January temperatures were on average 3.1 degrees cooler to 3.2 degrees warmer than historical values depending on location. Total rainfall for the month ranged from 0.1 inch in multiple locations to 8.6 inches in Jefferson County. According to the U.S. Drought Monitor, 12 percent of the State was moderately dry in January and no areas experienced drought conditions. Pasture conditions remained mostly fair to good. However, seasonal pasture decline was noted across the State. Cattle conditions remained mostly good throughout the

State. Sugarcane planting and harvesting continued, with no damage reported as a result of cold temperature that were experienced during the third week of January. Fungal problems were reported to be under control in the State, but disease in strawberries was noted late in the month. Vegetable growers began terminating fall crops and started planting spring crops. Crops marketed included tomatoes, peppers, eggplant, sweet corn, green beans, yellow squash, zucchini, bitter melons, herbs, and avocados. Grove activities included mowing, fertilizing, maintenance hedging, spraying and general grove maintenance. Citrus fruit harvested included white and red grapefruit, early and midseason oranges, tangerines, and tangelos.

GEORGIA: January temperatures were average to 5 degrees warmer than historical values. Total rainfall for the month ranged from 0.6 inch in Bibb County to 7.6 inches in Grady County. According to the U.S. Drought Monitor, the State remained drought free throughout the month with only 11 percent abnormally dry. Small grains did well over the past month. Aphid pressure was noted in small grains in the southern part of the State. Persistent rain in some locations has led to pasture conditions being subpar compared to previous years and hay was being fed at a rapid pace. Livestock conditions were fair to good but lower quality hay fed to some cattle caused deterioration in body condition. Onions planted in November and December are doing well. Vegetable planting was delayed in some areas due to wet field conditions. As weather permitted, fields were bedded with plastic for the upcoming spring season. Cool temperatures left fruit and nut crops in good condition. Field activities included harrowing, tilling, applying chemicals, and pruning.

HAWAII: DATA NOT AVAILABLE

IDAHO: The Statewide temperatures in Idaho for the month of January were normal to above average throughout the State. This marked the continuation of a mild winter in the State of Idaho. Calving progressed well across the State and hay stocks were in good shape. So far, winter 2021 had not put much stress on livestock or winter cereals. The mild weather also had not put much pressure on hay stocks. While there was snow on the ground in central and eastern Idaho, most of the big storms missed the State in January. The consensus was there needed to be more snow to improve the water outlook for crop year 2021.

ILLINOIS: For the week ending on January 24, 2021. Topsoil moisture 3% very short, 13% short, 74% adequate, 10% surplus. Subsoil moisture 4% very short, 21% short, 73% adequate, 2% surplus. Statewide, the average temperature in January was 29.7 degrees, 5.0 degrees above normal. Precipitation averaged 0.99 inch, 0.52 inch below normal.

INDIANA: Topsoil moisture for the month of January was 4% very short, 20% short, 69% adequate, and 7% surplus. Subsoil moisture for the month was 8% very short, 23% short, 63% adequate, and 6% surplus. Winter wheat condition was rated 1% very poor, 5% poor, 27% fair, 55% good, and 12% excellent. Statewide temperatures averaged 31.0 degrees, 5.1 degrees above normal for the month of January. Statewide average precipitation was 1.22 inches, 0.69 inch below normal. Most of January was much warmer and drier than normal, with the majority of the State's below average precipitation occurring within the first few days of the New Year. The temperatures began to drop near the end of the month, but the dry conditions persisted. Soil moisture levels decreased from the previous month. Winter wheat conditions remained stable overall, though the lack of soil moisture and absence of snow cover in some areas caused concern. Livestock were reported to be faring well amid the milder temperatures. Other activities for the week included tile work, purchasing equipment, and delivering grain.

IOWA: January brought unseasonably warm temperatures across the State for most of the month. Measurable snowfall was recorded mid-month with more expected this week, especially in the central and southern parts of the State. Localized ice in the east central part of the State made it difficult for some livestock producers to feed cattle mid-month. Fieldwork activities for the month included hauling manure. Unlike the previous year, there were no reports of crops remaining to be harvested. Grain movement was steady due to strong prices. Livestock continued to graze on corn stalks. The warm temperatures were beneficial for livestock. Lambing and calving have begun. Soil moisture levels continue to be a concern due to below average snowfall as farmers look forward to the 2021 crop year.

KANSAS: For the week ending January 24, 2021, topsoil moisture supplies rated 21% very short, 34% short, 42% adequate, 3% surplus. Subsoil moisture supplies rated 16% very short, 37% short, 46% adequate, 1% surplus. Winter wheat condition rated 7% very poor, 17% poor, 33% fair, 40% good, 3% excellent.

KENTUCKY: For the month of January, Kentucky saw above normal temperatures and much below normal precipitation. Throughout the month temperatures have stayed relatively mild, however dry conditions have persisted. Temperatures for the period averaged 36 degrees across the State, which was 3 degrees warmer than normal. Precipitation (liq. equ.) for the period totaled 1.14 inches Statewide, which was 1.8 inches below normal and 39% of normal. With mild and dry conditions prevalent, farmers have been able to hold onto the hay supplies for the most part. For the month of January, hay supplies 1% very short, 7% short, 83% adequate, 9% surplus. Livestock have benefitted overall from the absence of typical winter harshness. Livestock conditions 1% very poor, 3% poor, 21% fair, 65% good, 10% excellent. Condition of winter wheat 1% poor, 13% fair, 71% good, 15% excellent. Tobacco stripping 93% complete.

LOUISIANA: Conditions for January have been mild and wet for most of the State. The highest amount of rainfall was reported in the northwest part of the State. The wet conditions have limited fieldwork. Ryegrass progress has been slow in most areas. Cattle producers have been feeding more hay and supplements. Crawfish producers have started harvesting. Row crop burndown began in the northeast. The average rainfall for the month was about 4.04 inches with an average temperature of about 50 degrees. Overall, rainfall for the State was below normal while temperatures were slightly above average.

MARYLAND: The month of January experienced drier conditions, which allowed operators to do tasks that required them to be on fields such as applying lime, tillage, etc. Seasonal conditions with temperatures have kept soils right at freezing through most of the region. Wheat looked in good condition at this time. Pastures were not being cut up due to soil being wet. The State entered the fall very dry and went into the winter slightly wet, but has dried out again. Moisture is most needed overall. Some farmers were getting into the fields to harvest corn and soybeans in the bottoms of the field that were just too wet during the regular harvest season.

MICHIGAN: Topsoil moisture 0% very short, 14% short, 83% adequate and 3% surplus. Subsoil moisture 2% very short, 14% short, 80% adequate, and 4% surplus. Winter wheat condition rated 3% very poor, 7% poor, 32% fair, 52% good, and 6% excellent. Precipitation for the month of January averaged 0.92 inch throughout the State, 0.64 inch below normal. Temperature for the month of January averaged 27.1 degrees, 7.9 degrees above normal. The winter has continued to be unusually mild across the State. Precipitation was down in January as snowfall in most areas was reportedly below average. Temperatures were also significantly warmer than usual contributing to the lack of snow cover. The generally mild conditions have allowed farmers to easily tend to livestock and complete daily operations around the farm. Fruit growers continued to take advantage of favorable conditions by pruning and maintaining orchards. Weather conditions continued to remain good for winter wheat in central counties and the Thumb region. In southern counties snow cover is very light leading to some concern about damage. Other activities for the month included hauling manure, purchasing seed, getting equipment ready for spring, and cutting firewood for next winter.

MINNESOTA: January brought below normal precipitation amounts and above normal temperatures for much of the State. There were reports of no frost or shallower than normal frost levels in the soil. In the west central part of the State there were reports of high winds causing some soil erosion. Only a small amount of corn is still standing. Conditions allowed some manure spreading. Grain movement was widespread. Livestock consumed less feed than normal with adequate feed available. The lack of snow and milder temperatures also helped reduce bedding needs. Overall, January livestock conditions have been good as farmers prepare for calving season. Lambing is already underway. The preliminary January average temperature for the Twin Cities was 22.7 degrees Fahrenheit, which is 7.4 degrees above normal. Total precipitation was 0.86 inch, 0.14 inch below normal.

MISSISSIPPI: Conditions for the month of January have been cool and wet. Little fieldwork has been completed due to wet conditions and saturated ground. The State average rainfall was about 3.1 inches for the month of January with an average temperature of about 45 degrees. Overall, rainfall and average temperatures have been typical for this time of year in the State.

MISSOURI: For the week ending January 24, 2021. Topsoil moisture 1% very short, 8% short, 74% adequate, 17% surplus. Subsoil moisture 14% short, 85% adequate, 1% surplus. Winter wheat condition 1% very poor, 5% poor, 45% fair, 43% good, 6% excellent. Statewide, precipitation averaged 1.34 inches for the month of January, 0.09 inch below average. Temperatures averaged 33.1 degrees, 4.6 degrees above normal.

MONTANA: This report for Montana is for the entire month of January 2021. Topsoil moisture 14% very short, 43% short, 42% adequate, 1% surplus. Subsoil moisture 9% very short, 42% short, 47% adequate, 2% surplus. Winter wheat - condition 1% very poor, 4% poor, 27% fair, 62% good, 6% excellent. Winter wheat – wind damage 64% none, 25% light, 9% moderate, 2% heavy. Winter wheat – freeze and drought damage 86% none, 10% light, 3% moderate, 1% heavy. Winter wheat – protectiveness of snow cover 71% very poor, 26% poor, 3% fair. Pasture and range - condition 14% very poor, 28% poor, 46% fair, 10% good, 2% excellent. Livestock grazing accessibility – 85% open, 9% difficult, 6% closed. Livestock receiving supplemental feed – cattle and calves 92% fed. Livestock receiving supplemental feed – sheep and lambs 96% fed. The month of January was windy and dry for the State of Montana, according to the Mountain Regional Field Office of the National Agricultural Statistics Service, USDA. Reporters across the State noted a lack of precipitation and high winds throughout the month of January. Temperatures across the State were higher than the daily historical averages for a majority of the month. High temperatures ranged from the mid-20s to the mid-60s. Low temperatures ranged from the mid-30s to the teens. According to the U.S. Drought Monitor, approximately 81 percent of Montana is abnormally dry or in a current state of drought, with about 8 percent of the State in severe or extreme drought.

NEBRASKA: For the week ending January 24, 2021, topsoil moisture supplies rated 16% very short, 44% short, 39% adequate, and 1% surplus. Subsoil moisture supplies rated 16% very short, 48% short, 35% adequate, and 1% surplus. Winter wheat condition rated 6% very poor, 12% poor, 48% fair, 33% good, and 1% excellent.

NEVADA: Topsoil moisture 50% very short, 20% short, 25% adequate, 5% surplus. Subsoil moisture 70% very short, 25% short, 5% adequate. Temperatures for the month averaged 35.7 degrees, 3.8 degrees above normal. Statewide average precipitation was 0.25 inch.

NEW ENGLAND: New England States experienced variable weather - cold days, minimal snow, rain, and periods of warmth. In Connecticut, the weather continues to be drier than normal. Rain rather than snow seems to be the new normal. Reservoirs have been marked as lower than normal. The soil frozen on the surface but the frozen layer is thin. In Massachusetts, unusually warm conditions have made winter flooding difficult for cranberry growers in SE Massachusetts. The likelihood of ice standing the bogs is rapidly ending. According to a New Hampshire reporter, most of the county has snow cover, but only in moderate amounts. Lakes and ponds were slow to freeze over compared to the typical year. Additionally, farmers are repairing equipment and buildings, planning for the 2021 growing season, ordering seeds and attending webinars. They are finishing record keeping for the 2020 growing season. There have been a couple of days with a temperature low around 5 to 10 F degrees and highs of 40's F degrees. A bit above the average temperatures for January. Moreover, minimal snowfall this winter has farmers concerned about ground water recharge. Drought impacts from

2020 and 2019 are still very apparent. Ground water levels are still below normal. Streams are running at significantly lower levels for this time of the year. Rhode Island reports above average temperatures is providing good growing conditions in high tunnels. Vermont experienced great weather for sod crops in Franklin County. The winter so far has been fairly mild and dry. There is probably a 12 to 24 inch snow pack. There have been a few days near the zero mark but overall temperatures have been higher than average. Farms are doing well with winter feed supplies.

NEW JERSEY: The State has experienced fair conditions and temperatures were at or above normal. Ground moisture has been good the last month. Livestock producers were having difficulty making appointments with local butchers; appointments were being made 12-16 months out. Other concerns include the cost to feed and the insufficient supply of forages and grain due to delay. As mentioned last month, deer, bears, and groundhogs have caused considerable damage to some crops and farmland. Vegetable transplant growers continued to seed greenhouses with the anticipation of a normal spring season.

NEW MEXICO: This report for New Mexico is for the month of January 2021 through January 24. Topsoil moisture 58% very short, 37% short, 5% adequate. Subsoil moisture 65% very short, 31% short, 4% adequate. Pecans harvested 95%, 75% last year. Winter wheat condition 16% very poor, 53% poor, 26% fair, 3% good, 2% excellent. Cows calved 4%, Cattle receiving supplemental feed 94%, 75% last year. Cattle condition 3% very poor, 15% poor, 42% fair, 36% good, 4% excellent. Ewes lambed 9%, 14% last year. Sheep receiving supplemental feed 92%, 67% last year. Sheep and lambs condition 13% very poor, 11% poor, 28% fair, 42% good, 6% excellent. Hay and roughage supplies 25% very short, 50% short, 25% adequate. Stock water supplies 20% very short, 49% short, 30% adequate, 1% surplus. Precipitation since January 1 has been extremely limited for much of the State, resulting in further deterioration of not just soil moisture levels, but winter wheat condition as well. With a large portion of acreage represented, 69 percent of the winter wheat crop was reported in very poor or poor condition due to a prolonged battle against increasingly dry growing conditions. This compares with 37 percent in very poor or poor condition at the end of December. Comments across Union County expressed that producers for all commodities were in difficult situations trying to plan for the 2021 growing season. Converted monthly moisture totals – accounting for any precipitation received as snow – ranged from approximately 2 inches to merely a trace, with dryness across a few southern counties. Areas with above average precipitation were confined to northern, more mountainous counties, and the southeastern corner of the State. According to the United States Drought Monitor for January 19, the entire State was suffering from moderate drought or worse, and conditions continued to worsen. Moderate drought (D1) was present across less than 1 percent of the State. Severe drought (D2) covered 17.0 percent of the State, compared with 17.3 percent on December 29. Extreme drought (D3) was present across 28.4 percent of New Mexico, compared with 29.1 percent on December 29. Exceptional drought (D4) continued to expand, and now covered 65,981 square miles, or 54.3 percent of the State.

NEW YORK: The month of January was reported as a milder winter in the first half of the month, with colder temperatures and snow cover and ice reported for the second half in some areas. Some have reported ice sheeting as a concern and threat to winter grains and perennial forages. Others have reported favorable conditions for vineyards with the lack of extreme temperature fluctuations. Field work for the month included grapevine pruning where weather was favorable and manure application on fields when soil was frozen.

NORTH CAROLINA: For the week ending January 24, 2021 - Subsoil moisture 50% adequate, 50% surplus. Topsoil moisture 51% adequate and 49% surplus. Barley condition 2% poor, 18% fair, 78% good and 2% excellent. Hay and roughage supplies 3% short, 92% adequate, 5% surplus. Oats condition 38% fair, 61% good and 1% excellent. Pasture and range condition 1% very poor, 9% poor, 45% fair, 43% good, and 2% excellent. Winter wheat condition 1% very poor, 9% poor, 43% fair, 45% good, and 2% excellent. Throughout January, weather continues to be wet with rain every 3 to 4 days. Pastures are extremely muddy across the State and forage is thin. Hay supplies are OK. Cold, wet soils have some small grain crops showing some nutrient deficiencies. Winter wheat is better than expected with the given rainfall.

NORTH DAKOTA: For the week ending January 24, 2021, topsoil moisture supplies, 38% very short, 37% short, 24% adequate, 1% surplus. Subsoil moisture supplies, 33% very short, 37% short, 29% adequate, 1% surplus. Winter wheat condition, 7% very poor, 12% poor, 60% fair, 20% good, 1% excellent. Cattle and calf conditions, 1% very poor, 4% poor, 16% fair, 61% good, 18% excellent. Cattle and calf death loss, 1% heavy, 34% average, 65% light. Calving progress, 2% complete. Sheep and lamb conditions, 1% very poor, 2% poor, 12% fair, 68% good, 17% excellent. Sheep and lamb death loss, 2% heavy, 45% average, 53% light. Lambing progress, 5% complete. Shearing progress, 11% complete. Hay and roughage supplies, 5% very short, 13% short, 72% adequate, 10% surplus. Stock water supplies, 15% very short, 27% short, 57% adequate, 1% surplus.

OHIO: Topsoil moisture for the month was 1% very short, 7% short, 68% adequate, and 24% surplus. Subsoil moisture for the month was 2% very short, 9% short, 77% adequate, and 12% surplus. Winter wheat condition was rated 1% very poor, 2% poor, 26% fair, 57% good, and 14% excellent. The Statewide average temperature was 31.8 degrees, 5.4 degrees above normal. Precipitation averaged 1.37 inches Statewide, 0.64 inch below normal for January. Warmer than normal temperatures and limited snow cover raised concerns about winter wheat condition. The moderate weather conditions, however, have contributed to above average livestock conditions. The northwestern portion of the State saw drier soil due to a lack of winter precipitation while other parts of the State had wet and muddy soil conditions. Fieldwork continued with farmers tilling and applying manure and fertilizer.

OKLAHOMA: For the month of January, according to the US Drought Monitor Report, 32 percent of the State was in the moderate to exceptional drought categories, up 12 points from the previous year. Just 12 percent of the State was in the moderate to exceptional drought categories, compared to

9 percent from the previous year. Topsoil and subsoil moisture conditions were rated mostly adequate to short.

OREGON: The Statewide temperatures in Oregon for the month of January were normal to above average throughout the State. The western half of the State remained below average for cumulative precipitation for weather year 2021. The southwestern corner of Oregon remained well below average. In the northern coastal region of Oregon, the Willamette Valley received some heavy rains in January with some high water flooding through several farm fields. This wet weather was short lived and caused little to no damage to the crops. Nurseries were in full swing for planting for the upcoming spring. In Polk County, mild temperatures during most of the month allowed pastures and grass seed fields to green up nicely. Vole pressure continued to be a problem in grass seed fields and a second treatment of winter herbicides was applied. There was a flood event in early January that nearly covered the 100-year floodplain on some streams. Livestock continued to be fed in barns. Some sheep were out in pastures grazing. Kidding and lambing was about half complete. In Clackamas County, early January also brought creeks and rivers to flood or near-flood stage. Open crop fields and hazelnut groves showed moderate to extensive erosion and livestock barnyards were challenged with mud and manure management. In Tillamook County, grass continued to make slow progress in better-drained fields. Elk were observed in many fields. Many folks that raised corn silage proactively fenced their crop areas to exclude the elk and deer. Dairy herds were confined because of the weather and saturated soil conditions. Columbia County reported slug concerns on agronomic crops. In north central Oregon, the moisture received in January had not gone deep into the ground. The wheat looked decent. Calving started on several livestock operations. In Morrow County, winter wheat was small due to late seeding last fall. Crop year precipitation was below average, depending on location. Snowpack in the nearby Blue Mountains was minimal. In Wasco County, wheat crops had emerged, but needed more moisture to sustain the coming summer heat. Livestock had very little pasture growth to graze. In northeastern Oregon, calving went well in the milder winter weather. Early sown winter wheat was doing well. Stands were in good shape, weeds were few, and plants were in the 6-8 leaf stage. Wheat sown at typical planting time or sown late was small, but for the most part doing well. Stands filled in from early spotty emergence. Precipitation still lagged behind average. In southwestern Oregon, the unusually warm weather for late December and January allowed pastures, fall planted grains, cover crops and other forages to grow vigorously and were in excellent shape. The rainfall over the past month was welcome given the moderately dry fall. Snow accumulation in the high country was also below average with the mild temperatures. Winter dormant spraying for disease and insect controls in orchards, vineyards, berry crops, and nursery crops was active during the past month. In central and southeastern Oregon, the January weather was also warmer than usual. The area received snow and rain depending on elevation and location. Calving was going well. Crook, Deschutes, and Jefferson Counties received snow. This moisture was very welcome. To date Central Oregon, was below average for precipitation and reservoirs were behind last year's fill rate.

PENNSYLVANIA: The State has seen a mild winter so far with minimal to average snow cover, less than 2 inches of frost, and relatively good soil moisture in areas where ground is not frozen. Tobacco has been stripped and is in the process of delivery. Field activities were focused on spreading manure and lime.

SOUTH CAROLINA: January temperatures were on par with or up to 4 degrees Fahrenheit higher than historic averages. Total rainfall during the month ranged from 1.1 inches to 6.2 inches. According to the U.S. Drought Monitor, 6 percent of the State was experiencing abnormally dry conditions by month's end, compared to 13 percent at the beginning of the month. Untimely rainfall hampered the last of the winter wheat planting. Due to cold, wet conditions, cover crops and small grains grew slowly, and producers held off on spreading lime until fields could dry. Despite the less than ideal weather, winter wheat condition was fair to excellent. Strawberries and winter vegetables progressed slowly, but remained in good condition overall. A few producers were able to begin preparing fields for spring row crop planting when breaks in the rain allowed. Livestock and forages were generally in good condition.

SOUTH DAKOTA: For the week ending January 24, 2021, topsoil moisture supplies rated 19% very short, 43% short, 38% adequate, 0% surplus. Subsoil moisture supplies rated 20% very short, 44% short, 36% adequate, 0% surplus. Winter wheat condition rated 3% very poor, 18% poor, 47% fair, 32% good, and 0% excellent.

TENNESSEE: For the week ending January 24, Days suitable 3.3. Topsoil moisture 4% short, 66% adequate, 30% surplus. Subsoil moisture 6% short, 70% adequate, 24% surplus. Winter wheat condition 3% poor 25% fair, 61% good, 11% excellent. Pasture and Range condition 2% very poor, 17% poor, 36% fair, 40% good, 5% excellent. Cattle condition 3% poor, 24% fair, 64% good, 9% excellent. Hay and roughage supplies 1% very short, 9% short, 78% adequate, 12% surplus. Tennessee experienced decreased moisture in January and warm temperatures. Some report the driest January conditions in several years. The conditions were favorable for cattle. Hay and roughage supplies appear adequate for the winter season. Winter wheat condition reported as mostly good. Cattle condition is currently reported as mostly good.

TEXAS: Precipitation mostly ranged from trace amounts to upwards of 4 inches. Isolated areas in the Edwards Plateau, South Central Texas, the Upper Coast, East Texas and the Blacklands received from 4 inches to upwards of 8 inches. Very isolated areas of East Texas ranged from 10 to upwards of 15 inches of rain. Cotton harvest virtually complete throughout the State. Small grains seeding was nearing completion, however, development was behind normal in some areas. Row crop producers in the Lower Valley, the Upper Coast, South Central Texas, and South Texas prepared fields for planting. Livestock condition continued fair to good. Supplemental feeding continued Statewide.

UTAH: This report for Utah is for the entire month of January 2021. Topsoil moisture 14% very short, 41% short, 44% adequate, 1% surplus. Subsoil moisture 19% very short, 29% short, 51% adequate, 1% surplus. Pasture and range

condition 23% very poor, 37% poor, 28% fair, 11% good, 1% surplus. Winter wheat condition 5% very poor, 23% poor, 57% fair, 15% good. Hay and roughage supplies 6% very short, 20% short, 70% adequate, 4% surplus. Stock water supplies 10% very short, 31% short, 58% adequate, 1% surplus. Cattle and calves condition 1% very poor, 4% poor, 29% fair, 64% good, 2% excellent. Sheep and lambs condition 4% poor, 31% fair, 63% good, 2% excellent. Livestock receiving supplemental feed for cattle 82%. Livestock receiving supplemental feed for sheep 65%. Cows calved 8%. Ewes lambed-farm flock 5%. Ewes lambed-range flock 2%. Mild temperatures along with isolated snow storms occurred throughout the State for the month of January. Beaver County reports livestock are doing well, but it has been a mild winter with low snowpack.

VIRGINIA: For the week ending January 24 - Topsoil moisture 2% short, 77% adequate and 21% surplus. Subsoil moisture 2% short, 79% adequate and 19% surplus. Winter wheat condition 1% very poor, 9% poor, 37% fair, 49% good and 4% excellent. Barley condition 1% very poor, 3% poor, 41% fair, 53% good, 2% excellent. Livestock condition 1% very poor, 5% poor, 34% fair, 49% good, 11% excellent. Pasture and Range condition 4% very poor, 22% poor, 44% fair, 26% good and 4% excellent. Hay supplies 1% very short, 13% short, 76% adequate and 10% surplus. Percent of feed obtained from pastures 12%. Virginia experienced normal precipitation and temperatures in January, allowing farmers to finish grain crop harvesting. Hay and roughage supplies are mostly adequate, but higher than the previous year. Other farming activities for the beginning of the year included preparing for winter grazing and 2021 vegetable crop preparations; tobacco farmers are finishing the stripping of dark fired burley and Maryland type tobaccos.

WASHINGTON: The Statewide temperatures in Washington for the month of January were above normal to slightly below normal throughout the State. In western Washington, crops were doing fine. In Jefferson County, heavy flooding from rain continued in some lower agricultural valleys. In San Juan County, livestock were on retained feed. Some farms were pruning berries and kiwifruit vines. In Snohomish County, there was virtually no fieldwork due to the saturated soils. There was no major flooding, but just enough rain to keep places very wet. Cane tying and blueberry pruning was taking place where possible. Greenhouses were starting up with early cool crops, along with some tomatoes. In central Washington, there was little activity in the fields and orchards as a dusting of snow covered the ground in most areas. Tree and vine pruning and training occurred. Pruning focused on the more cold-tolerant apples and pears. No damage was reported for the perennial crops. Northeast Washington had snow followed by rain and high winds. The wind created damage to some tree crops, particularly in forests. The rain and wind melted snow on low elevation fields. High elevation snow pack was good. In east central Washington, crop conditions were normal and calving was starting. The winter had been mild with good moisture, but unseasonably warm conditions. These conditions were good for winter wheat growth and development. In southeast Washington, winter wheat was up and growing and soil moisture was good. Seeded crops remained stable due to cold temperatures.

WEST VIRGINIA: For the week ending January 24, Topsoil moisture 11% short, 79% adequate, and 10% surplus. Subsoil moisture 9% short, 85% adequate, and 6% surplus. Hay and roughage supplies 2% very short, 10% short, 81% adequate, and 7% surplus. Feed grain supplies 6% short, 89% adequate, and 5% surplus. Winter wheat condition 47% fair, 52% good, and 1% excellent. Cattle and calves condition 2% poor, 31% fair, 63% good, and 4% excellent. Sheep and lambs condition 1% poor, 12% fair, 84% good, and 3% excellent. Weather conditions for the month have been a mix of warmer and cooler temperatures with periods of light rain and some snow. Farming activities for the month included planning for the new crop year, feeding hay and grain to livestock, and repairing roads.

WISCONSIN: January temperatures at the five major weather stations were all above normal. They ranged from 5.1 degrees above normal in Madison to 8.2 degrees above normal in Green Bay. Average highs ranged from 28.4 degrees in Eau Claire to 34.0 degrees in Milwaukee, while average lows ranged from 15.5 degrees in Eau Claire to 23.8 degrees in Milwaukee. Precipitation ranged from 0.58 inch in Madison to 1.01 inches in Milwaukee. Milwaukee received the most snowfall out of the major cities with 8.3 inches. Green Bay received the least, with 3.5 inches of snow for the month. Variable snow coverage remains on Wisconsin farm fields due to warmer and drier than normal conditions. Concerns were expressed in some areas regarding the lack of snow cover to protect topsoil from wind and overwintering crops from frost damage. The warmer temperatures and limited precipitation eased livestock care and daily maintenance routines. Surface application of solid manure was completed where conditions permitted.

WYOMING: This report for Wyoming is for the entire month of January 2021. Topsoil moisture 47% very short, 43% short, 10% adequate. Subsoil moisture 56% very short, 32% short, 12% adequate. Winter wheat condition 4% very poor, 15% poor, 61% fair, 16% good, 4% excellent. Calving progress 5% cows calved. Sheep and lamb progress 3% ewes lambed. Hay and roughage supplies 22% very short, 22% short, 55% adequate, 1% surplus. Livestock condition 6% poor, 29% fair, 64% good, 1% excellent. Stock water supplies 18% very short, 20% short, 61% adequate, 1% surplus. Pasture and range condition 33% very poor, 27% poor, 30% fair, 9% good, 1% excellent. January brought little change to Wyoming's drought conditions. Precipitation for January was limited. There were multiple reports of dry, windy conditions and little snowfall and comments indicated concern for the coming year. Reports out of Albany County noted calving and lambing is just starting. According to the United States Drought Monitor for January 21, 2021, the amount of land rated as abnormally dry was 6.9 percent, down from 8.3 percent last month. Moderate drought was present across 34.5 percent of the State, an increase from 33.2 percent last month. Severe drought covered 28.6 percent of the State, compared to 28.4 percent last month. Extreme drought conditions covered 25.4 percent of the State and exceptional drought conditions covered 0.4 percent, unchanged from last month's percentages.

International Weather and Crop Summary

January 17-23, 2021

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Unsettled weather prevailed across much of the continent, though temperatures moderated from the recent cold spell.

MIDDLE EAST: Widespread rain and mountain snow lingered across western and central portions of the region.

NORTHWESTERN AFRICA: Additional light showers maintained good moisture supplies for vegetative winter grains.

SOUTHEAST ASIA: Downpours returned to the northern Philippines, maintaining ample water for rice but causing excessively wet conditions for other crops.

AUSTRALIA: Warm, showery weather continued to favor summer crop development.

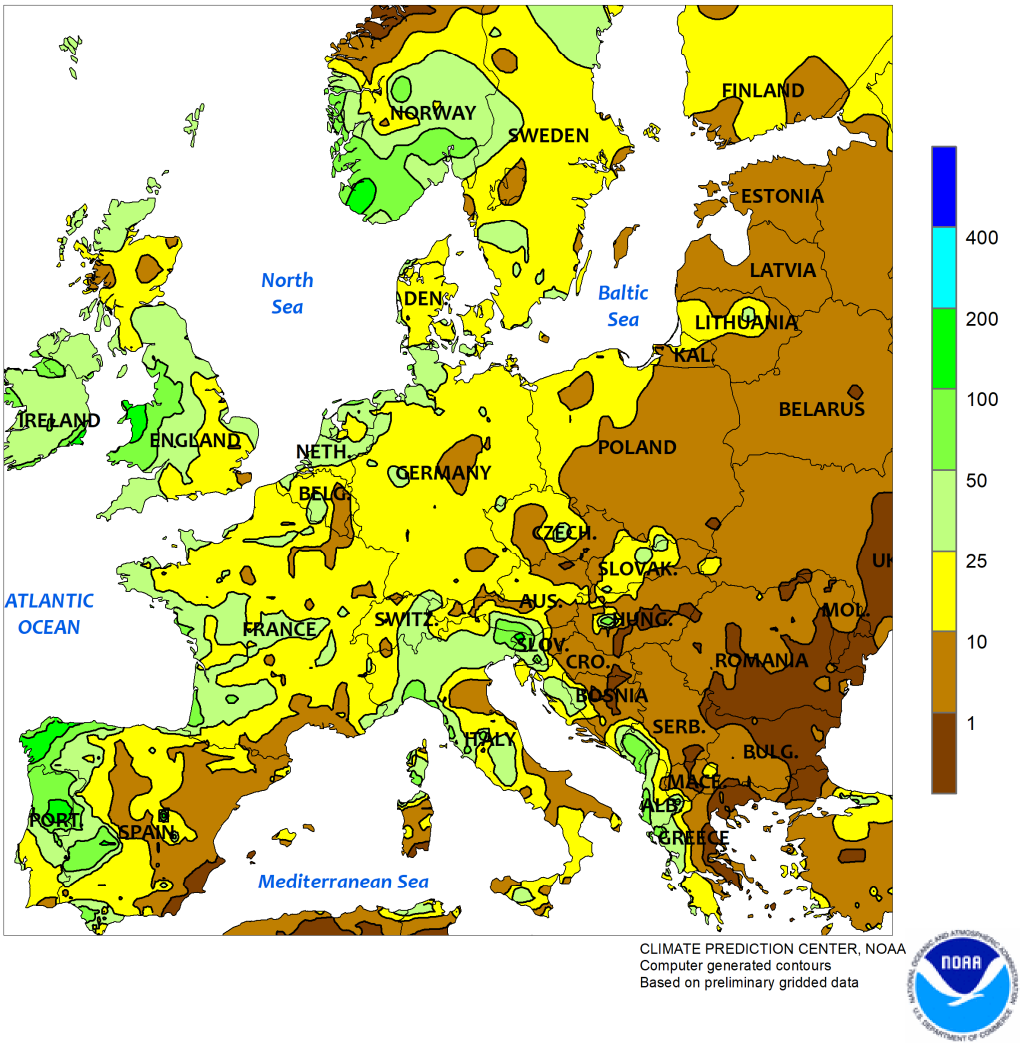
SOUTH AFRICA: Warm, sunny weather spurred growth of corn and other summer crops.

ARGENTINA: Sunny, seasonably warm conditions promoted development of corn and soybeans after last week's beneficial rain.

BRAZIL: Widespread, locally heavy rain provided highly beneficial moisture for immature soybeans and first-crop corn.

For additional information contact: mark.brusberg@usda.gov

EUROPE
Total Precipitation (mm)
January 17 - 23, 2021



EUROPE

Unsettled weather prevailed, with above-normal temperatures replacing the recent cold spell. A series of disturbances continued to bring rain and snow (10-50 mm liquid equivalent, locally more in orographically favored locations) to most of northern, central, and western Europe. Consequently, moisture supplies remained favorable for semi-dormant to vegetative winter grains in Spain and Italy as well as dormant winter crops across the remainder of the continent. However, precipitation bypassed the lower Danube River Valley, providing a welcome respite from recent excessive wetness (30-day precipitation totaling 200 to 500 percent of normal). After last week's cold spell, temperatures during the 7-day monitoring period averaged 2 to 4°C above normal, save for lingering chilly weather (up to 5°C below normal) in northeastern Europe. The warmth melted much of the snowpack over central and eastern portions of the continent, although a shallow snow cover lingered from southeastern Germany into the Baltic States.

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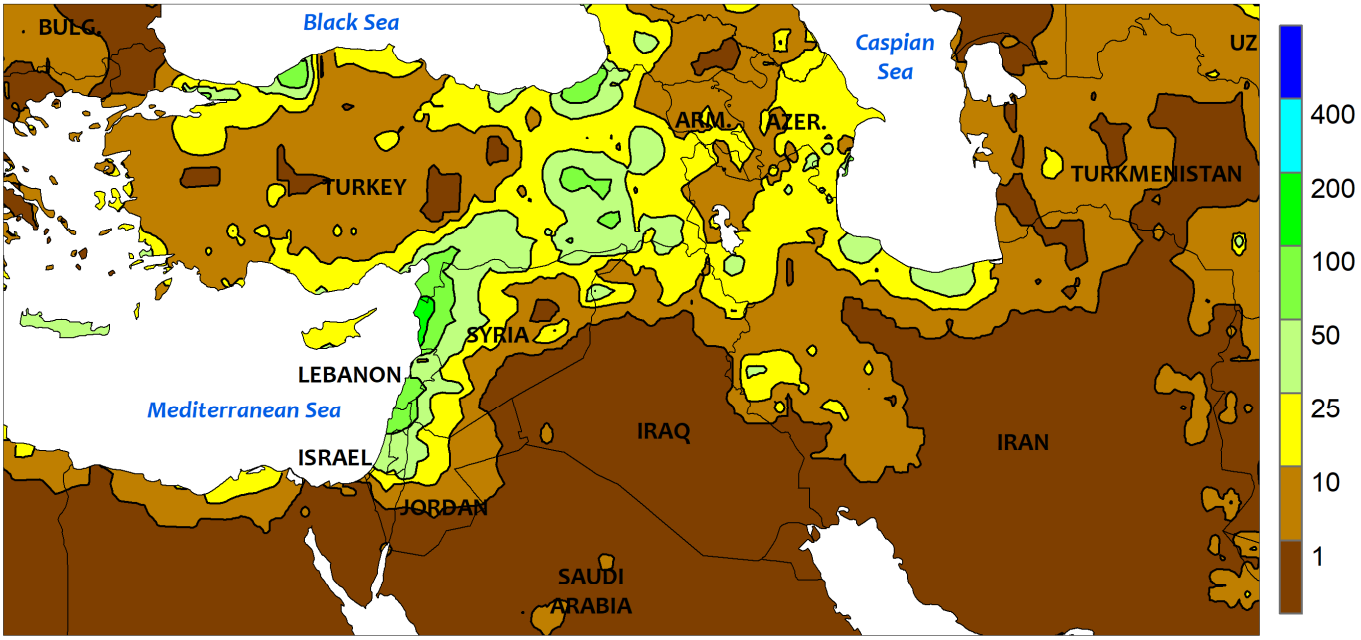
MIDDLE EAST
Total Precipitation (mm)
January 17 - 23, 2021



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

MIDDLE EAST

Early-week precipitation gave way to drier weather by week's end. A departing storm system was responsible for widespread albeit highly variable rain and high-elevation snow from Turkey and the eastern Mediterranean Coast into northwestern Iran. Turkey received 1 to 5 mm on the Anatolian Plateau but 50 mm or more from the GAP Region into the Armenian Highlands. Long-term deficits lingered, however, with precipitation since September 1 averaging 65 percent of normal on the Anatolian Plateau, the third driest of the past 30 years. Moderate to heavy rain and mountain snow likewise extended from the eastern Mediterranean Coast (25-165 mm) into northwestern Iran (5-45 mm), sustaining favorable to abundant moisture supplies for dormant (north) to vegetative (south) winter grains. Cold weather settled over Turkey (2-5°C below normal), while milder conditions (up to 2°C above normal) prevailed across the rest of the region.

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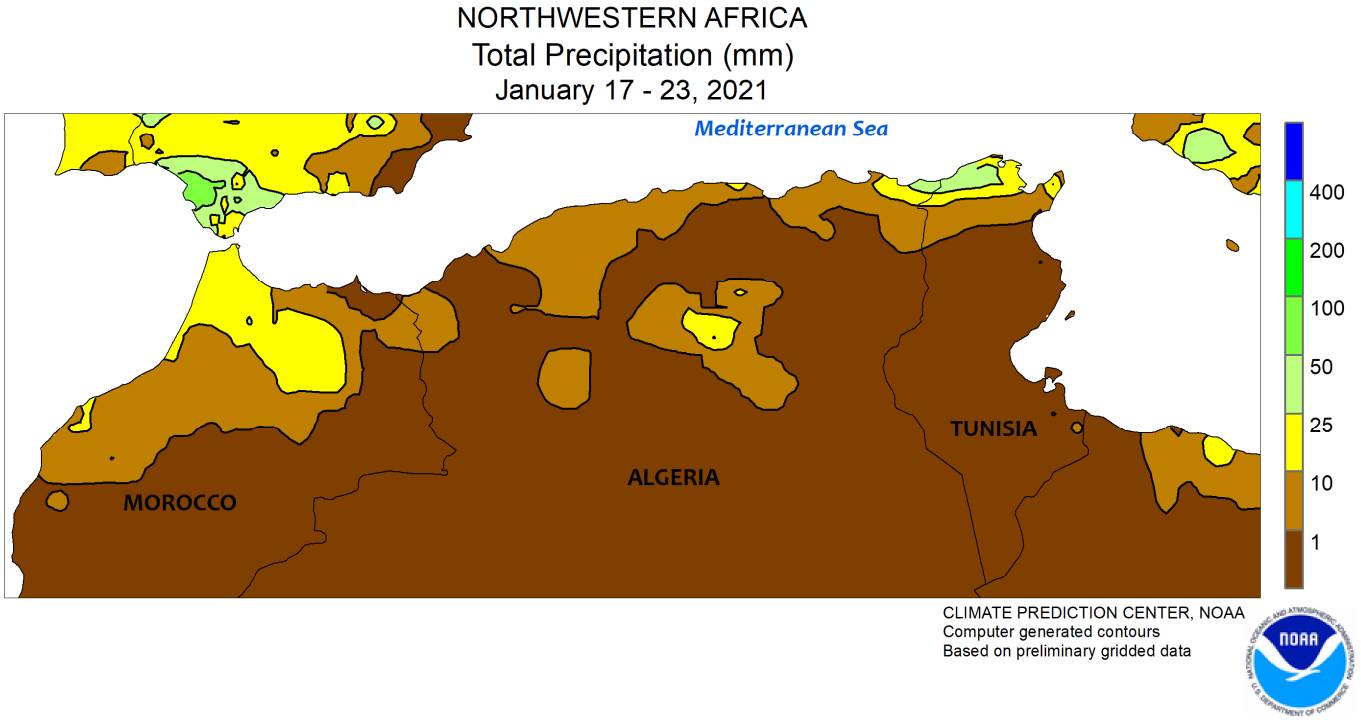

NORTHWESTERN AFRICA

Lingering showers maintained favorable moisture supplies for vegetative winter grains. Rain was lighter than previous weeks (1-20 mm, locally more in northern Morocco) but favorable for vegetative winter grains while also facilitating seasonal fieldwork. Following a severe autumn drought to start the growing campaign in Morocco, most western growing areas have recovered due to a wet December and January. The rest of the region (central Algeria into northern Tunisia) have benefited from timely — at times very heavy — rainfall since the onset of autumn, though Tunisia's inland Steppe Region has trended drier than normal since the beginning of January.

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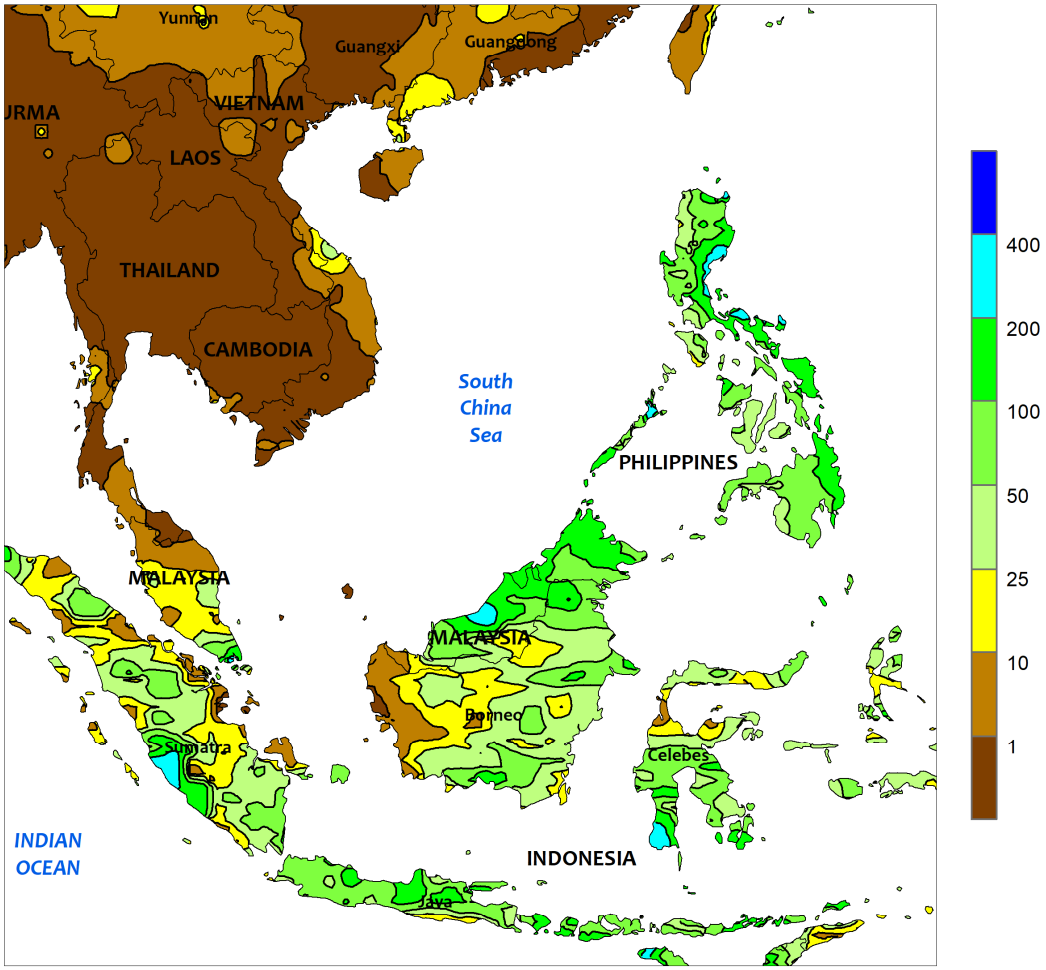
SOUTHEAST ASIA
Total Precipitation (mm)
January 17 - 23, 2021



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

SOUTHEAST ASIA

Widespread showers returned to much of the Philippines, including northern areas that had a brief respite from continual deluges. Most of the country reported rainfall totals well in excess of 25 mm and locally over 150 mm in the aforementioned north. While consistent rainfall is not uncommon during the winter, portions of eastern Luzon have received over three times the normal amount, sustaining ample water for rice but creating excessively wet conditions for other crops. Elsewhere, oil palm in Malaysia and Indonesia continued to benefit from adequate to ample soil moisture despite some recent drier-than-normal weather. Meanwhile in southern Indonesia (Java), wetter-than-normal weather has meant abundant water for rice, maintaining favorable prospects.

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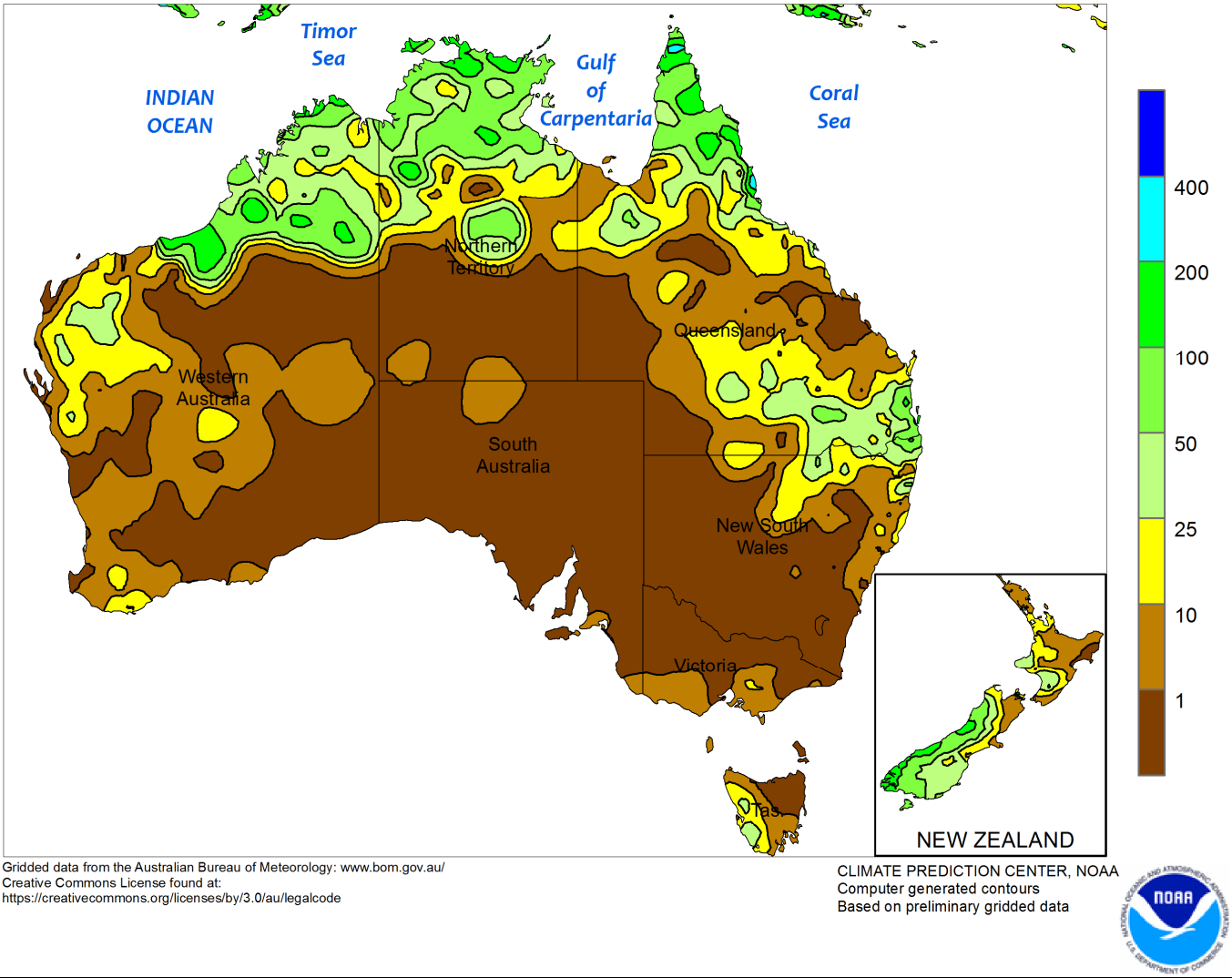
AUSTRALIA
Total Precipitation (mm)
January 17 - 23, 2021



Gridded data from the Australian Bureau of Meteorology: www.bom.gov.au/
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CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

AUSTRALIA

In southern Queensland and northern New South Wales, warm, showery weather continued to aid cotton and sorghum development, further increasing the yield potential of these crops. The rainfall was relatively widespread in major summer crop producing areas, with between 15 and 50 mm falling throughout most of the region. Although temperatures averaged 2 to 3ºC below normal for the week, daily maximum temperatures were generally in the upper 20s and lower 30s (degrees C), favoring crop development.

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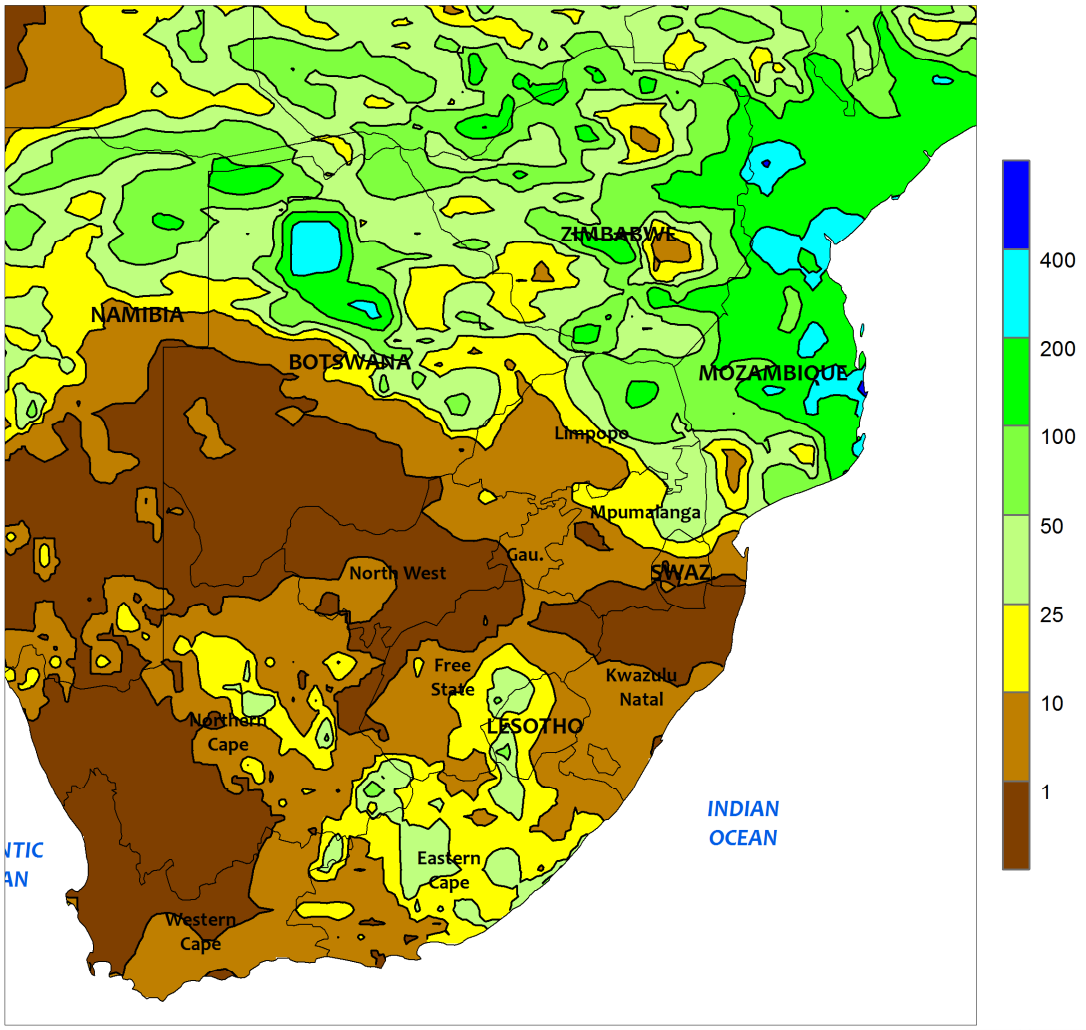
SOUTH AFRICA
Total Precipitation (mm)
January 17 - 23, 2021



SOUTH AFRICA

Warm, sunny weather promoted development of rain-fed summer crops, which have benefited from favorable levels of moisture for most of the season. The majority of the corn belt (North West and Free State to southwestern Mpumalanga) recorded little to no rainfall, with just a few isolated locations receiving more than 5 mm. Similar amounts were reported in rain-fed sugarcane areas of southern KwaZulu-Natal. Weekly temperatures averaged up to 2°C above normal in the aforementioned areas, with daytime highs reaching the upper 30s (degrees C) in some of the traditionally warmer locations of North West, Limpopo, and KwaZulu-Natal. Elsewhere, locally heavy rain (25-100 mm) fell in eastern Limpopo and eastern Mpumalanga, reducing irrigation demands for summer crops that included sugarcane. The rain was generated by the remnants of Tropical Cyclone Eloise, which made landfall in Mozambique on January 23 (additional information will appear in the next edition of the *Weekly Weather and Crop Bulletin*). Meanwhile, light to moderate rain (10-50 mm) fell from the southern edge of the corn belt (southern Free State) southward through Eastern Cape, increasing irrigation reserves in watersheds of the Orange River Valley. Warm, sunny weather (daytime highs reaching the upper 30s) favored rapid development of summer crops in irrigated farming areas of Northern and Western Cape.

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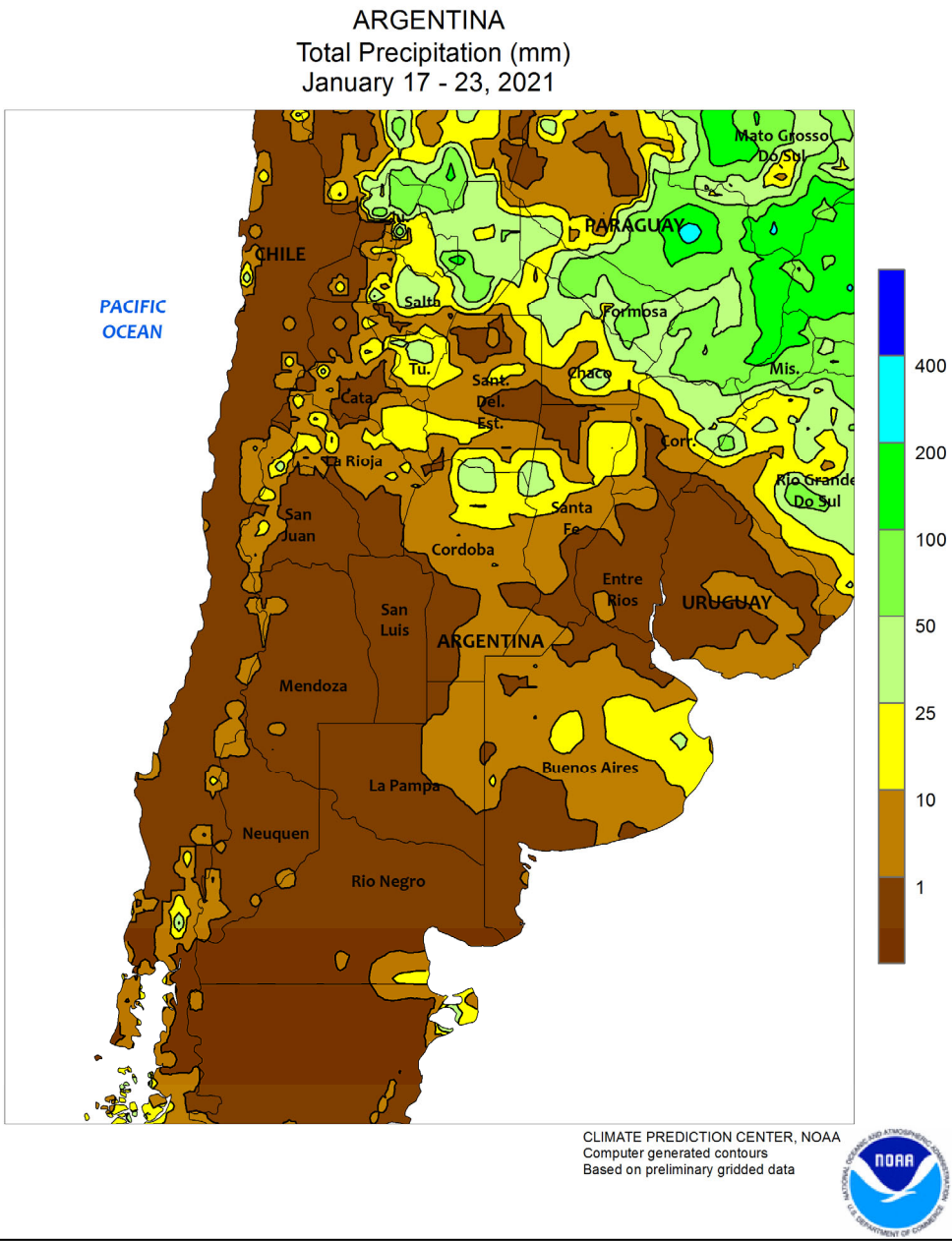

ARGENTINA

Mostly dry, gradually warming weather promoted rapid growth of summer grains and oilseeds in central Argentina, following last week's soaking rainfall. After a final round of light to moderate showers (mostly less than 10 mm) on January 17, dry weather dominated La Pampa, Buenos Aires, and southern agricultural regions of Cordoba, Santa Fe, and Entre Rios. By week's end, daytime highs reaching the middle and upper 30s (degrees C) had covered the entire region. Similar conditions prevailed farther north, although early-week precipitation was more substantial, totaling 10 to 50 mm from Salta and northern Cordoba eastward through Corrientes. In addition, northern temperatures averaged up to 2°C below normal despite also recording high temperatures reaching the upper 30s. According to the government of Argentina, corn and soybeans were 96 and 99 percent planted, respectively, as of January 21, similar to last year's pace for both crops. Cotton planting was reportedly complete as was harvesting of wheat and barley. Earlier-planted corn and soybeans were advancing through reproductive and filling stages of development.

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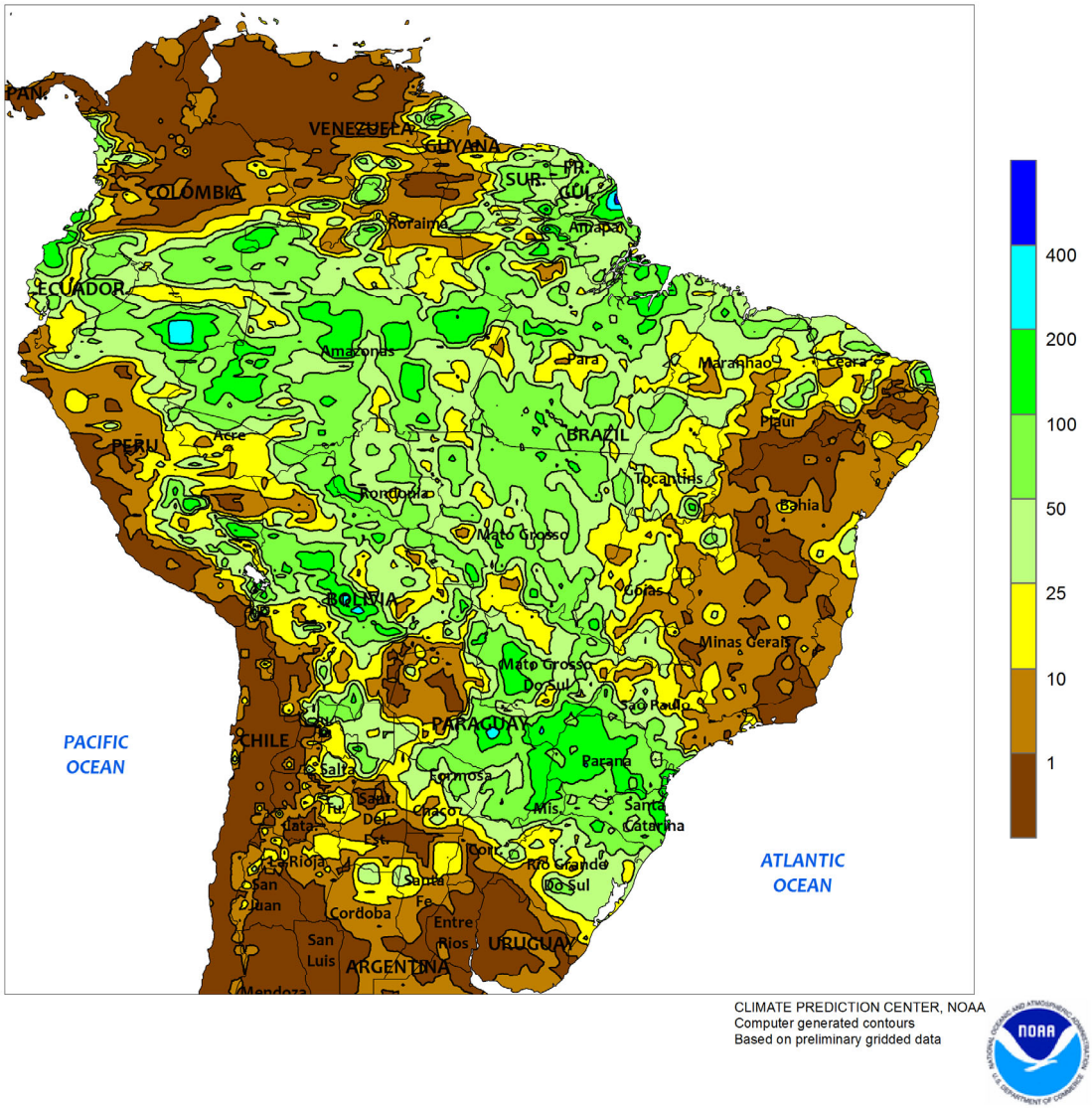
BRAZIL
Total Precipitation (mm)
January 17 - 23, 2021



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

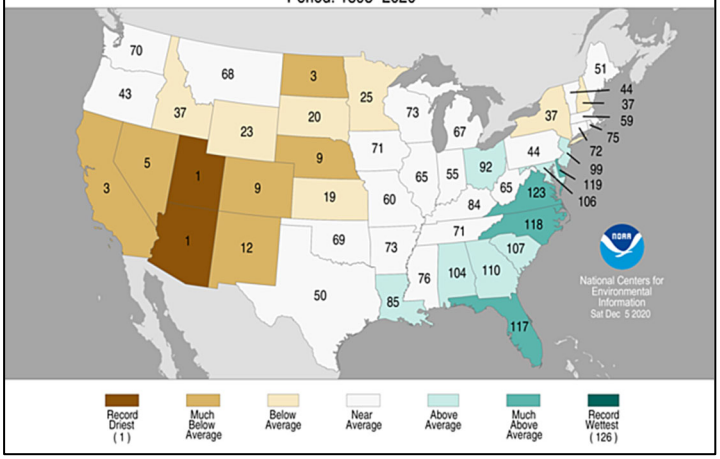
BRAZIL

Locally heavy showers provided timely moisture for immature summer crops throughout much of Brazil. Some of the heaviest rainfall (50-100 mm, locally more) was concentrated over the south (Mato Grosso do Sul through Rio Grande do Sul), portions of which have trended dry for extended periods throughout the season. The moisture was particularly timely in Rio Grande do Sul, where farmers have already reported crop damage from extreme weather events; according to the government, soybeans were 47 percent reproductive to filling on January 21, while the earlier-planted corn crop was already 18 percent harvested and would not have fully benefited from the moisture. In Parana, soybeans and first-crop corn were 91 and 72 percent, respectively, in reproductive and filling stages of development as of January 18. Farther north, moderate to heavy rain (25-100 mm) spread from Mato Grosso and western Goias northeastward through Tocantins and environs, including much of western Bahia. Although late in the season, crops in Mato Grosso could still benefit from the moisture due to this season's planting delays; according to the government, soybean harvesting was off to a slow start as of January 17, with under 1 percent harvested compared to about 5 percent on average. The rain in the aforementioned regions helped to keep temperatures to more seasonable levels, with daytime highs capped in the lower 30s (degrees C). An exception to the favorable wetness was in Minas Gerais and northern Sao Paulo, where unseasonable dryness (mostly below 10 mm) reduced moisture for immature corn, sugarcane, and coffee.

For additional information contact: mark.brusberg@usda.gov

(Continued from page 11)

Figure 12 Statewide Precipitation Ranks
September – November 2020
Period: 1895–2020



December

Mild weather and occasional storms benefited winter wheat across the nation's mid-section, with crop conditions improving across the Great Plains between late November and the end of the year. Despite the mostly favorable December weather, significant soil moisture shortages persisted across parts of the Plains. By December 31, topsoil moisture was rated at least one-half very short to short in several states, including Colorado (77 percent), North Dakota (71 percent), Montana (61 percent), South Dakota (59 percent) and Nebraska (56 percent).

Meanwhile, significant drought persisted from Oregon and California to the central and southern Rockies. By December 29, drought covered 78.6 percent of the 11-state Western region and 49.0 percent of the contiguous U.S., according to the *U.S. Drought Monitor*. A week earlier, U.S. drought coverage had reached a 7-year high, peaking at 49.6 percent. By month's end, the average water equivalency of the high-elevation Sierra Nevada snowpack stood at just over 5 inches, barely one-half of late-December normal and about one-fifth of the typical spring maximum. In contrast, a La Niña-driven storm track primarily affected the Pacific Northwest, delivering heavy precipitation across western Washington.

Although heavy snow bypassed much of the West, occasional December accumulations occurred from the Plains into the Midwest and Northeast. At mid-month, one of the most significant winter storms in several years deposited 1 to 3 feet of snow in parts of the Northeast. About a week later, a storm produced blizzard conditions (on December 23) in the upper Midwest and sparked a rain-to-snow event (on December 24-25) from the Appalachians into the lower Great Lakes region. A sharp but short-lived cold outbreak trailed the wintry weather into the Midwest and East.

However, significant early-winter cold outbreaks were scarce, as December temperatures averaged more than 10°F above normal in parts of North Dakota and eastern Montana. In fact, near- or above-normal temperatures covered the country, except for cooler-than-normal conditions in the southern Atlantic States and parts of the Southwest. Despite a cool December, the warmest year on record wrapped up in numerous Southeastern locations, mainly across Florida, but extending as far north as the mid-Atlantic. In addition, several communities in Virginia, including Lynchburg and Roanoke, as well as some places in neighboring states, completed a record-wet year. Southeastern wetness hampered late-season harvest efforts for crops such as cotton and soybeans.

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