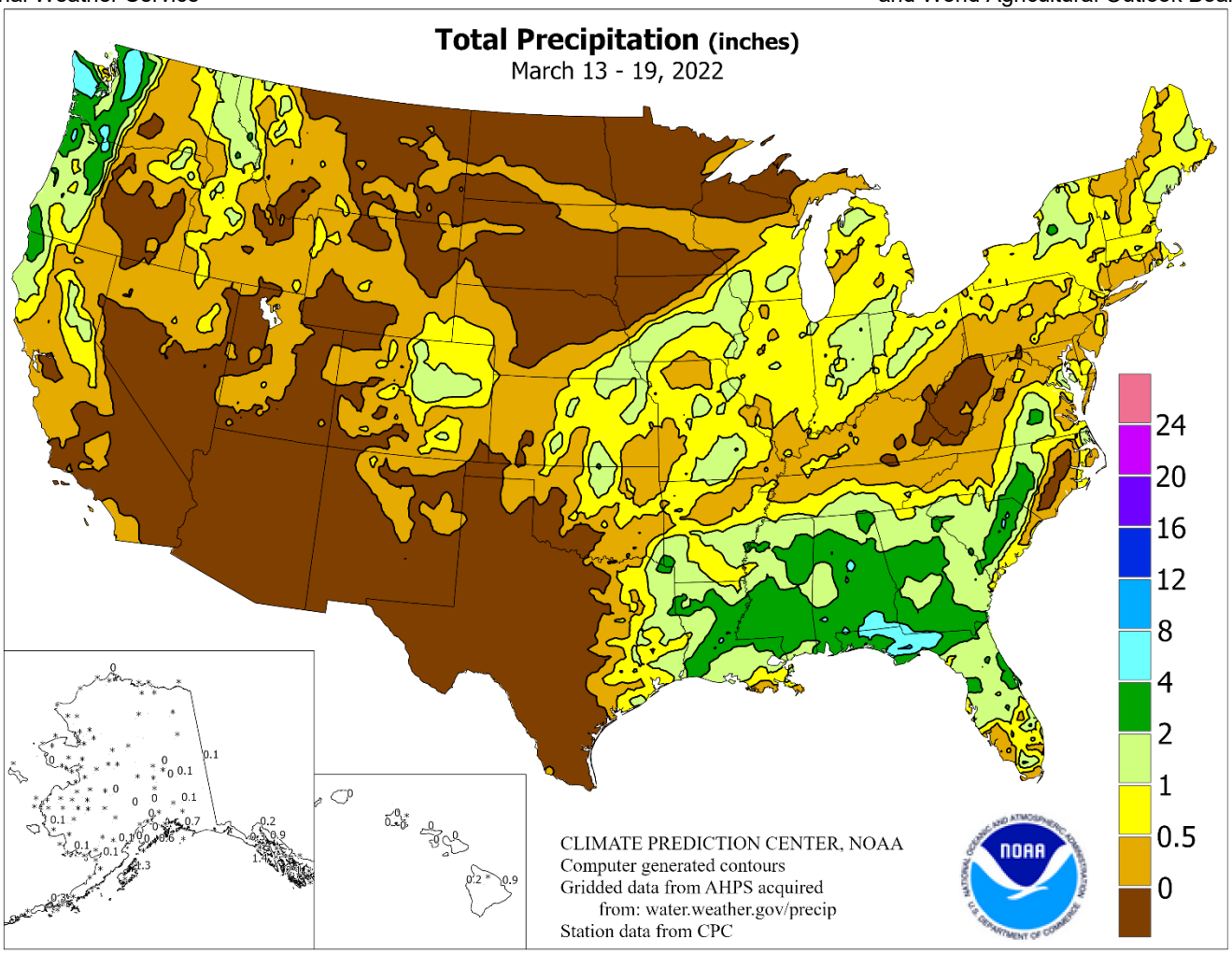
Volume 109, No. 12 www.usda.gov/oce/weather-drought-monitor March 22, 2022

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



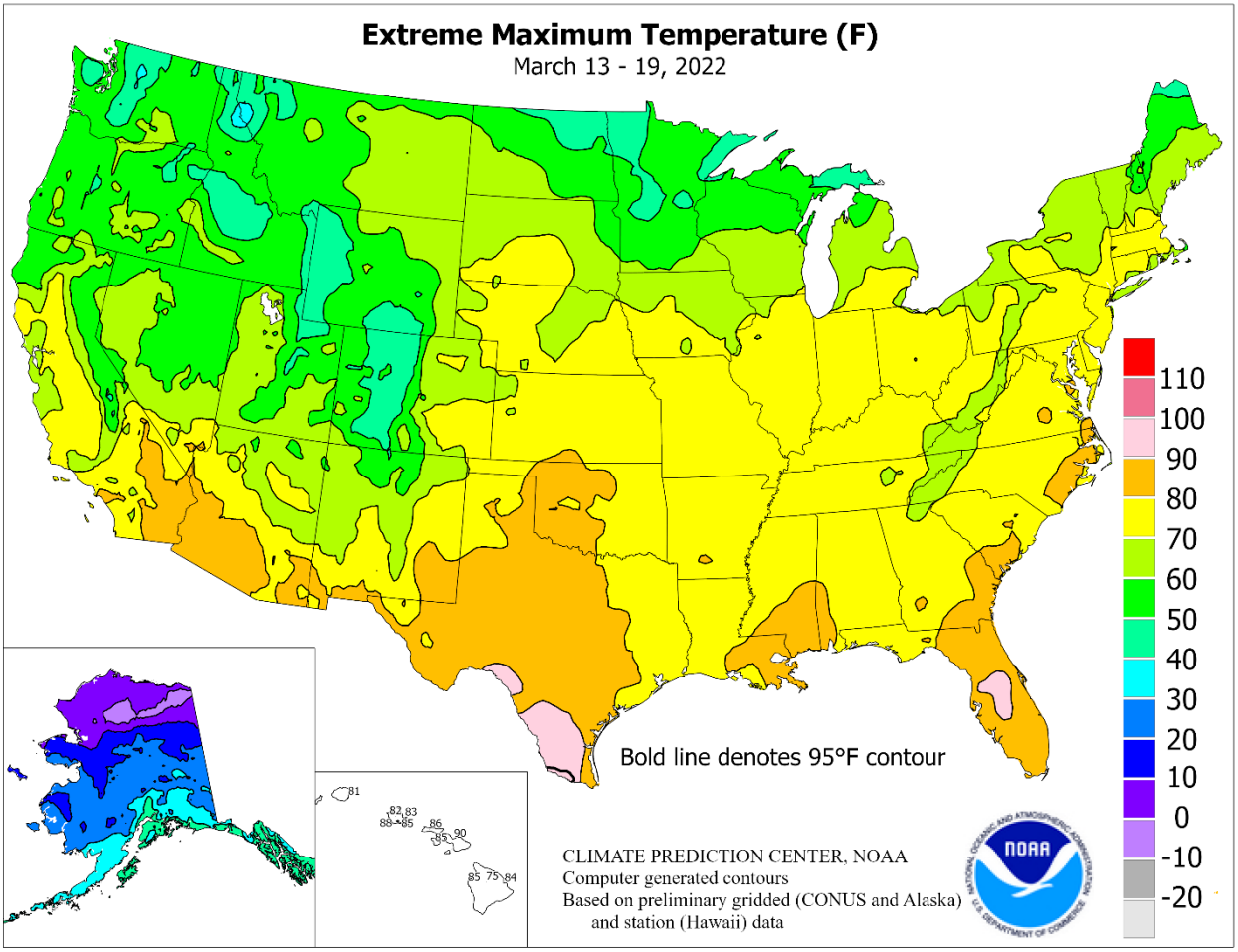
HIGHLIGHTS
March 13 – 19, 2022

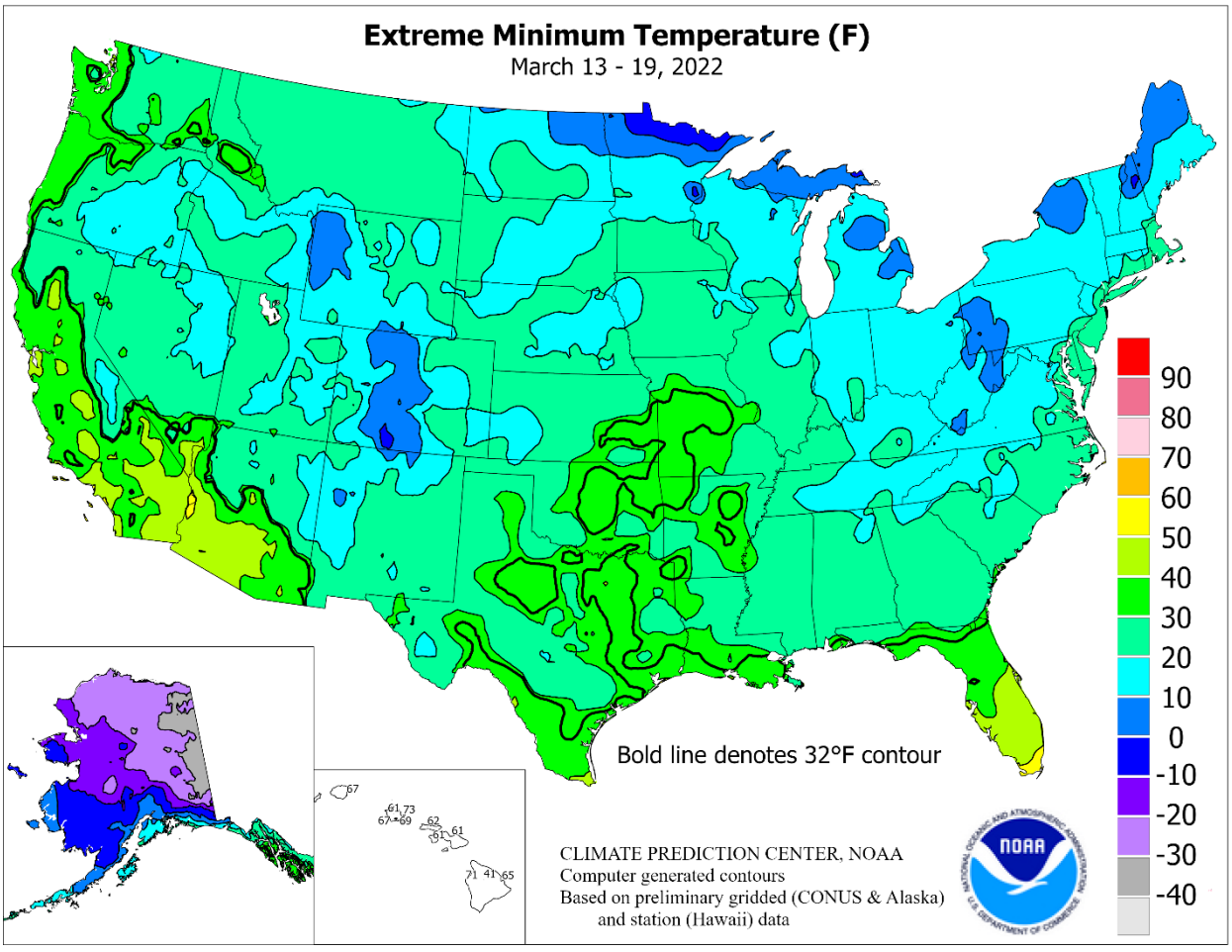
Highlights provided by USDA/WAOB

Cold, mostly dry weather yielded to mild, unsettled conditions, starting in the **Pacific Northwest**. As the week progressed, a pair of storms delivered widespread precipitation, benefiting some drought-stressed rangeland, pastures, and winter grains. The leading system traversed the **Southeast** around the middle of the week, while the trailing storm produced showers and thunderstorms across the **South** and a separate area of precipitation from the **central Plains into the Midwest**. Meanwhile, some rain and snow fell in the **western U.S.**, although significant

(Continued on page 3)

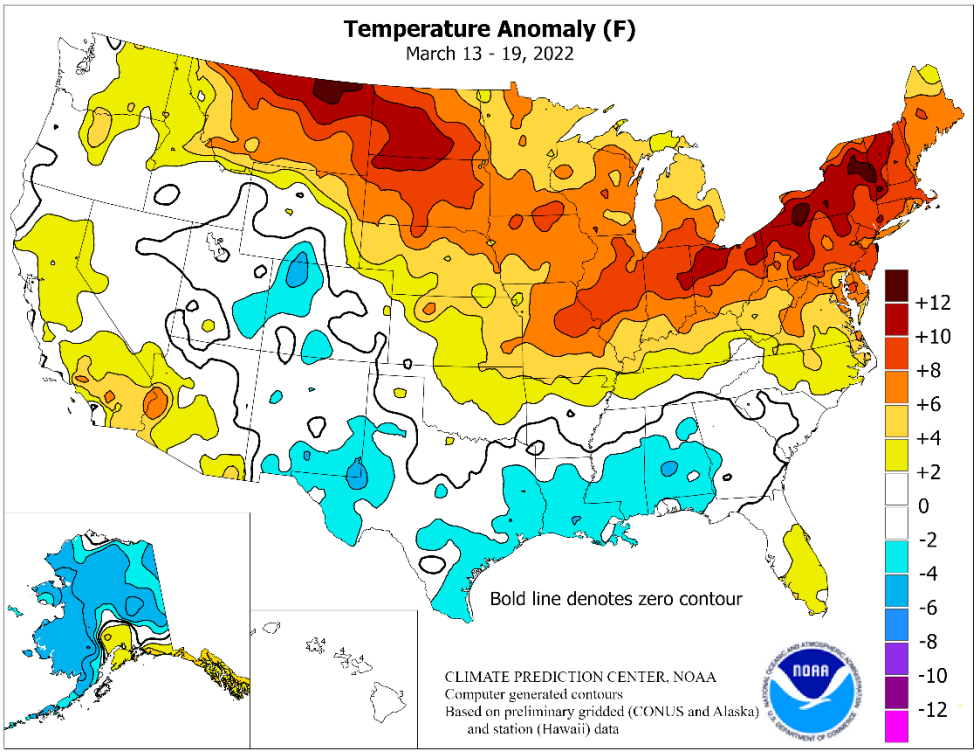
Contents


Extreme Maximum Temperature (F)
March 13 - 19, 2022
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (F)
March 13 - 19, 2022
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA

(Continued from front cover)

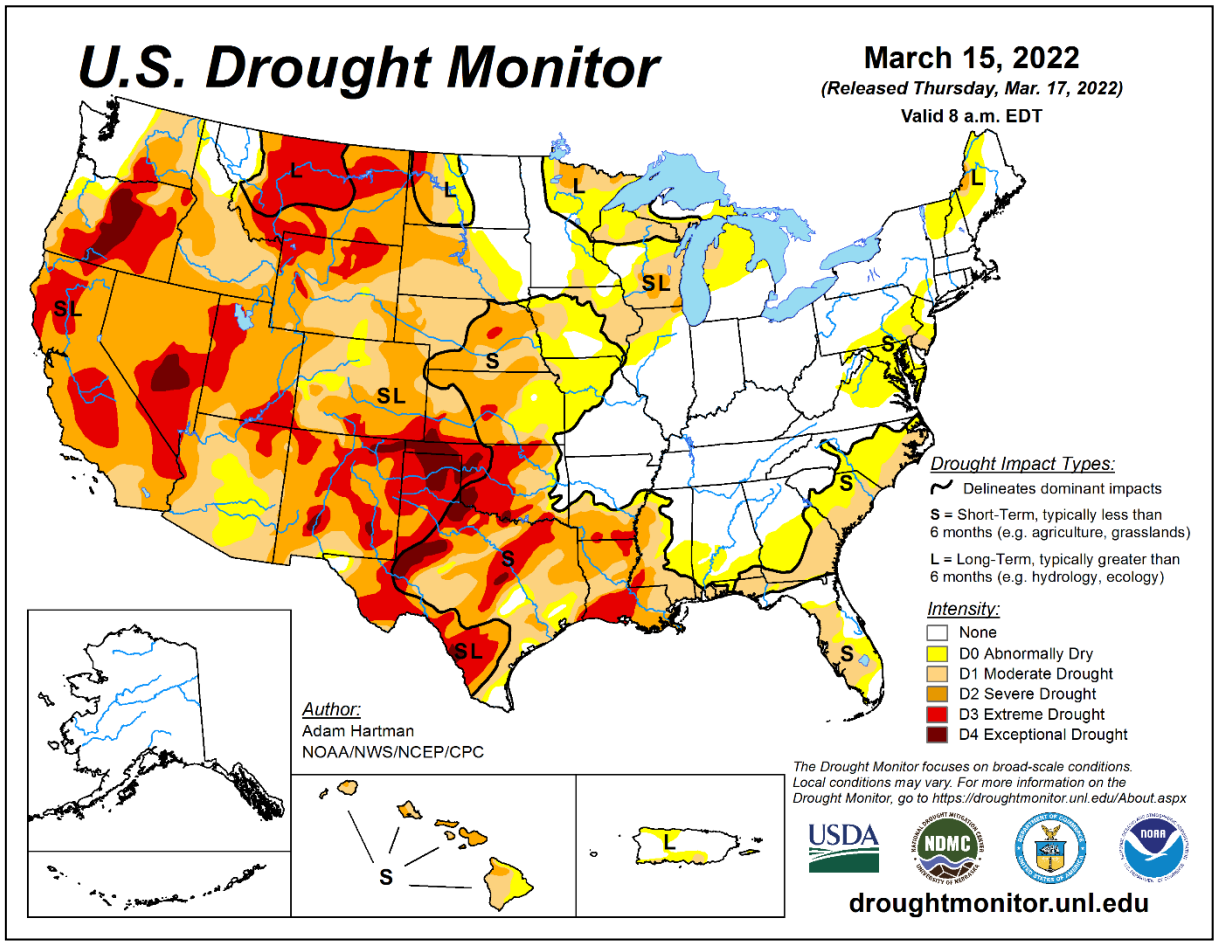
amounts were generally limited to the **central Rockies** and the **Northwest**. In fact, little or no precipitation fell from **southern California into the Southwest**. Elsewhere, mostly dry weather also persisted across the **north-central U.S.** and the **southern Plains**. In the latter region, mid- to late-week wildfires flared amid warmth, wind, and low humidity levels, fueled by ample freeze- and drought-cured vegetation. Within days, the Eastland Complex had destroyed dozens of homes in **Carbon, TX**, and had scorched more than 54,000 acres of vegetation in or near **Eastland County**. Following the previous week's cold spell, temperatures averaged at least 10°F above normal across large sections of the **northern Plains**, as well as an area extending from the **middle Mississippi Valley into parts of the Northeast**. Near- or above-normal temperatures covered the **southern Atlantic States** and much of the **West**. However, cooler-than-normal conditions lingered in a few areas, including the **central and southern Rockies** and parts of the **Deep South**.

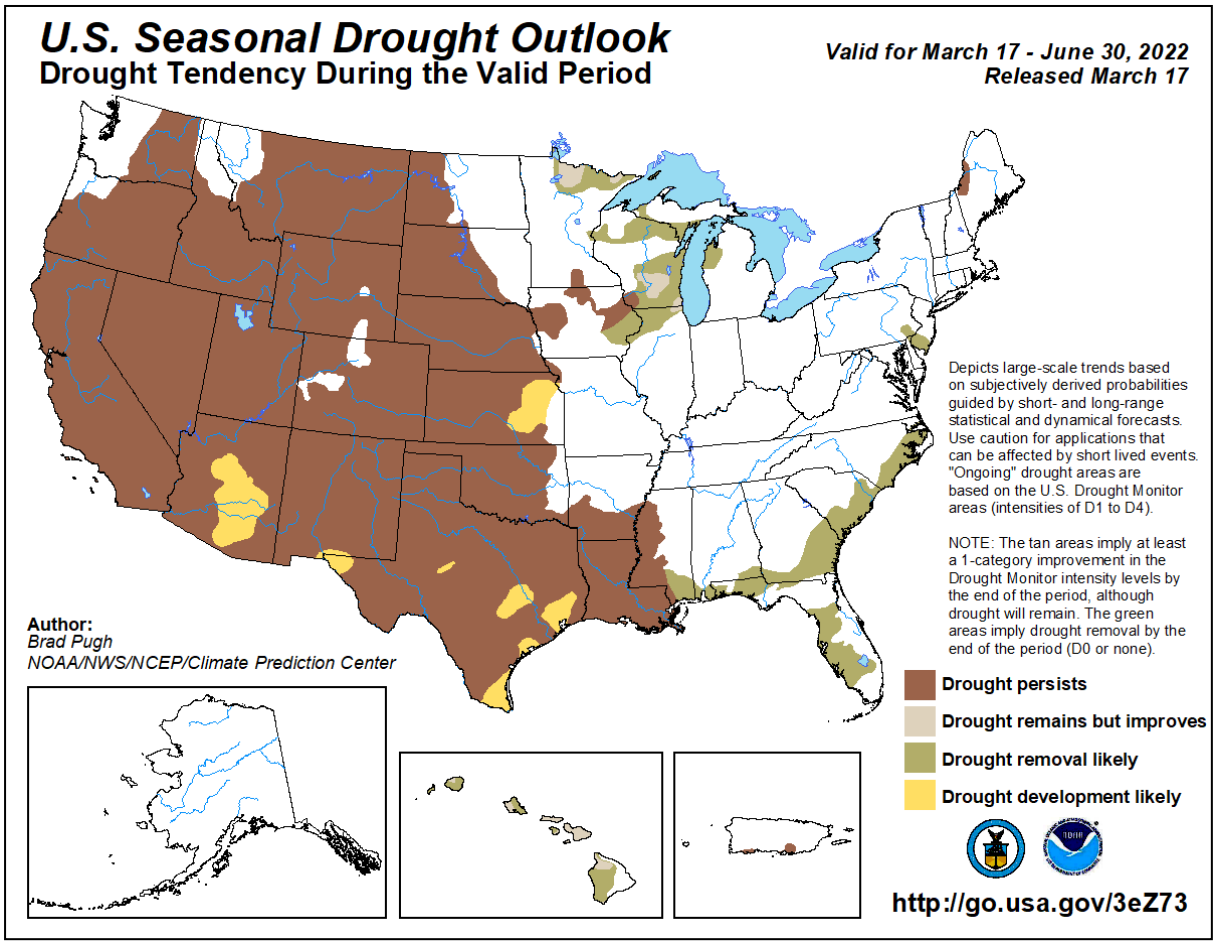


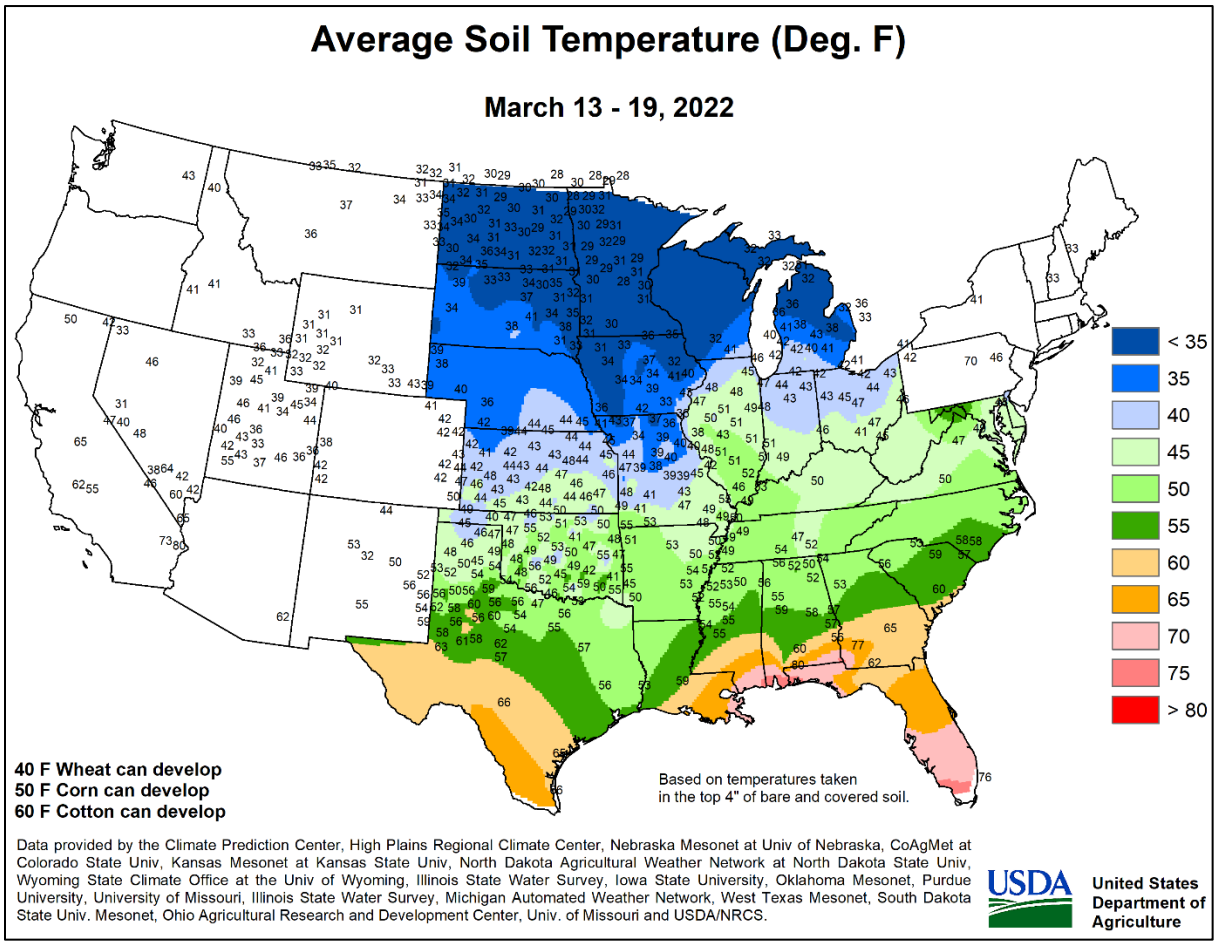
As the week began, effects of a sharp cold snap lingered across the **southern and eastern U.S.** Indeed, March 13 was the coldest morning of the outbreak in much of the **Southeast**. Daily-record low temperatures for the 13th were set or tied in numerous locations, including **Augusta, GA** (19°F); **Macon, GA** (22°F); **Mobile, AL** (28°F); **Baton Rouge, LA** (28°F); and **Jacksonville, FL** (30°F). For **Jacksonville**, it was the lowest reading since January 30, when the temperature dipped to 22°F. Soon, warmth returned along the **Pacific Coast**. Daily record-tying highs in **California** included 68°F (on March 14) in **Eureka** and 84°F (on March 16) in **Santa Barbara**. During the second half of the week, warmth returned across much of the remainder of the country. March 17 featured daily-record highs in locations such as **McAllen, TX** (97°F), and **Dayton, OH** (74°F). **Hartford, CT**, logged a daily-record high (76°F) on March 18. Elsewhere on the 18th, **Leesburg, FL**, collected a daily-record high of 89°F, just 5 days after posting a daily-record low of 36°F.

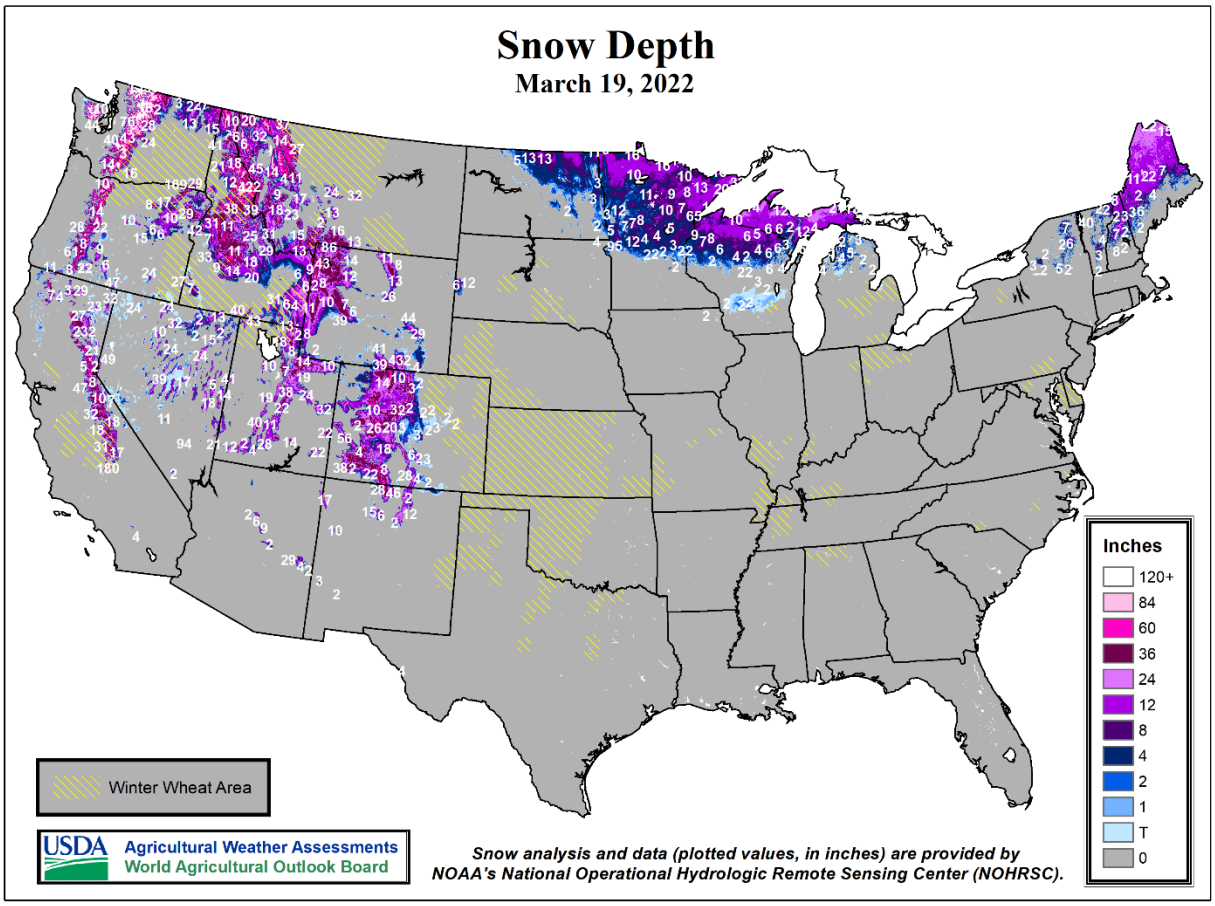
Early-week precipitation was heaviest across the **Pacific Northwest**, where **Quillayute, WA**, netted a daily-record rainfall (2.09 inches) for March 14. **Quillayute** reported measurable rain each day from March 11-20, totaling 7.23 inches. In contrast, negligible precipitation has fallen in 2022 from **California to the southern Plains**. Through March 20, year-to-date precipitation in **California** totaled 0.73 inch (7 percent of normal) at **San Francisco Airport**; 0.32 inch (4 percent) in **Sacramento**; 0.24 inch (4 percent) in **Fresno**; 0.15 inch (2 percent) in **Stockton**; 0.11 inch (2 percent) in **San Jose**; and 0.08 inch (1 percent) in **Modesto**. In **northern Texas**, **Dalhart** reported a January 1 – March 20 precipitation total of 0.07 inch (5 percent of normal). As a pair of storms affected the **South**, **Tuscaloosa, AL**, received a March 15-18 rainfall total of 1.99 inches—aided by a daily-record sum (1.45 inches) on the 18th. **Waterloo, IA**, also netted a daily-record sum (1.10 inches) on March 18. At week's end, precipitation gradually ended along the **East Coast**. However, lingering storminess on March 19 resulted in a daily-record rainfall (2.60 inches) on **Saint Simons Island, GA**, and 4.0 inches of snow (not a record for the date) in **Caribou, ME**. **Caribou's** snow depth peaked for the winter at 23 inches on February 9 and March 13.

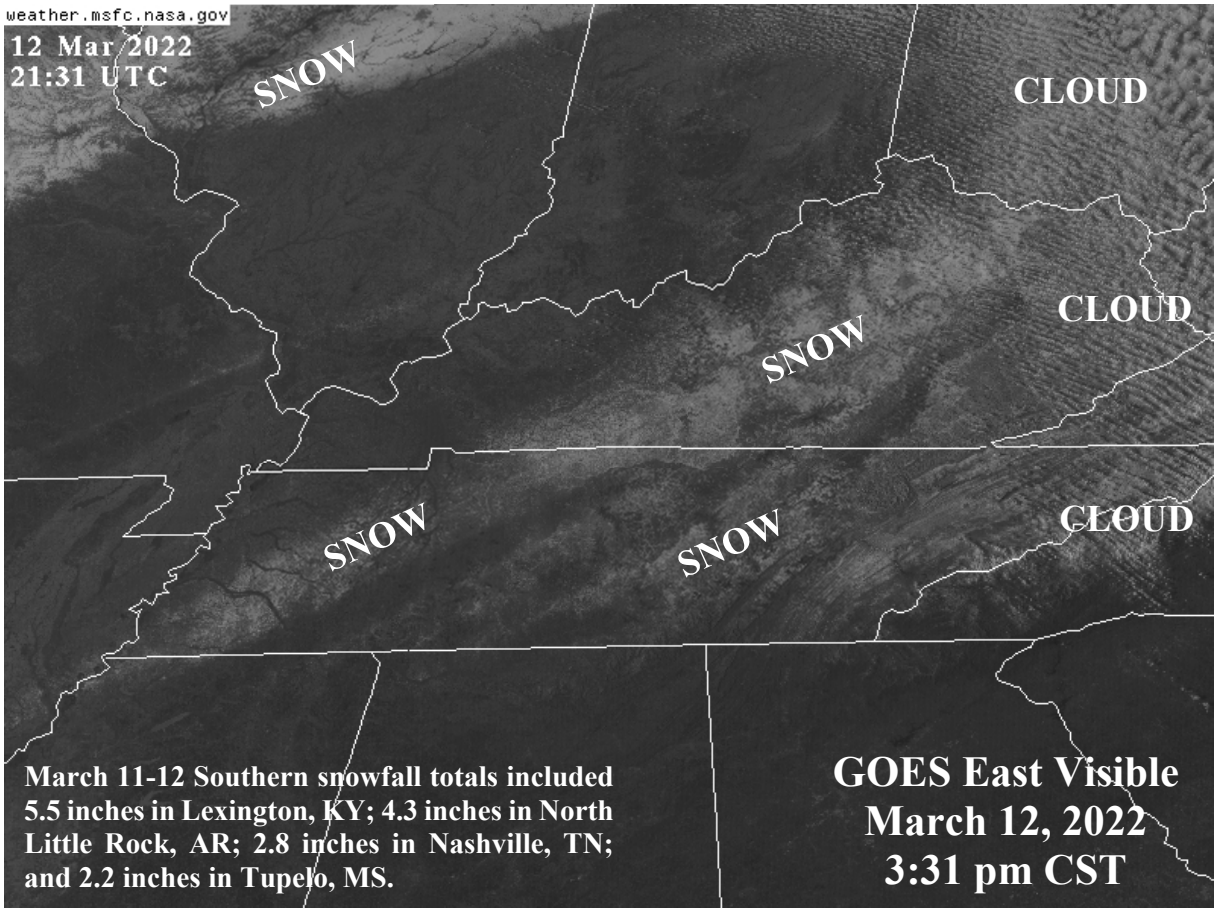
Much of **Alaska** experienced the return of colder, drier weather, although above-normal temperatures continued across the **state's southern and northern tiers**. In **Fairbanks**, the temperature plunged as low as -25°F (on March 14), helping to keep the snow depth steady at 33 inches throughout the week. **King Salmon** (-10°F on March 17) reported its first sub-zero reading since February 9. In **Anchorage**, however, the temperature jumped to 47°F on March 19, setting a record high for the date. Meanwhile in **southeastern Alaska**, **Ketchikan** noted measurable precipitation each day during the week, totaling 5.76 inches. Elsewhere, **Juneau** received 3.4 inches of snow on the 14th, followed by maxima of 40°F or greater each day starting March 15. Farther south, **Hawaii's** warm, mostly dry weather regime persisted. On the 16th, **Kahului, Maui**, topped the 90-degree mark in March for only the second time on record, with both occurring this year—92 and 91°F on March 10 and 16, respectively. **Honolulu, Oahu**, notched a daily record-tying high of 85°F on March 18. Meanwhile, March 1-19 rainfall at the state's major airport observation sites ranged from a trace (1.55 inches below normal) in **Honolulu** to 1.70 inches (21 percent of normal) in **Hilo**, on the **Big Island**.

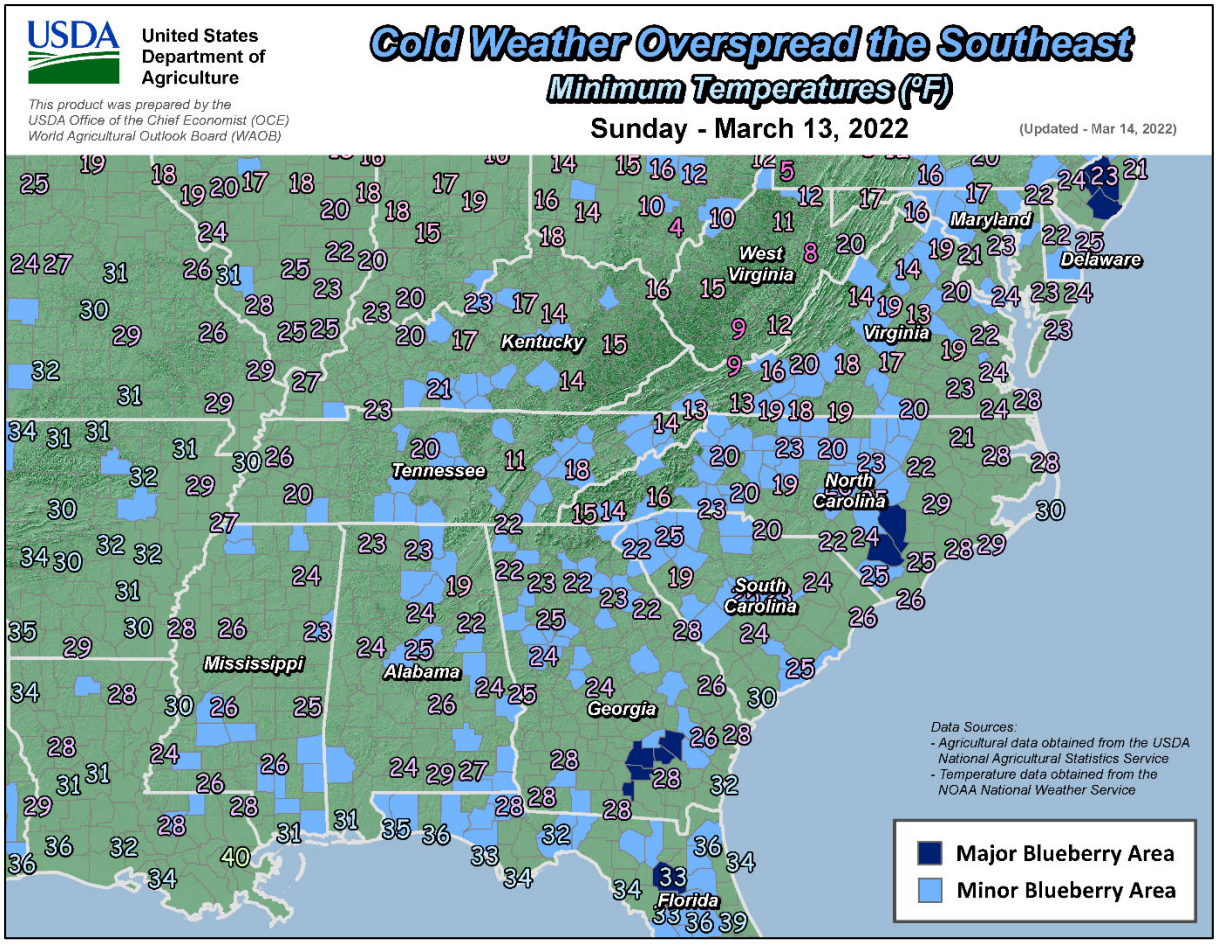

U.S. Drought Monitor
March 15, 2022
(Released Thursday, Mar. 17, 2022)
Valid 8 a.m. EDT
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Adam Hartman
NOAA/NWS/NCEP/CPC
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
USDA
NDMC
droughtmonitor.unl.edu


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for March 17 - June 30, 2022
Released March 17
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Author:
Brad Pugh
NOAA/NWS/NCEP/Climate Prediction Center
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/3eZ73


Average Soil Temperature (Deg. F)
March 13 - 19, 2022
< 35
35
40
45
50
55
60
65
70
75
> 80
40 F Wheat can develop
50 F Corn can develop
60 F Cotton can develop
Based on temperatures taken
in the top 4" of bare and covered soil.
Data provided by the Climate Prediction Center, High Plains Regional Climate Center, Nebraska Mesonet at Univ of Nebraska, CoAgMet at Colorado State Univ, Kansas Mesonet at Kansas State Univ, North Dakota Agricultural Weather Network at North Dakota State Univ, Wyoming State Climate Office at the Univ of Wyoming, Illinois State Water Survey, Iowa State University, Oklahoma Mesonet, Purdue University, University of Missouri, Illinois State Water Survey, Michigan Automated Weather Network, West Texas Mesonet, South Dakota State Univ. Mesonet, Ohio Agricultural Research and Development Center, Univ. of Missouri and USDA/NRCS.
USDA
United States Department of Agriculture


Snow Depth
March 19, 2022
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).


weather.msfc.nasa.gov
12 Mar 2022
21:31 UTC
SNOW
CLOUD
SNOW
CLOUD
SNOW
SNOW
CLOUD
March 11-12 Southern snowfall totals included 5.5 inches in Lexington, KY; 4.3 inches in North Little Rock, AR; 2.8 inches in Nashville, TN; and 2.2 inches in Tupelo, MS.
GOES East Visible
March 12, 2022
3:31 pm CST


USDA
United States Department of Agriculture
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)
Cold Weather Overspread the Southeast
Minimum Temperatures (°F)
Sunday - March 13, 2022
(Updated - Mar 14, 2022)
Maryland
Delaware
West Virginia
Virginia
Kentucky
Tennessee
North Carolina
South Carolina
Mississippi
Alabama
Georgia
Florida
Data Sources:
- Agricultural data obtained from the USDA National Agricultural Statistics Service
- Temperature data obtained from the NOAA National Weather Service
Major Blueberry Area
Minor Blueberry Area

National Weather Data for Selected Cities

Weather Data for the Week Ending March 19, 2022

Data Provided by Climate Prediction Center

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 MAR 1	PCT. NORMAL SINCE MAR 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	22	46	12	29	3	0.01	-0.13	0.01	0.86	223	4.60	246	73	46	0	7	1	0
	BARROW	-2	-17	4	-24	-9	0	0.05	0.04	0.02	0.07	113	5.80	900	80	69	0	7	3	0
	FAIRBANKS	21	-11	31	-24	5	-6	0.00	-0.06	0.00	0.00	0	1.08	88	77	39	0	7	0	0
	JUNEAU	40	34	46	28	37	4	0.85	0.02	0.25	3.06	125	25.76	216	91	69	0	3	7	0
	KODIAK	40	28	45	20	34	1	1.26	0.04	0.33	5.62	165	21.33	119	89	62	0	6	7	0
	NOME	15	2	27	-4	9	-1	0.00	-0.14	0.00	0.18	42	1.23	52	65	43	0	7	0	0
AL	BIRMINGHAM	65	43	74	24	54	-1	4.21	3.04	2.14	6.87	211	14.43	114	85	42	0	1	3	3
	HUNTSVILLE	64	42	74	23	53	-1	1.17	0.00	0.62	3.74	117	18.03	139	91	48	0	1	3	2
	MOBILE	72	45	81	28	58	-2	2.75	1.38	1.85	5.00	132	9.23	63	93	43	0	1	2	2
	MONTGOMERY	68	44	77	25	56	-1	1.91	0.57	1.38	2.85	77	12.22	89	88	46	0	2	3	1
AR	FORT SMITH	70	41	79	30	55	3	0.28	-0.58	0.15	0.59	26	6.89	88	89	36	0	1	3	0
	LITTLE ROCK	67	43	77	32	55	2	0.94	-0.11	0.69	1.32	47	10.92	109	83	44	0	1	3	1
AZ	FLAGSTAFF	53	20	58	17	37	0	0.00	-0.50	0.00	1.02	73	2.31	41	82	20	0	7	0	0
	PHOENIX	83	54	86	49	69	4	0.00	-0.25	0.00	0.09	12	0.50	19	33	8	0	0	0	0
	PRESCOTT	65	32	71	26	48	2	0.00	-0.24	0.00	0.16	21	1.10	33	56	13	0	5	0	0
	TUCSON	82	47	87	42	64	4	0.00	-0.17	0.00	0.00	0	0.48	20	28	6	0	0	0	0
CA	BAKERSFIELD	73	49	77	45	61	3	0.10	-0.20	0.10	0.78	96	0.90	27	77	28	0	0	1	0
	EUREKA	54	40	56	36	47	-3	1.86	0.66	0.59	2.08	61	4.47	28	95	80	0	0	4	3
	FRESNO	73	49	77	45	61	4	0.02	-0.47	0.02	0.20	14	0.24	4	77	29	0	0	1	0
	LOS ANGELES	70	54	78	51	62	4	0.01	-0.38	0.01	0.01	0	0.15	2	91	44	0	0	1	0
	REDDING	68	46	74	41	57	3	0.35	-0.64	0.19	0.37	12	1.54	10	83	33	0	0	3	0
	SACRAMENTO	69	46	73	41	58	3	0.27	-0.37	0.27	0.27	14	0.32	3	94	36	0	0	1	0
	SAN DIEGO	68	52	73	49	60	1	0.00	-0.41	0.00	0.63	49	1.47	26	91	55	0	0	0	0
	SAN FRANCISCO	63	49	68	46	56	1	0.09	-0.57	0.07	0.30	14	0.72	7	86	50	0	0	2	0
	STOCKTON	72	47	75	40	59	5	0.15	-0.36	0.14	0.15	10	0.15	2	87	33	0	0	2	0
CO	ALAMOSA	53	11	62	2	32	-2	0.08	-0.05	0.08	0.24	78	0.95	102	85	17	0	7	1	0
	CO SPRINGS	57	30	71	23	44	4	0.38	0.13	0.27	0.66	110	1.43	106	70	21	0	5	2	0
	DENVER INTL	55	28	70	19	41	0	0.61	0.39	0.37	0.93	189	2.57	192	81	30	0	7	2	0
	GRAND JUNCTION	56	29	61	25	42	-2	0.02	-0.20	0.02	0.35	66	0.97	58	67	22	0	6	1	0
	PUEBLO	62	28	76	22	45	3	0.31	0.08	0.31	0.93	174	2.04	160	78	20	0	5	1	0
CT	BRIDGEPORT	55	36	69	21	46	6	0.16	-0.75	0.08	1.18	49	7.64	92	93	56	0	2	2	0
	HARTFORD	58	35	76	20	47	9	0.28	-0.52	0.17	1.33	62	7.74	94	88	45	0	3	3	0
DC	WASHINGTON	66	42	76	21	54	7	0.86	0.05	0.86	2.20	110	8.09	109	81	41	0	2	1	1
DE	WILMINGTON	63	38	74	22	51	8	0.50	-0.43	0.27	2.20	96	8.76	110	80	45	0	2	2	0
FL	DAYTONA BEACH	78	58	88	39	68	4	1.12	0.11	1.04	3.83	148	5.76	71	93	53	0	0	2	1
	JACKSONVILLE	76	49	87	30	62	1	1.57	0.69	0.85	6.14	242	9.04	100	97	48	0	1	4	2
	KEY WEST	81	72	83	60	76	3	0.00	-0.48	0.00	0.43	31	3.39	69	93	72	0	0	0	0
	MIAMI	81	68	85	52	75	2	1.05	0.37	0.76	1.30	75	8.80	157	94	64	0	0	2	1
	ORLANDO	83	59	91	41	71	4	1.92	1.02	1.61	5.57	254	7.20	104	91	45	1	0	2	1
	PENSACOLA	71	53	77	35	62	2	1.06	-0.24	1.06	2.15	59	6.93	51	92	56	0	0	1	1
	TALLAHASSEE	73	48	80	32	61	0	3.41	2.00	2.20	6.26	159	11.84	90	95	42	0	1	3	2
	TAMPA	81	61	87	41	71	4	1.02	0.32	1.02	1.42	76	2.76	40	85	50	0	0	1	1
	WEST PALM BEACH	82	68	86	48	75	5	1.79	0.67	1.74	2.27	81	6.46	74	90	58	0	0	2	1
GA	ATHENS	65	43	76	23	54	0	2.01	1.00	1.28	4.59	163	11.67	102	89	45	0	2	2	2
	ATLANTA	65	45	74	25	55	1	2.04	0.93	0.83	4.84	158	13.39	112	83	47	0	1	3	2
	AUGUSTA	70	39	78	19	55	-1	2.16	1.20	1.88	3.21	119	8.41	80	98	40	0	2	3	1
	COLUMBUS	69	44	77	25	56	-2	2.09	0.84	1.24	2.83	83	11.94	102	92	42	0	2	3	2
	MACON	71	42	79	22	56	-1	1.28	0.25	0.88	2.90	100	8.05	69	94	40	0	2	3	1
	SAVANNAH	74	47	84	28	60	1	0.63	-0.22	0.36	1.00	44	4.88	56	95	42	0	2	4	0
HI	HILO	82	68	84	65	75	3	0.87	-2.17	0.43	1.68	20	9.28	34	86	58	0	0	4	0
	HONOLULU	84	72	85	69	78	3	0.00	-0.46	0.00	0.00	0	6.93	124	75	46	0	0	0	0
	KAHULUI	87	66	90	61	77	4	0.00	-0.55	0.00	0.06	4	0.25	4	82	46	1	0	0	0
	LIHUE	80	71	81	67	76	3	0.00	-1.05	0.00	1.27	44	9.42	97	88	66	0	0	0	0
IA	BURLINGTON	60	36	70	22	48	7	0.42	-0.22	0.41	0.92	55	2.22	49	86	49	0	1	2	0
	CEDAR RAPIDS	55	31	68	19	43	6	0.62	0.14	0.62	1.47	122	1.80	53	97	54	0	4	1	1
	DES MOINES	58	34	72	27	46	6	0.63	0.11	0.60	1.38	106	4.96	137	87	43	0	3	2	1
	DUBUQUE	53	32	66	18	43	7	0.85	0.32	0.74	1.80	134	2.42	61	89	54	0	2	3	1
	SIOUX CITY	61	25	71	15	43	6	0.00	-0.48	0.00	0.09	8	0.25	10	85	27	0	5	0	0
	WATERLOO	55	31	70	21	43	7	1.16	0.70	1.10	2.69	238	3.50	116	86	47	0	5	2	1
ID	BOISE	56	36	61	31	46	1	0.30	-0.02	0.27	0.32	38	1.53	49	78	29	0	1	2	0
	LEWISTON	58	41	61	34	50	4	0.24	-0.04	0.12	0.74	106	2.33	89	81	38	0	0	3	0
	POCATELLO	52	31	59	22	41	3	0.13	-0.17	0.12	0.25	31	1.30	46	81	36	0	5	2	0
IL	CHICAGO/O_HARE	57	36	73	21	47	9	0.70	0.17	0.64	1.11	76	4.49	90	81	51	0	1	2	1
	MOLINE	61	33	72	23	47	8	0.92	0.28	0.88	1.63	95	4.46	92	88	42	0	3	2	1
	PEORIA	63	38	74	21	50	10	0.47	-0.16	0.39	1.00	61	4.12	79	84	41	0	1	2	0
	ROCKFORD	59	32	71	22	46	8	0.59	0.08	0.50	1.03	79	2.61	63	86	44	0	4	2	1
	SPRINGFIELD	64	40	76	26	52	10	0.62	0.05	0.61	1.80	116	2.28	44	84	44	0	1	2	1
IN	EVANSVILLE	65	39	73	26	52	6	0.14	-0.84	0.07	2.73	110	13.49	155	84	40	0	1	3	0
	FORT WAYNE	62	33	72	16	48	9	1.00	0.40	0.54	2.10	137	5.53	94	92	51	0	2	2	1
	INDIANAPOLIS	64	39	74	15	51	9	0.73	-0.08	0.67	2.67	130	8.19	117	79	42	0	1	2	1
	SOUTH BEND	60	35	72	16	47	10	0.72	0.20	0.62	1.23	85	5.02	88	83	48	0	2	2	1
KS	CONCORDIA	64	33	73	27	48	5	0.42	-0.06	0.24	0.78	71	1.10	44	80	27	0	2	2	0
	DODGE CITY	64	29	73	19	47	2	0.26	-0.12	0.23	0.30	34	0.92	42	82	21	0	5	2	0
	GOODLAND	60	26	69	21	43	2	0.13	-0.12	0.13	0.38	62	1.40	91	83	30	0	7	1	0
	TOPEKA	65	35	77	29	50	5	0.75	0.19	0.55	1.41	104	2.54	71	83	34	0	2	2	1

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

Weather Data for the Week Ending March 19, 2022

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 MAR 1	PCT. NORMAL SINCE MAR 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	66	35	77	27	51	4	1.13	0.48	0.87	1.59	104	2.56	71	82	30	0	2	2	1
KY	LEXINGTON	64	39	73	14	52	6	0.22	-0.74	0.20	3.57	146	16.39	186	76	39	0	1	2	0
	LOUISVILLE	67	44	75	23	56	8	0.17	-0.80	0.16	1.68	68	11.27	127	72	38	0	1	2	0
	PADUCAH	66	40	73	27	53	4	0.05	-0.80	0.05	0.83	36	13.31	135	81	38	0	1	1	0
LA	BATON ROUGE	73	46	84	28	59	-2	1.25	-0.01	1.04	1.56	47	5.85	41	92	37	0	1	2	1
	LAKE CHARLES	71	46	76	32	58	-3	2.16	1.38	1.81	2.59	117	5.31	48	96	43	0	1	3	1
	NEW ORLEANS	72	52	84	37	62	-1	0.58	-0.43	0.58	1.22	43	6.46	48	85	41	0	0	1	1
	SHREVEPORT	71	44	80	31	57	-1	1.79	0.93	0.90	2.72	107	7.06	61	90	38	0	1	4	2
MA	BOSTON	52	37	68	22	45	6	0.24	-0.73	0.19	1.36	53	8.06	88	85	54	0	2	3	0
	WORCESTER	53	34	70	16	44	9	0.71	-0.22	0.54	1.89	77	10.35	113	88	46	0	2	3	1
MD	BALTIMORE	66	37	77	20	52	8	0.38	-0.55	0.38	1.72	74	8.00	97	84	35	0	2	1	0
ME	CARIBOU	37	19	47	4	28	3	0.77	0.23	0.75	2.89	190	8.32	129	86	53	0	6	3	1
	PORTLAND	47	31	65	21	39	6	0.83	-0.13	0.59	2.05	82	8.23	90	93	57	0	3	3	1
MI	ALPENA	43	26	65	11	35	6	0.50	0.11	0.18	1.30	120	2.95	72	93	64	0	4	4	0
	GRAND RAPIDS	53	31	67	15	42	7	0.38	-0.12	0.28	1.10	79	5.62	107	88	55	0	4	3	0
	HOUGHTON LAKE	46	25	64	7	35	6	0.34	-0.06	0.17	0.78	74	2.15	56	91	59	0	4	4	0
	LANSING	54	32	72	12	43	8	0.45	0.02	0.31	1.05	91	7.09	165	88	56	0	4	4	0
	MUSKEGON	52	34	66	24	43	8	0.31	-0.19	0.16	0.58	42	3.69	71	88	55	0	4	4	0
	TRAVERSE CITY	46	28	63	12	37	6	0.61	0.21	0.36	1.95	181	2.79	51	89	60	0	5	2	0
MN	DULUTH	41	24	49	15	33	7	0.04	-0.29	0.03	0.13	15	2.09	78	85	51	0	6	2	0
	INT_L FALLS	42	16	57	-8	29	6	0.00	-0.20	0.00	0.11	21	2.48	145	87	48	0	7	0	0
	MINNEAPOLIS	48	29	55	24	39	6	0.06	-0.37	0.06	1.21	113	2.39	86	85	49	0	5	1	0
	ROCHESTER	50	30	64	23	40	0	0.00	-0.42	0.00	0.83	81	2.04	73	88	51	0	5	0	0
	ST. CLOUD	45	24	52	11	35	5	0.16	-0.20	0.16	0.40	47	1.77	84	88	52	0	5	1	0
MO	COLUMBIA	67	41	78	33	54	10	0.31	-0.33	0.31	1.80	107	4.85	83	86	38	0	0	1	0
	KANSAS CITY	65	38	77	32	51	7	0.58	0.05	0.58	1.59	120	2.96	76	81	38	0	1	1	1
	SAINT LOUIS	69	44	78	32	56	10	0.25	-0.50	0.19	2.03	109	6.90	106	75	32	0	1	2	0
	SPRINGFIELD	65	40	76	32	53	6	0.52	-0.30	0.51	1.56	73	6.36	89	88	44	0	1	2	1
MS	JACKSON	69	42	79	25	56	-1	1.81	0.71	1.00	6.23	203	10.90	85	92	41	0	1	3	2
	MERIDIAN	70	42	83	25	56	0	2.30	1.10	1.17	3.14	92	12.23	86	89	38	0	2	2	2
	TUPELO	68	44	77	24	56	2	2.15	1.09	1.57	3.63	118	16.15	129	86	36	0	1	3	2
MT	BILLINGS	56	35	63	29	45	7	0.01	-0.23	0.01	0.42	72	1.65	105	64	25	0	1	1	0
	BUTTE	49	27	63	21	38	6	0.07	-0.11	0.05	0.12	29	0.77	56	79	31	0	7	2	0
	CUT BANK	52	31	56	24	41	10	0.00	-0.11	0.00	0.32	112	0.44	57	72	35	0	4	0	0
	GLASGOW	56	30	65	25	43	12	0.00	-0.10	0.00	0.28	109	0.55	56	85	35	0	6	0	0
	GREAT FALLS	53	32	62	26	43	9	0.10	-0.11	0.08	0.26	50	1.69	111	72	28	0	3	2	0
	HAVRE	56	29	62	25	43	10	0.06	-0.07	0.06	0.29	96	0.62	62	82	33	0	5	1	0
	MISSOULA	53	32	57	26	42	3	0.11	-0.12	0.05	0.38	62	2.42	110	85	40	0	4	4	0
NC	ASHEVILLE	61	37	69	16	49	2	0.86	0.02	0.74	2.68	116	11.71	120	90	44	0	2	3	1
	CHARLOTTE	68	41	79	20	55	4	0.83	-0.11	0.79	4.69	183	10.85	117	83	37	0	2	2	1
	GREENSBORO	67	41	79	19	54	4	0.30	-0.54	0.29	3.16	140	11.05	134	83	32	0	2	2	0
	HATTERAS	65	51	73	30	58	7	1.37	0.28	1.17	1.88	65	10.98	90	86	56	0	1	2	1
	RALEIGH	70	44	79	23	57	5	1.19	0.24	0.65	3.21	124	10.47	113	82	39	0	2	2	2
	WILMINGTON	70	45	82	25	58	3	0.10	-0.87	0.10	0.69	25	5.88	58	94	42	0	2	1	0
ND	BISMARCK	55	28	65	24	41	12	0.13	-0.07	0.12	0.17	32	1.10	73	93	40	0	7	2	0
	DICKINSON	55	27	63	22	41	11	0.01	-0.14	0.01	0.04	9	0.11	10	85	35	0	7	1	0
	FARGO	44	25	63	16	34	7	0.00	-0.31	0.00	0.02	3	1.33	62	83	55	0	7	0	0
	GRAND FORKS	38	21	50	7	30	5	0.00	-0.23	0.00	0.04	7	1.49	87	96	72	0	7	0	0
	JAMESTOWN	46	27	54	22	37	9	0.00	-0.20	0.00	0.02	4	0.43	31	86	57	0	6	0	0
NE	GRAND ISLAND	62	29	72	22	46	6	0.11	-0.31	0.11	0.30	30	0.40	18	81	25	0	5	1	0
	LINCOLN	63	28	73	20	46	5	0.67	0.19	0.35	1.27	121	1.48	59	84	27	0	4	2	0
	NORFOLK	61	28	69	18	44	7	0.00	-0.42	0.00	0.17	18	0.32	14	76	25	0	5	0	0
	NORTH PLATTE	63	24	72	21	44	5	0.00	-0.24	0.00	0.67	114	1.10	73	83	24	0	7	0	0
	OMAHA	62	31	75	26	46	7	0.71	0.26	0.51	1.06	100	1.60	60	84	30	0	5	2	1
	SCOTTSBLUFF	61	28	71	22	44	6	0.29	0.07	0.15	0.71	125	1.89	117	86	24	0	6	2	0
	VALENTINE	63	28	76	19	46	9	0.00	-0.24	0.00	0.10	17	0.28	19	70	22	0	5	0	0
NH	CONCORD	53	32	72	18	42	10	0.59	-0.13	0.39	1.84	96	8.03	111	91	46	0	3	3	0
NJ	ATLANTIC_CITY	62	39	73	22	51	9	0.36	-0.62	0.36	1.83	72	11.80	137	88	48	0	2	1	0
	NEWARK	61	40	74	21	50	8	0.16	-0.80	0.15	1.18	48	7.52	85	83	44	0	2	2	0
NM	ALBUQUERQUE	63	34	70	29	49	1	0.00	-0.13	0.00	0.04	11	0.39	30	52	11	0	4	0	0
NV	ELY	52	25	54	17	38	2	0.00	-0.22	0.00	0.48	81	0.83	40	82	25	0	7	0	0
	LAS VEGAS	73	51	79	45	62	2	0.00	-0.10	0.00	0.00	0	0.06	3	31	11	0	0	0	0
	RENO	60	37	67	32	48	3	0.01	-0.15	0.01	0.03	5	0.46	17	67	24	0	1	1	0
	WINNEMUCCA	57	29	62	22	43	1	0.28	0.08	0.15	1.02	197	1.23	59	85	27	0	5	2	0
NY	ALBANY	55	34	71	18	45	10	0.35	-0.38	0.28	1.58	83	14.27	214	89	48	0	4	3	0
	BINGHAMTON	54	32	69	11	43	10	0.25	-0.43	0.17	2.25	130	7.41	115	92	47	0	3	2	0
	BUFFALO	57	34	71	16	46	12	0.29	-0.34	0.27	1.28	74	8.09	109	87	48	0	2	3	0
	ROCHESTER	55	32	71	16	43	9	0.28	-0.26	0.25	0.89	60	7.05	121	95	51	0	3	4	0
	SYRACUSE	56	33	71	17	44	10	0.76	0.09	0.71	1.98	115	6.68	106	92	48	0	3	3	1
OH	AKRON-CANTON	62	37	72	10	49	12	0.68	0.02	0.43	3.37	196	10.96	166	77	41	0	2	3	0
	CINCINNATI	64	39	73	15	52	8	0.30	-0.62	0.24	1.78	78	10.33	128	83	43	0	1	2	0
	CLEVELAND	62	34	73	14	48	10	0.57	-0.08	0.41	2.03	120	7.31	109	81	43	0	1	2	0
	COLUMBUS	64	35	73	15	49	7	0.31	-0.37	0.26	1.56	91	10.09	151	85	37	0	2	2	0
	DAYTON	64	38	74	14	51	11	0.95	0.19	0.71	3.58	190	10.76	158	75	39	0	1	2	1
	MANSFIELD	61	34	72	10	48	11	0.69	-0.06	0.63	2.73	142	9.48	132	86	44	0	2	2	1

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

Weather Data for the Week Ending March 19, 2022

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 MAR 1	PCT. NORMAL SINCE MAR 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	63	34	75	16	48	11	0.88	0.35	0.49	1.51	105	14.01	252	81	41	0	2	2	0
	YOUNGSTOWN	60	34	71	10	47	10	0.24	-0.42	0.12	9.00	530	16.18	253	83	41	0	2	3	0
OK	OKLAHOMA CITY	69	38	79	33	54	1	0.12	-0.61	0.12	0.20	11	1.64	34	80	25	0	0	1	0
	TULSA	69	44	78	34	56	5	0.39	-0.37	0.28	1.09	56	4.19	76	83	33	0	0	2	0
OR	ASTORIA	52	43	53	38	47	1	2.55	0.83	0.88	3.93	83	21.61	97	94	70	0	0	7	3
	BURNS	55	25	61	18	40	2	0.08	-0.17	0.08	0.08	11	1.08	37	87	30	0	7	1	0
	EUGENE	56	41	61	36	49	2	1.01	-0.11	0.39	2.85	89	7.86	50	94	57	0	0	4	0
	MEDFORD	59	39	63	33	49	1	0.57	0.19	0.31	1.28	116	1.96	35	90	38	0	0	3	0
	PENDLETON	56	38	60	31	47	2	0.61	0.30	0.26	1.04	123	3.46	102	89	47	0	1	5	0
	PORTLAND	55	44	59	39	50	1	0.61	-0.22	0.24	2.18	92	9.81	89	86	55	0	0	6	0
	SALEM	56	42	60	37	49	2	1.35	0.45	0.81	3.69	143	10.73	81	90	52	0	0	6	1
PA	ALLENTOWN	60	34	74	17	47	8	0.51	-0.26	0.29	1.65	84	7.85	102	88	42	0	3	2	0
	ERIE	59	34	70	17	47	11	0.42	-0.22	0.34	1.65	95	9.52	135	79	43	0	4	2	0
	MIDDLETOWN	64	36	75	20	50	8	0.42	-0.38	0.35	1.56	78	7.36	101	83	36	0	2	2	0
	PHILADELPHIA	65	42	76	24	53	10	0.24	-0.65	0.16	1.22	55	6.93	88	79	41	0	1	2	0
	PITTSBURGH	60	34	70	9	47	8	0.12	-0.55	0.08	1.12	64	8.50	124	81	35	0	2	2	0
	WILKES-BARRE	61	36	73	17	48	12	0.25	-0.32	0.15	1.56	107	6.70	114	80	38	0	2	3	0
	WILLIAMSPORT	60	33	72	17	47	8	0.14	-0.53	0.06	1.61	95	7.76	115	86	38	0	4	3	0
RI	PROVIDENCE	56	35	70	22	46	7	0.48	-0.68	0.30	1.72	58	10.38	103	86	53	0	2	2	0
SC	CHARLESTON	71	47	81	25	59	1	0.38	-0.47	0.26	0.93	41	3.93	44	93	44	0	2	2	0
	COLUMBIA	69	43	78	23	56	0	0.90	0.07	0.80	1.70	72	7.54	79	90	41	0	2	3	1
	FLORENCE	71	43	80	24	57	1	2.35	1.60	2.29	3.67	175	9.83	120	86	38	0	2	3	1
	GREENVILLE	65	41	74	23	53	0	1.10	0.06	0.88	4.12	146	12.22	115	83	40	0	2	4	1
SD	ABERDEEN	55	24	66	19	39	10	0.10	-0.17	0.10	0.10	15	0.91	54	89	40	0	7	1	0
	HURON	59	24	69	18	42	9	0.00	-0.33	0.00	0.11	14	0.49	26	86	26	0	7	0	0
	RAPID CITY	58	28	68	21	43	7	0.00	-0.22	0.00	0.21	38	0.70	51	81	29	0	6	0	0
	SIOUX FALLS	56	27	65	22	42	9	0.00	-0.39	0.00	0.35	40	0.81	39	87	40	0	6	0	0
TN	BRISTOL	63	34	69	14	49	2	0.21	-0.55	0.21	2.06	99	12.92	146	89	38	0	2	1	0
	CHATTANOOGA	64	40	74	22	52	0	1.24	0.11	0.77	4.05	132	17.96	139	89	47	0	2	3	1
	KNOXVILLE	64	40	71	18	52	2	0.56	-0.41	0.51	3.10	118	17.00	151	91	45	0	2	3	1
	MEMPHIS	67	44	75	26	56	2	0.87	-0.28	0.65	2.24	73	13.28	116	81	42	0	1	3	1
	NASHVILLE	65	42	73	20	54	4	0.49	-0.45	0.39	1.45	58	16.38	160	74	42	0	1	2	0
TX	ABILENE	76	43	85	38	60	3	0.00	-0.39	0.00	0.00	0	2.19	63	58	14	0	0	0	0
	AMARILLO	67	33	80	27	50	2	0.06	-0.29	0.04	0.16	19	0.63	30	65	14	0	4	2	0
	AUSTIN	77	47	84	33	62	0	0.00	-0.63	0.00	0.09	5	4.98	83	73	25	0	0	0	0
	BEAUMONT	73	47	78	36	60	-2	1.48	0.72	1.01	1.64	76	4.09	37	97	42	0	0	3	1
	BROWNSVILLE	80	55	85	45	67	-2	0.02	-0.23	0.02	0.12	17	4.48	147	91	42	0	0	1	0
	CORPUS CHRISTI	80	49	84	34	64	-2	0.00	-0.39	0.00	0.58	48	3.13	66	92	35	0	0	0	0
	DEL RIO	82	47	93	38	65	1	0.00	-0.26	0.00	0.00	0	0.17	7	57	13	1	0	0	0
	EL PASO	72	38	82	25	55	-1	0.00	-0.06	0.00	0.11	54	1.28	115	43	9	0	1	0	0
	FORT WORTH	74	47	81	39	60	3	0.10	-0.69	0.08	0.30	14	6.20	90	75	26	0	0	2	0
	GALVESTON	73	58	77	44	65	2	0.39	0.00	0.21	0.50	0	3.18	0	82	45	0	0	3	0
	HOUSTON	74	47	79	32	61	-2	0.63	-0.08	0.47	0.82	39	11.41	132	90	35	0	1	4	0
	LUBBOCK	70	34	82	30	52	0	0.00	-0.25	0.00	0.02	3	0.33	15	52	13	0	3	0	0
	MIDLAND	72	35	83	29	54	-2	0.00	-0.12	0.00	0.00	0	0.27	16	55	11	0	3	0	0
	SAN ANGELO	77	39	86	27	58	1	0.00	-0.33	0.00	0.00	0	0.43	13	59	11	0	1	0	0
	SAN ANTONIO	78	44	83	28	61	-1	0.00	-0.52	0.00	0.02	1	2.06	41	71	24	0	1	0	0
	VICTORIA	78	44	82	27	61	-2	0.13	-0.44	0.05	0.17	10	3.58	58	92	35	0	1	3	0
	WACO	75	41	82	31	58	0	0.51	-0.20	0.51	0.57	27	2.59	38	83	26	0	2	1	1
	WICHITA FALLS	75	40	84	33	58	3	0.00	-0.49	0.00	0.00	0	1.51	35	71	16	0	0	0	0
UT	SALT LAKE CITY	56	36	64	32	46	2	0.12	-0.28	0.11	1.15	111	1.88	53	79	29	0	1	2	0
VA	LYNCHBURG	69	38	79	18	53	8	0.70	-0.12	0.40	1.98	93	8.94	109	83	30	0	2	2	0
	NORFOLK	66	44	79	26	55	6	0.69	-0.14	0.69	3.00	134	8.66	99	86	45	0	2	1	1
	RICHMOND	66	39	80	19	53	5	0.16	-0.83	0.16	2.82	116	8.81	108	85	40	0	2	1	0
	ROANOKE	68	40	77	20	54	7	0.21	-0.58	0.17	1.46	72	7.84	100	77	28	0	1	2	0
	WASH/DULLES	66	37	76	19	51	7	0.10	-0.67	0.10	1.06	55	7.14	97	84	37	0	2	1	0
VT	BURLINGTON	50	33	65	17	41	11	0.22	-0.29	0.20	1.28	97	4.57	89	89	52	0	2	2	0
WA	OLYMPIA	52	40	56	36	46	1	1.72	0.50	0.69	2.74	81	18.70	113	97	62	0	0	6	1
	QUILLAYUTE	50	40	54	37	45	1	4.87	2.37	2.26	6.27	92	30.13	94	100	78	0	0	7	4
	SEATTLE-TACOMA	51	42	55	40	47	0	1.43	0.59	0.59	2.61	112	14.74	129	93	63	0	0	5	1
	SPOKANE	50	36	53	32	43	3	0.39	0.02	0.17	1.04	102	3.98	95	87	50	0	1	4	0
	YAKIMA	57	35	61	27	46	3	0.02	-0.11	0.02	0.12	27	1.58	66	82	37	0	3	1	0
WI	EAU CLAIRE	47	26	60	19	37	6	0.00	-0.38	0.00	0.00	0	0.01	0	91	52	0	7	0	0
	GREEN BAY	49	30	62	18	39	9	0.45	0.06	0.19	2.36	221	2.89	87	89	57	0	4	3	0
	LA CROSSE	54	30	70	22	42	8	0.12	-0.33	0.12	0.76	67	1.62	49	88	43	0	5	1	0
	MADISON	52	30	66	21	41	7	0.76	0.30	0.56	2.22	187	3.09	80	91	51	0	6	3	1
	MILWAUKEE	54	32	70	21	43	8	0.40	-0.08	0.25	0.81	64	2.13	45	85	48	0	4	3	0
WV	BECKLEY	61	33	69	9	47	5	0.01	-0.80	0.01	1.33	62	10.22	133	80	31	0	2	1	0
	CHARLESTON	65	34	73	15	50	4	0.00	-0.93	0.00	2.67	108	12.83	149	87	32	0	2	0	0
	ELKINS	63	27	71	8	45	6	0.00	-0.91	0.00	1.91	80	10.58	122	84	26	0	4	0	0
	HUNTINGTON	65	38	73	16	51	5	0.02	-0.90	0.02	2.89	121	13.22	157	76	34	0	1	1	0
WY	CASPER	48	26	55	22	37	1	0.19	-0.01	0.15	1.07	227	2.76	177	82	39	0	6	2	0
	CHEYENNE	51	27	62	19	39	3	0.13	-0.11	0.11	0.70	115	1.88	127	78	25	0	6	2	0
	LANDER	50	25	57	16	37	1	0.21	-0.06	0.21	1.46	231	2.92	175	80	34	0	7	1	0
	SHERIDAN	56	28	66	23	42	7	0.04	-0.19	0.04	0.52	95	1.70	103	77	27	0	7	1	0

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

Winter Weather Review

Weather summary provided by USDA/WAOB

Highlights: The Western winter wet season petered out after December, as hopes for drought relief fizzled during the first 2 months of 2022. Consistent with La Niña, periods of heavier precipitation were mostly limited to the northern tier of the West, where several rounds of flooding occurred west of the Cascades. With the generally dry start to 2022, there was little overall change in the Western drought depiction, according to the *U.S. Drought Monitor*. In fact, coverage of moderate to exceptional drought (D1 to D4) in the 11-state Western region held nearly steady at 88 to 90 percent each week from January 4 to March 1, after peaking just below 95 percent on December 7, 2021. Some of the most acute dryness in early 2022 covered California and Nevada; it was the driest January-February combined during the 1895-2022 period of record in both states. According to the California Department of Water Resources, the Sierra Nevada began the dry spell with a snow-water equivalency of 16 inches—nearly 160 percent of the late-December average. By mid-March, the water equivalency stood at just over 16 inches, less than 60 percent of average for the date.

Farther east, drought also continued to dominate the landscape across the High Plains, leaving rangeland, pastures, and winter grains in uncommonly poor shape as spring approached. By February 27, topsoil moisture was rated 75 to 80 percent very short to short in Kansas, Oklahoma, and Texas, according to USDA/NASS. On that date, winter wheat was rated 75 percent very poor to poor in Texas, along with 65 percent in Oklahoma and 38 percent in Kansas. Texas also reported 69 percent of its rangeland, pastures, and oats were rated in very poor to poor condition. Meanwhile, a drier-than-normal winter led to development of short-term drought in parts of the South, especially from the Mississippi Delta westward, along the Gulf Coast, and in the southern Atlantic region.

In contrast, ample to locally excessive precipitation fell during winter from the Tennessee Valley into the eastern Corn Belt and lower Great Lakes region. Mid-February statistics from USDA/NASS indicated topsoil moisture was rated at least one-third surplus in Illinois, Michigan, Indiana, and Ohio. Late-winter flooding affected several basins; in Lafayette, IN, the Wabash River crested 9.43 feet above flood stage on February 18—the highest water level in that gauge location in 4 years, since late-February 2018. Winter wetness—in the form of frequent blizzards—also affected portions of the north-central U.S., including the Red River Valley of the North and the upper Great Lakes region, helping to eradicate drought or significantly reduce drought intensity.

Despite the wet spots, U.S. drought coverage continued to climb, rising from 53.4 percent to 59.2 percent between November 30, 2021, and March 1, 2022. By March 1, national drought coverage had been greater than 40 percent for 75 consecutive weeks—a *Drought Monitor*-era record. When U.S. drought coverage climbed to 61.1 percent on March 8, it marked the first time since January 8, 2013, that drought blanketed more than 60 percent of the country.

Besides drought, the winter of 2021-22 featured some notable extremes. In December, multiple severe weather outbreaks resulted in more than 200 tornadoes, based on preliminary reports. Tragically, the December 10-11 outbreak was responsible for 87 tornado-related fatalities. Days later, on the 15th, the first-ever December derecho swept from the east-central Plains into the upper Midwest. December ended with winter wildfires ravaging areas near Boulder, CO. About a month later, a late-January blizzard along the northern Atlantic Coast helped to draw the coldest air in 4 years across Florida's peninsula. Elsewhere in January, rare, mid-winter wildfires affected several areas, including the central California coast near Big Sur and the southern Plains.

Historical Perspective: According to preliminary data provided by the National Centers for Environmental Information, the winter of 2021-22 featured generally warm, dry conditions, with several exceptions. The national average temperature of 34.8°F was 2.5°F above the 1901-2000 mean, while precipitation averaged 5.76 inches—85 percent of normal. It was the nation's driest December-February period since 2001-02, when winter precipitation averaged 5.69 inches.

Only Minnesota ranked in the cool half of the December-February historical distribution, reporting its 49th-coldest winter (figure 1). In contrast, top-ten values for winter warmth were noted in Georgia, Mississippi, and South Carolina. Meanwhile, state precipitation rankings ranged from the third-driest winter in Louisiana to the tenth-wettest winter in Minnesota (figure 2). Along with Louisiana, top-ten values for winter dryness were observed in Kansas, Nebraska, and Texas.

Figure 1 Statewide Average Temperature Ranks
December 2021 – February 2022
Period: 1895–2022

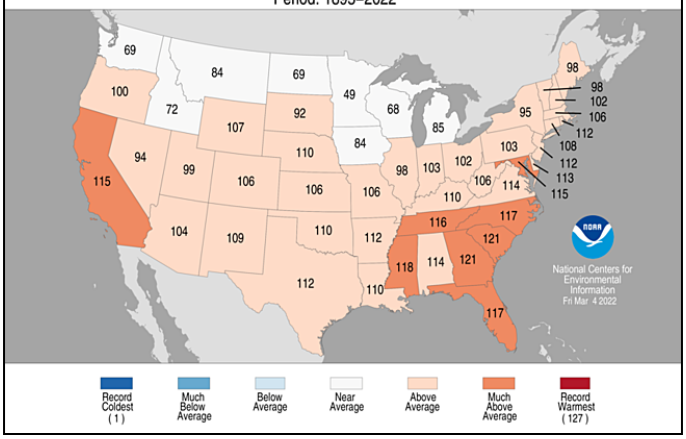
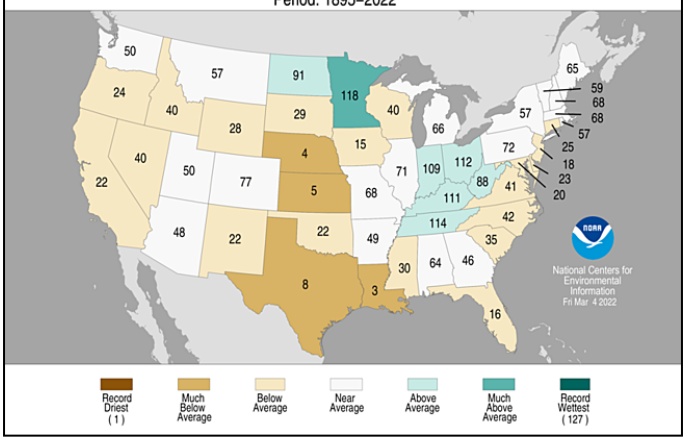


Figure 2 Statewide Precipitation Ranks
December 2021 – February 2022
Period: 1895–2022



December: December 2021 featured some notable weather extremes. In fact, monthly temperatures averaged at least 10°F above normal at numerous locations from the southern Plains to the Mississippi Delta, setting records for the warmest-ever December. That warmth, along with frigid conditions (locally more than 5°F below normal) near the Canadian border from the Pacific Northwest to the northern Plains, fueled an active storm track and periods of severe thunderstorms and heavy precipitation. The month's first significant severe-weather outbreak occurred across the mid-South and lower Midwest on December 5-6. Less than a week later, on the 10th, the deadliest December tornado in the Nation's history—an EF-4 with winds estimated near 190 mph—traveled nearly 166 miles, starting in Obion County, TN, and devastating the Kentucky communities of Mayfield and Dawson Springs. More than 50 deaths occurred during that tornado's rampage, according to preliminary reports, while dozens of additional tornadoes—some with fatalities—swarmed other parts of the mid-South and lower Midwest.

A mid-December wind and dust storm, which raked the central and southern Plains with wind gusts of 75 to 100 mph or higher, increased concerns regarding the overwintering wheat crop. By the end of December, only 33 percent of Kansas' winter wheat was rated in good to excellent condition, down from 62 percent in late-November 2021. Similarly, the portion of Nebraska's wheat rated good to excellent dropped from 64 to 39 percent between November 28 and December 31. Across the southern High Plains, Texas communities such as Amarillo and Borger ended the year on an 80-day streak (October 13 – December 31) without any precipitation—not even a trace. Lingering drought across the northern High Plains also maintained stress on winter wheat; in Montana, 71 percent of the crop was rated very poor to poor at year's end. The Plains' drought was also reflected in moisture shortages; at the end of December, among reporting states, USDA/NASS rated topsoil moisture at least one-half very short to short in Colorado (84 percent), New Mexico (80 percent), Montana (77 percent), Kansas (72 percent), and Nebraska (68 percent), and North Dakota (50 percent). Toward month's end, wind-driven wildfires near Boulder, CO—including the 6,219-acre Marshall Fire—swept through thousands of acres of drought-cured brush, timber, and grass, as well as portions of the communities of Louisville and Superior, destroying as many as 1,000 structures.

In contrast, consistent and widespread storminess delivered December drought relief—in the form of improvements in soil moisture and mountain snowpack—west of the Rockies. Although drought coverage in the 11-state Western region decreased only 5 percentage points (from 94 to 89 percent) between November 30, 2021, and January 4, 2022, there was a substantial decrease in the higher-end drought categories. For example, Western coverage of extreme to exceptional drought (D3 to D4) during that 5-week period decreased from 44 to 24 percent. By December 31, the average water equivalency of the high-elevation Sierra Nevada snowpack stood at just over 15 inches, more than 150 percent of average for the date, but only 55 percent of the typical end-of-season accumulation. In addition, many large reservoirs—including Lake Mead on the Colorado River—remained at historically low levels and will be unlikely to significantly recover.

January: As 2021 ended, the water equivalency of the Sierra Nevada snowpack stood close to 15 inches, nearly 160 percent of the late-December average, according to the California Department of Water Resources. Incredibly, less than an inch was added during January to that snowpack, leaving the early-February water equivalency at 16 inches, about 90 percent of average for the date. Disappointingly low January precipitation totals were also reported across the remainder of California and the Great Basin, as well as the Southwest. In contrast, wet weather persisted early in the month across the Pacific Northwest, while periods of precipitation provided varying degrees of drought relief from the northern and central Rockies to the northern Plains.

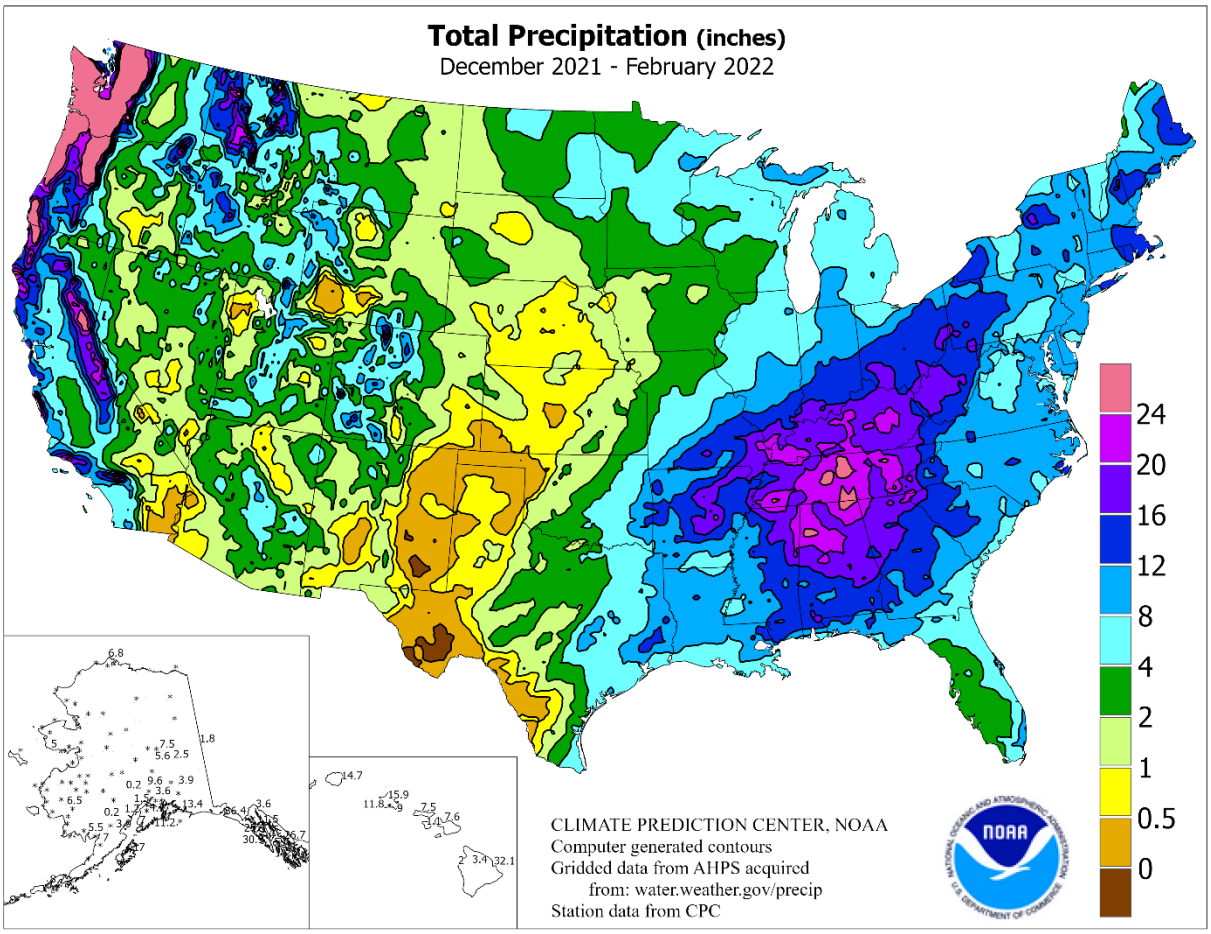
Meanwhile, Southwestern dryness extended across the southern half of the Plains, where intensifying drought adversely affected rangeland, pastures, and winter grains. By January 23, more than one-quarter of the winter wheat was rated in very poor to poor condition in several key production states, including Kansas (31 percent), Colorado (40 percent), Oklahoma (43 percent), and Texas (71 percent). Drought impacts extended to the northern High Plains, where 65 percent of Montana's winter wheat was rated very poor to poor. On the same date, USDA/NASS rated topsoil moisture at least 40 percent very short to short in each of the ten states encompassing the Plains and the eastern slopes of the Rockies, ranging from 41 percent in North Dakota to 87 percent in New Mexico.

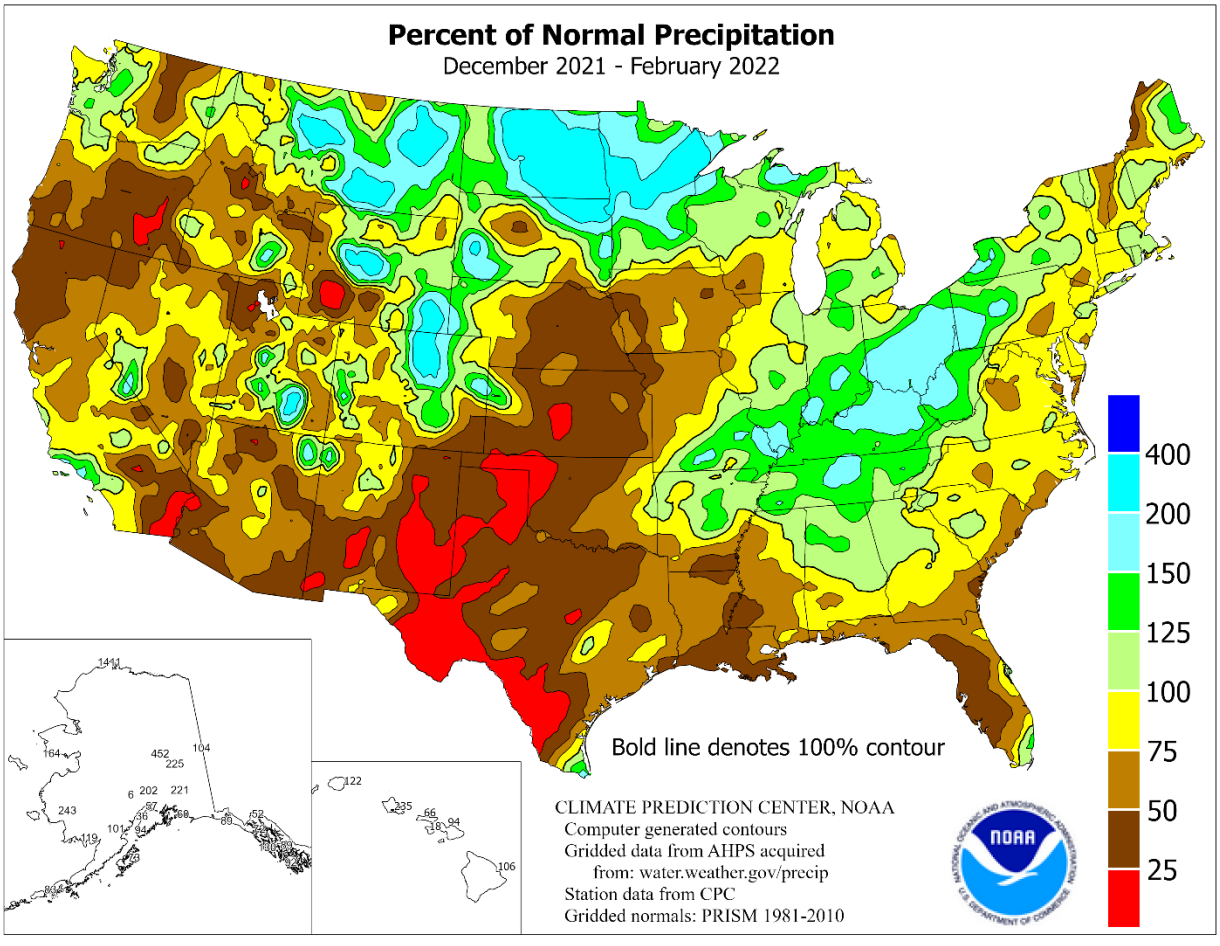
Farther east, an overall cold but quiet Midwestern weather pattern was interrupted by a mid-January storm, which delivered wind-driven snow, mainly west of the Mississippi River. In fact, parts of the upper Midwest were subjected to sustained cold weather, interspersed with periods of gusty winds and light snow, leading to rural travel difficulties and increased livestock stress. Monthly temperatures broadly averaged at least 5°F below normal from the Midwest to the interior Northeast. Cold weather occasionally reached the Deep South, culminating in freezes across parts of Florida on January 24 and 30. During the latter cold snap, Daytona Beach, FL (31°F on January 30), experienced its first freeze since January 19, 2018.

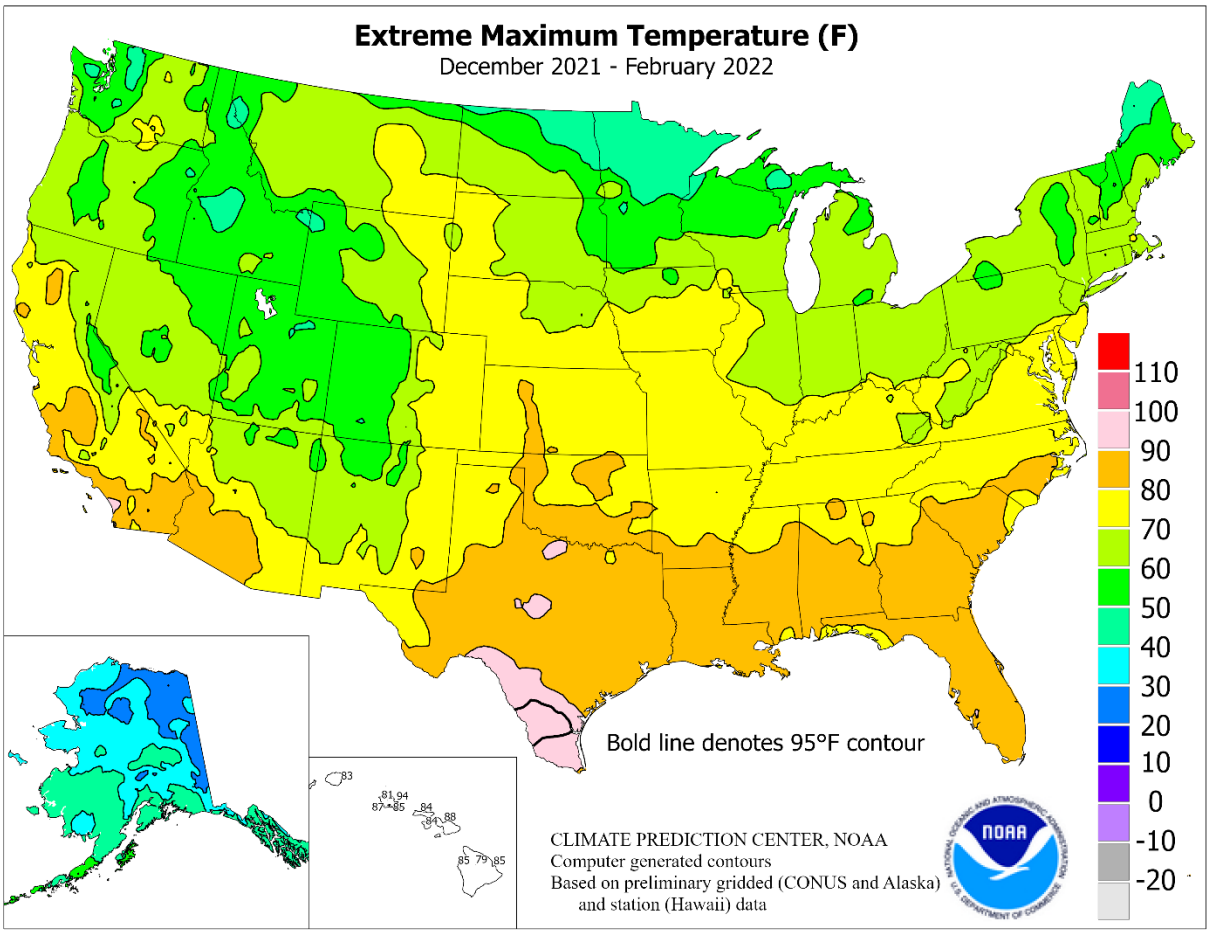
In contrast, generally mild weather prevailed from the Pacific Coast to the High Plains, although cooler air began to settle across the Northwest late in the month. Parts of the Northwest also dealt with extended periods of air stagnation and foggy conditions. On the other side of the Rockies, windy weather frequently raked the High Plains, keeping winter wheat's protective snow cover at a minimum. On the southern Plains, windy, dry weather led to several, mid-winter grassfires, including the 1,700-acre Mill Creek Fire in Shackelford County, TX, which was sparked on January 15. A rare winter wildfire—the Colorado Fire—also burned along the central California coastline near Big Sur, torching nearly 700 acres of vegetation, starting on January 21.

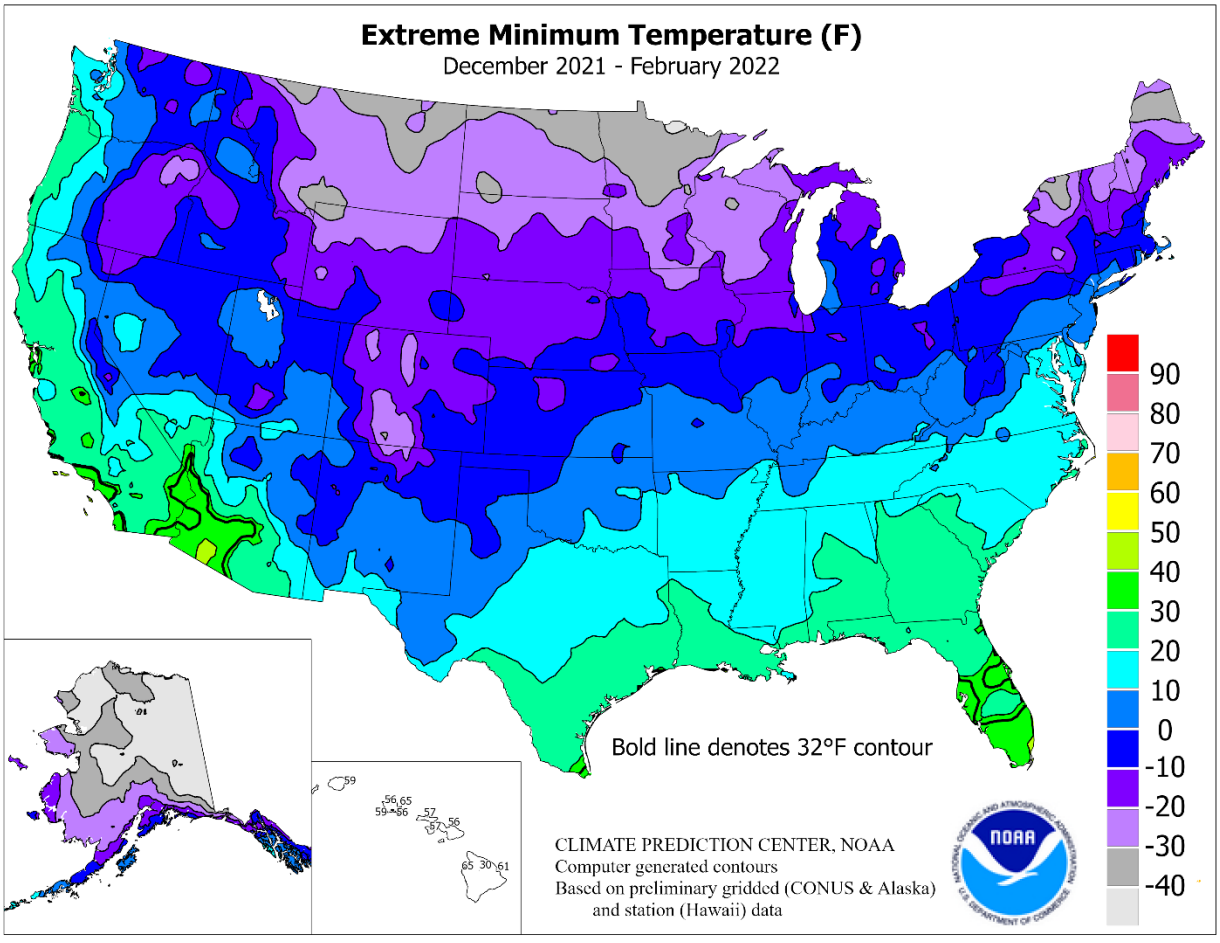
Elsewhere, several rounds of wintry weather affected parts of the South and East, contributing to above-normal January precipitation in some areas. The same storm system that delivered mid-month wind and snow across the upper Midwest later produced significant snow and ice accumulations from the southern Appalachians into the Northeast. Late in the month, a rapidly intensifying coastal storm resulted in blizzard conditions for the first time in more than 4 years along the middle and northern Atlantic Coast.

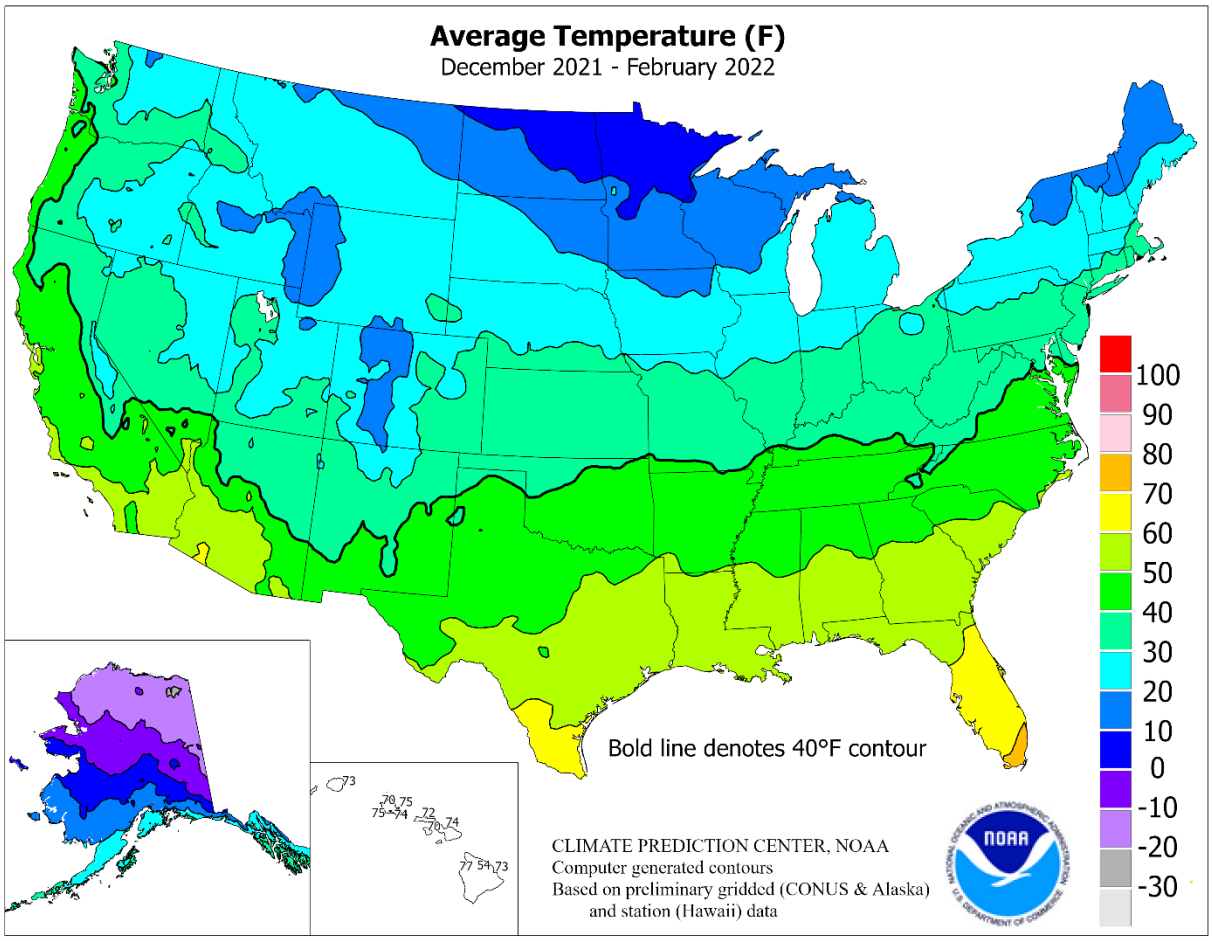
February: A complete summary appeared in the *Weekly Weather and Crop Bulletin* dated February 8, 2022.

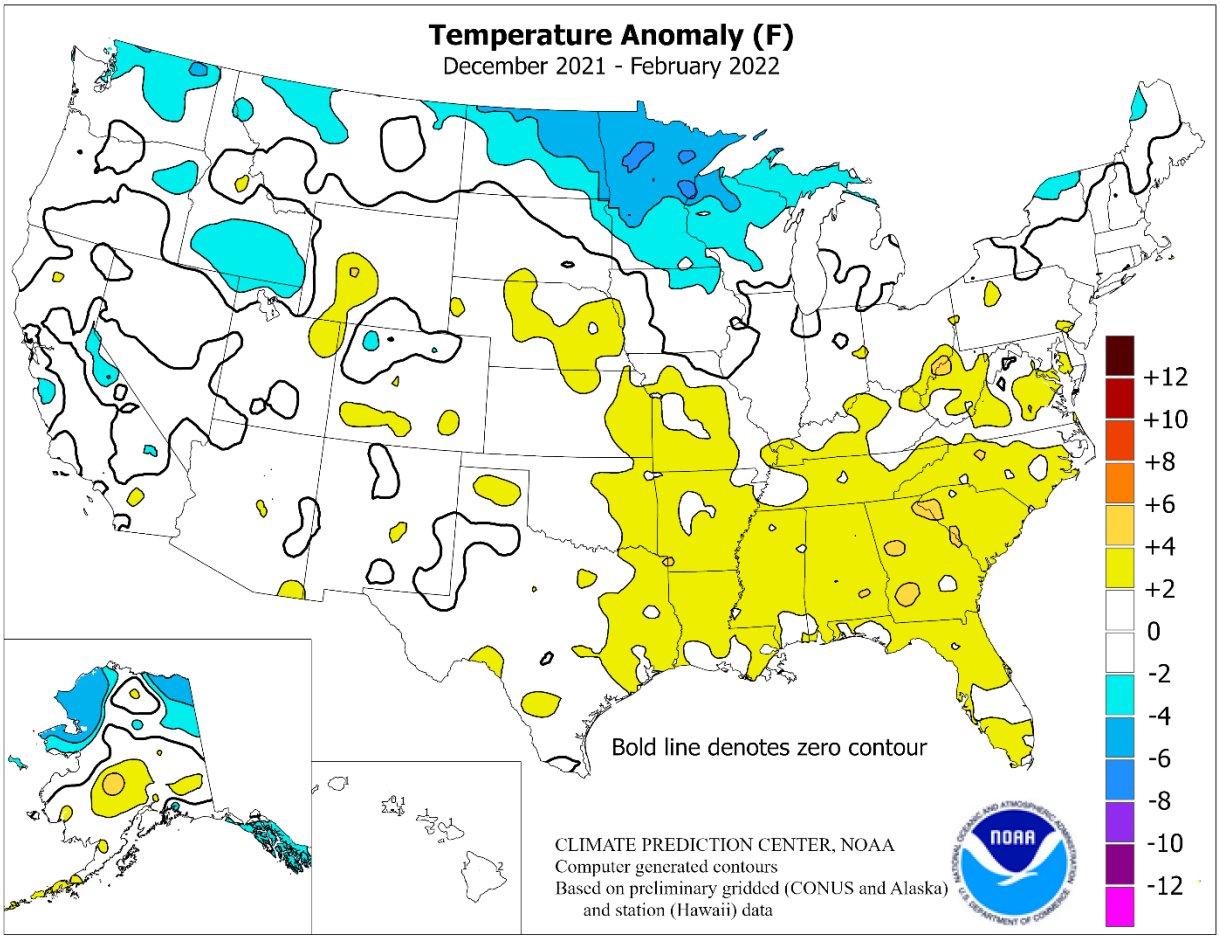

Total Precipitation (inches)
December 2021 - February 2022
24
20
16
12
8
4
2
1
0.5
0
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Gridded data from AHPS acquired
from: water.weather.gov/precip
Station data from CPC
NOAA


Percent of Normal Precipitation
December 2021 - February 2022
400
200
150
125
100
75
50
25
Bold line denotes 100% contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Gridded data from AHPS acquired
from: water.weather.gov/precip
Station data from CPC
Gridded normals: PRISM 1981-2010
NOAA


Extreme Maximum Temperature (F)
December 2021 - February 2022
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (F)
December 2021 - February 2022
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


Average Temperature (F)
December 2021 - February 2022
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
Bold line denotes 40°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


Temperature Anomaly (F)
December 2021 - February 2022
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
Bold line denotes zero contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

National Weather Data for Selected Cities

December 2021 - February 2022

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	22	3	4.67	2.07	WICHITA	37	2	0.97	-2.27	TOLEDO	30	2	15.94	9.16
BARROW	-11	0	6.83	6.35	KY LEXINGTON	37	2	17.45	7.19	YOUNGSTOWN	30	2	10.21	2.56
FAIRBANKS	-2	-4	7.52	5.85	LOUISVILLE	40	3	13.16	2.97	OK OKLAHOMA CITY	42	1	1.61	-3.25
JUNEAU	28	-1	25.44	10.11	PADUCAH	41	4	16.44	4.25	TULSA	43	4	4.75	-1.24
KODIAK	33	2	16.98	-6.20	LA BATON ROUGE	56	0	7.78	-7.50	OR ASTORIA	43	0	30.17	2.86
NOME	6	-1	4.96	1.93	LAKE CHARLES	56	3	4.93	-8.44	BURNS	29	3	2.60	-1.20
AL BIRMINGHAM	50	4	7.56	-6.31	NEW ORLEANS	58	3	8.29	-7.42	EUGENE	42	1	16.00	-4.13
HUNTSVILLE	46	2	18.96	3.44	SHREVEPORT	53	5	6.63	-7.13	MEDFORD	42	1	4.64	-3.27
MOBILE	55	2	8.91	-6.93	MA BOSTON	33	1	9.01	-1.33	PENDLETON	35	0	4.39	0.35
MONTGOMERY	53	5	13.83	-0.97	WORCESTER	29	2	12.07	1.58	PORTLAND	42	0	14.57	0.54
AR FORT SMITH	45	3	10.74	1.92	MD BALTIMORE	39	4	7.07	-2.17	SALEM	43	1	16.85	-0.54
LITTLE ROCK	47	4	13.67	1.49	ME CARIBOU	14	0	8.76	0.61	PA ALLENTOWN	32	2	7.46	-1.79
AZ FLAGSTAFF	31	1	5.72	-0.34	PORTLAND	27	1	10.46	-0.17	ERIE	32	2	11.52	2.50
PHOENIX	59	2	1.92	-0.89	MI ALPENA	21	-1	4.12	-0.62	MIDDLETOWN	35	3	6.65	-1.80
PRESCOTT	40	0	2.76	-0.76	GRAND RAPIDS	26	0	6.76	0.40	PHILADELPHIA	39	3	7.35	-1.83
TUCSON	55	2	1.77	-1.07	HOUGHTON LAKE	21	0	3.90	-0.49	PITTSBURGH	32	1	10.35	2.44
CA BAKERSFIELD	51	2	2.68	-0.76	LANSING	27	2	8.13	3.14	WILKES-BARRE	31	3	6.47	-0.58
EUREKA	46	-2	7.47	-12.78	MUSKEGON	29	1	5.35	-1.05	WILLIAMSPORT	31	2	7.50	-0.44
FRESNO	51	3	3.62	-2.40	TRAVERSE CITY	25	1	2.40	-4.37	RI PROVIDENCE	34	2	10.37	-0.96
LOS ANGELES	58	1	8.35	0.37	MN DULUTH	10	-3	4.66	1.64	SC CHARLESTON	54	4	5.95	-3.76
REDDING	50	4	6.51	-11.22	INT_L FALLS	3	-5	4.18	2.14	COLUMBIA	50	4	9.75	-0.60
SACRAMENTO	48	1	7.05	-3.24	MINNEAPOLIS	16	-2	3.10	0.22	FLORENCE	51	4	8.13	-0.96
SAN DIEGO	57	-1	3.40	-2.38	ROCHESTER	16	0	2.59	-0.41	GREENVILLE	46	2	10.94	-0.93
SAN FRANCISCO	52	1	10.15	-2.17	ST. CLOUD	12	-3	3.39	1.29	SD ABERDEEN	15	0	1.60	0.02
STOCKTON	49	2	3.82	-3.65	MO COLUMBIA	36	4	5.09	-1.51	HURON	19	0	0.60	-1.05
CO ALAMOSA	22	3	0.74	-0.27	KANSAS CITY	35	4	1.87	-2.22	RAPID CITY	26	0	1.08	-0.18
CO SPRINGS	35	4	0.84	-0.30	SAINT LOUIS	37	3	7.60	0.15	SIOUX FALLS	22	3	1.77	-0.11
DENVER INTL	33	2	1.79	0.55	SPRINGFIELD	39	4	6.09	-1.89	TN BRISTOL	41	4	12.69	2.57
GRAND JUNCTION	30	1	2.67	0.96	MS JACKSON	52	4	7.67	-7.23	CHATTANOOGA	46	4	18.56	3.87
PUEBLO	34	2	1.22	0.07	MERIDIAN	52	6	12.33	-3.48	KNOXVILLE	44	3	17.42	4.28
CT BRIDGEPORT	34	1	8.16	-1.00	TUPELO	48	5	17.17	1.43	MEMPHIS	47	4	15.55	1.43
HARTFORD	31	2	9.34	-0.14	MT BILLINGS	27	-1	2.19	0.69	NASHVILLE	44	5	18.20	6.28
DC WASHINGTON	41	3	6.51	-1.96	BUTTE	22	2	1.00	-0.46	TX ABILENE	50	4	2.23	-1.40
DE WILMINGTON	37	3	8.87	-0.24	CUT BANK	21	-2	0.32	-0.42	AMARILLO	41	3	0.48	-1.53
FL DAYTONA BEACH	63	4	5.58	-2.53	GLASGOW	17	1	1.20	0.05	AUSTIN	55	2	6.57	-0.05
JACKSONVILLE	58	3	4.50	-4.75	GREAT FALLS	24	-1	2.33	0.78	BEAUMONT	58	4	3.86	-10.27
KEY WEST	73	2	3.89	-1.86	HAVRE	19	0	1.09	-0.05	BROWNSVILLE	65	3	5.67	2.14
MIAMI	72	2	8.65	2.73	MISSOULA	26	0	3.15	0.49	CORPUS CHRISTI	60	1	3.19	-2.12
ORLANDO	66	4	3.70	-3.56	NC ASHEVILLE	42	3	9.95	-1.04	DEL RIO	59	5	0.41	-1.87
PENSACOLA	58	5	6.41	-7.88	CHARLOTTE	47	5	8.26	-1.67	EL PASO	49	2	1.74	0.04
TALLAHASSEE	56	3	6.35	-6.74	GREENSBORO	44	3	9.35	0.41	FORT WORTH	51	3	6.35	-0.99
TAMPA	67	5	1.66	-5.83	HATTERAS	51	4	12.29	-1.30	GALVESTON	61	5	3.87	0.00
WEST PALM BEACH	70	3	6.30	-2.97	RALEIGH	46	3	8.84	-0.88	HOUSTON	57	3	12.67	2.42
GA ATHENS	49	4	10.76	-1.48	WILMINGTON	52	4	7.61	-3.32	LUBBOCK	44	2	0.54	-1.67
ATLANTA	50	5	14.63	1.87	ND BISMARCK	15	0	1.96	0.47	MIDLAND	47	2	0.30	-1.59
AUGUSTA	52	5	10.72	-0.46	DICKINSON	18	0	0.31	-0.69	SAN ANGELO	50	3	0.46	-2.73
COLUMBUS	53	4	13.93	1.38	FARGO	8	-5	2.91	0.72	SAN ANTONIO	55	2	2.93	-2.51
MACON	52	4	10.15	-2.52	GRAND FORKS	4	-6	2.81	1.11	VICTORIA	58	2	3.97	-2.92
SAVANNAH	55	4	5.02	-4.35	JAMESTOWN	10	-3	0.97	-0.37	WACO	51	3	2.06	-5.41
HI HILO	73	2	32.13	1.74	NE GRAND ISLAND	31	4	0.32	-1.54	WICHITA FALLS	46	3	1.80	-2.72
HONOLULU	74	1	17.57	10.08	LINCOLN	30	3	0.45	-1.95	UT SALT LAKE CITY	33	2	2.33	-1.59
KAHULUI	74	1	7.59	-0.48	NORFOLK	28	3	0.65	-1.48	VA LYNCHBURG	41	4	7.85	-1.40
LIHUE	73	1	14.72	2.63	NORTH PLATTE	30	3	0.83	-0.52	NORFOLK	44	2	7.43	-2.31
IA BURLINGTON	27	-1	1.96	-3.00	OMAHA	29	3	0.91	-1.74	RICHMOND	43	3	7.06	-1.93
CEDAR RAPIDS	21	-1	1.48	-2.11	SCOTTSBLUFF	31	3	1.43	-0.14	ROANOKE	42	3	7.07	-1.63
DES MOINES	26	0	4.35	0.62	VALENTINE	29	5	0.88	-0.34	WASH/DULLES	39	3	6.52	-1.82
DUBUQUE	22	0	2.13	-2.32	NH CONCORD	26	2	10.02	1.52	VT BURLINGTON	23	1	5.87	-0.32
SIOUX CITY	26	3	0.81	-1.30	NJ ATLANTIC_CITY	37	1	10.61	0.91	WA OLYMPIA	40	0	24.86	4.28
WATERLOO	21	0	2.08	-1.00	NEWARK	36	2	7.71	-2.44	QUILLAYUTE	40	-2	37.15	-0.80
ID BOISE	32	-1	2.78	-1.05	NM ALBUQUERQUE	39	1	0.47	-0.96	SEATTLE-TACOMA	40	-2	16.40	1.99
LEWISTON	36	0	3.36	0.45	NV ELY	27	0	2.35	0.28	SPOKANE	30	0	4.27	-1.17
POCATELLO	25	-1	2.34	-0.89	LAS VEGAS	51	1	0.33	-1.51	YAKIMA	32	0	1.81	-1.71
IL CHICAGO/O_HARE	29	2	5.67	-0.09	RENO	38	1	3.33	0.21	WI EAU CLAIRE	15	-2	0.33	-2.46
MOLINE	27	1	4.07	-1.22	WINNEMUCCA	32	1	2.55	0.01	GREEN BAY	21	1	2.19	-1.57
PEORIA	29	1	4.65	-1.35	NY ALBANY	28	2	15.30	7.63	LA CROSSE	20	-1	2.57	-0.98
ROCKFORD	26	1	3.95	-0.81	BINGHAMTON	25	1	7.96	0.44	MADISON	22	1	2.56	-1.85
SPRINGFIELD	32	2	2.43	-3.71	BUFFALO	29	2	9.12	-0.39	MILWAUKEE	27	2	3.65	-1.77
IN EVANSVILLE	37	2	14.80	4.83	ROCHESTER	27	0	8.10	1.14	WV BECKLEY	37	3	11.33	2.80
FORT WAYNE	29	1	7.66	0.58	SYRACUSE	28	2	6.83	-0.94	CHARLESTON	38	2	13.21	3.81
INDIANAPOLIS	33	2	9.67	1.59	OH AKRON-CANTON	31	3	11.19	3.47	ELKINS	34	3	11.00	1.46
SOUTH BEND	28	1	7.65	0.83	CINCINNATI	36	2	11.97	2.87	HUNTINGTON	39	3	13.74	4.44
KS CONCORDIA	34	4	0.50	-1.78	CLEVELAND	31	1	8.07	-0.02	WY CASPER	27	2	2.31	0.72
DODGE CITY	35	1	0.62	-1.53	COLUMBUS	33	1	13.01	5.11	CHEYENNE	30	1	1.58	0.21
GOODLAND	32	1	1.07	-0.33	DAYTON	33	3	11.63	3.63	LANDER	27	5	1.83	0.22
TOPEKA	35	3	1.24	-2.33	MANSFIELD	30	2	13.19	4.68	SHERIDAN	27	2	2.19	0.52

Based on 1981-2010 normals

***** Not Available**

International Weather and Crop Summary

March 13-19, 2022

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

HIGHLIGHTS

EUROPE: Moderate to heavy rain further eased lingering deficits in Spain, while warmer weather renewed winter crop development over much of central and northern Europe.

MIDDLE EAST: Unseasonably cold weather intensified in Turkey and expanded eastward into Iraq as well as western and northern Iran.

NORTHWESTERN AFRICA: Widespread soaking rainfall provided late-season moisture for drought-afflicted winter grains in Morocco but further boosted wheat and barley prospects in Algeria and Tunisia.

EAST ASIA: Unseasonably high temperatures in China promoted winter and spring crop development but increased moisture demands.

SOUTHEAST ASIA: Showers throughout the region boosted moisture reserves for the next cycle of seasonal rice.

AUSTRALIA: Showers were more widely scattered in the east, aiding summer crop drydown and harvesting.

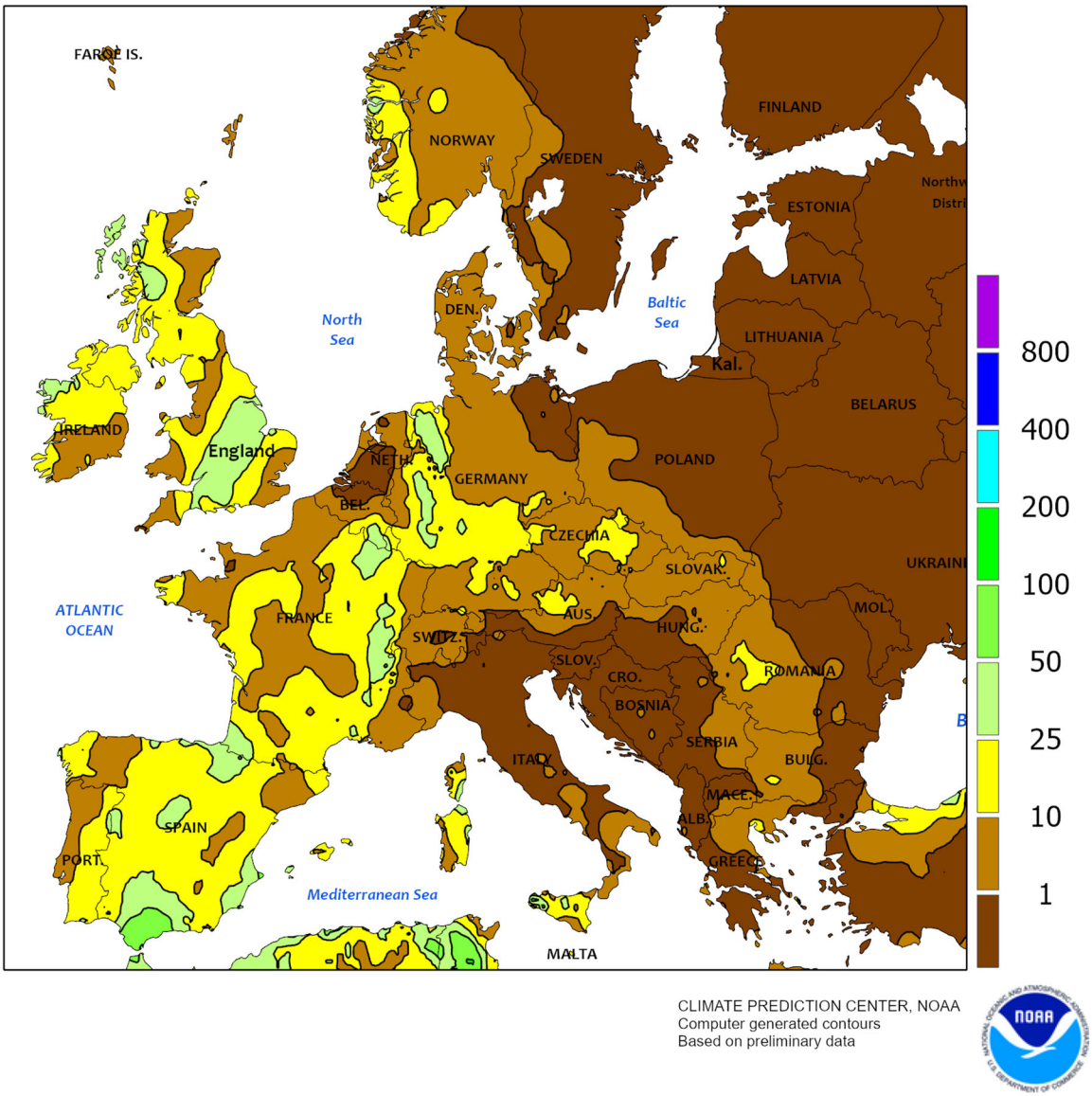
SOUTH AFRICA: Mild, showery weather maintained overall favorable conditions for immature corn.

ARGENTINA: Generally cool, overall drier conditions prevailed.

BRAZIL: Rain maintained generally favorable prospects for second-crop corn and cotton.

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

EUROPE
Total Precipitation(mm)
March 13 - 19, 2022

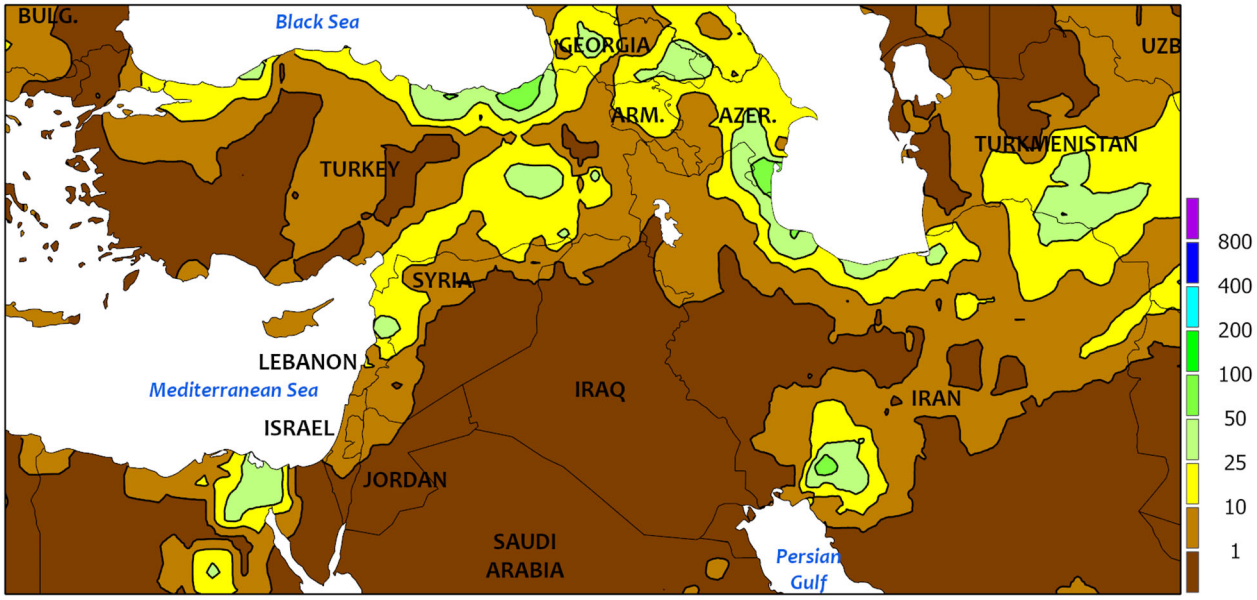


EUROPE

Locally heavy rain further eased lingering drought in Spain, while dry weather over eastern Europe contrasted with showers in western growing areas. Moderate to heavy showers (10-50 mm) over central and northern portions of the Iberian Peninsula maintained or boosted soil moisture for greening to vegetative winter grains. In previously drought-stricken Andalucía (southern Spain), heavy to excessive rainfall (25-130 mm) eased lingering long-term precipitation deficits and improved summer crop irrigation prospects. In contrast, short-term dryness in Italy continued to reduce topsoil moisture for greening to vegetative wheat and barley. Farther north, warmer temperatures (2-5°C above normal) over much of central and northern Europe allowed winter crop green up (east) and vegetative development (west) to resume following recent chilly weather. However, cold conditions (up to 7°C below normal) lingered over Greece and the Balkans. Widespread showers over western Europe (2-25 mm, but up to 45 mm in England) improved topsoil moisture for winter wheat, barley, and rapeseed, while dry weather favored seasonal fieldwork in eastern Europe outside of a north-south ribbon of rain and snow (1-10 mm liquid equivalent) from northern Greece into Slovakia.

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

MIDDLE EAST
Total Precipitation(mm)
March 13 - 19, 2022



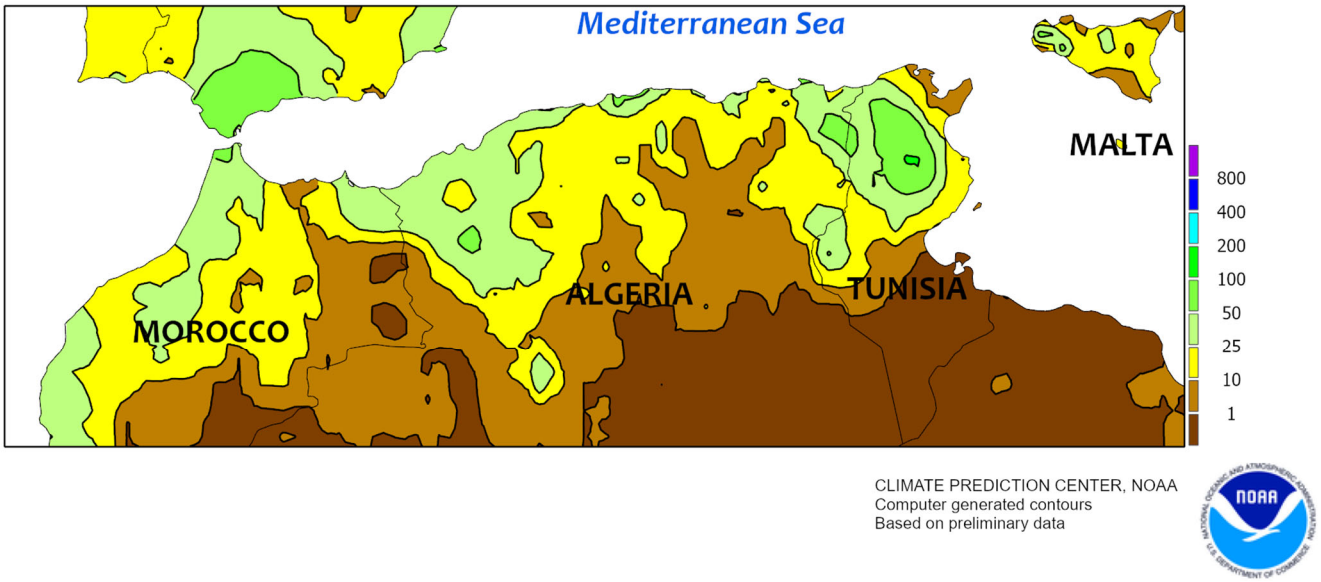
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

MIDDLE EAST

The cold snap which began last week over Turkey intensified and expanded eastward. Temperatures in Turkey averaged 10 to 13°C below normal on the Anatolian Plateau, with somewhat lesser anomalies (4-8°C below normal) rimming the country's coastal perimeter. Despite the bitter cold (as low as -13°C in central Turkey), a shallow to moderate snow cover protected most wheat and barley from burnback or winterkill. Another round of moderate to heavy rain in southeastern Turkey's GAP Region (10-30 mm) further eased this important growing area out of drought, while additional heavy snow in the Armenian Highlands (locally more than 100 mm liquid equivalent) boosted spring runoff prospects for summer crop irrigation. The unusually cold weather (4-8°C below normal) expanded eastward and included locales from the eastern Mediterranean Coast into western and northern Iran. Freezes were common, though nighttime lows of -4 to -2°C did not pose a significant risk to vegetative winter grains in the climatologically warmer coastal and southern croplands. Rain and mountain snow accompanied the cold from coastal Syria into Lebanon (7-30 mm) in addition to Iran's southwestern (4-50 mm) and northern (3-50 mm, locally more near the Caspian Sea Coast) growing areas. Moisture supplies across the region have improved considerably for spring growth following autumn drought.

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

NORTHWESTERN AFRICA
Total Precipitation(mm)
March 13 - 19, 2022

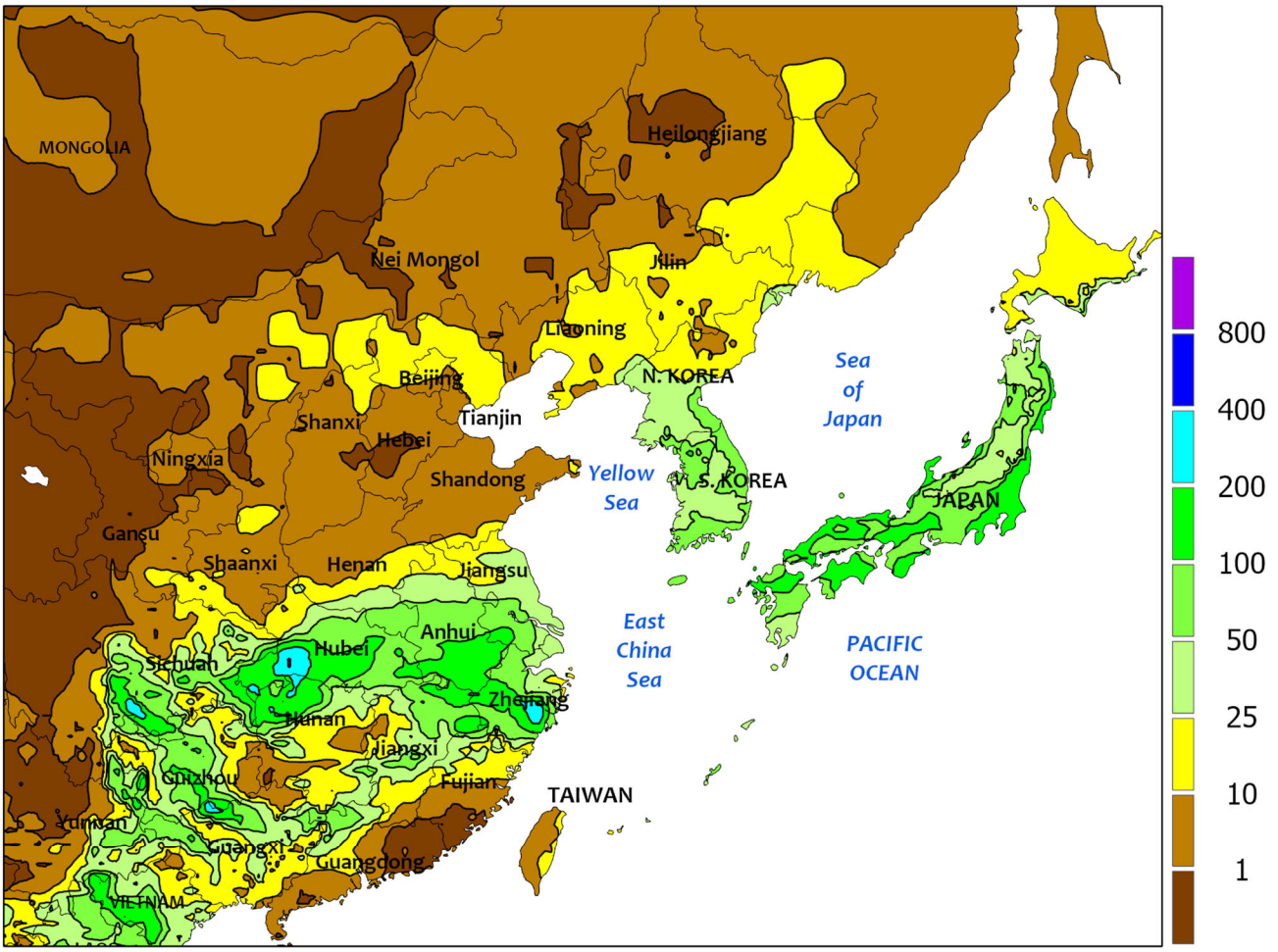


NORTHWESTERN AFRICA

Expanding and intensifying rainfall stabilized (west) or boosted (east) winter grain prospects across the region. Following recent highly variable showers in Morocco, a more widespread soaking rainfall (10-45 mm) this past week provided sorely needed moisture for winter grains, though the impacts of this season's historic drought remained largely irreversible. However, yield prospects for winter wheat and barley in Morocco stabilized — or perhaps even improved — where crops had not yet progressed into the filling stages of development. However, all of Morocco's growing areas remained mired in the driest winter crop growing campaign (September – May) over the past 30 years despite this past week's rain. In Algeria and Tunisia, another round of moderate to heavy showers (10-60 mm most areas) boosted soil moisture for winter grains approaching reproduction on the cooler Hautes Plateau and progressing through the heading and flowering stages of development closer to the coast and in the west. The last three weeks of well-timed rain have vastly improved wheat and barley prospects across Algeria and Tunisia.

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

EASTERN ASIA
Total Precipitation(mm)
March 13 - 19, 2022



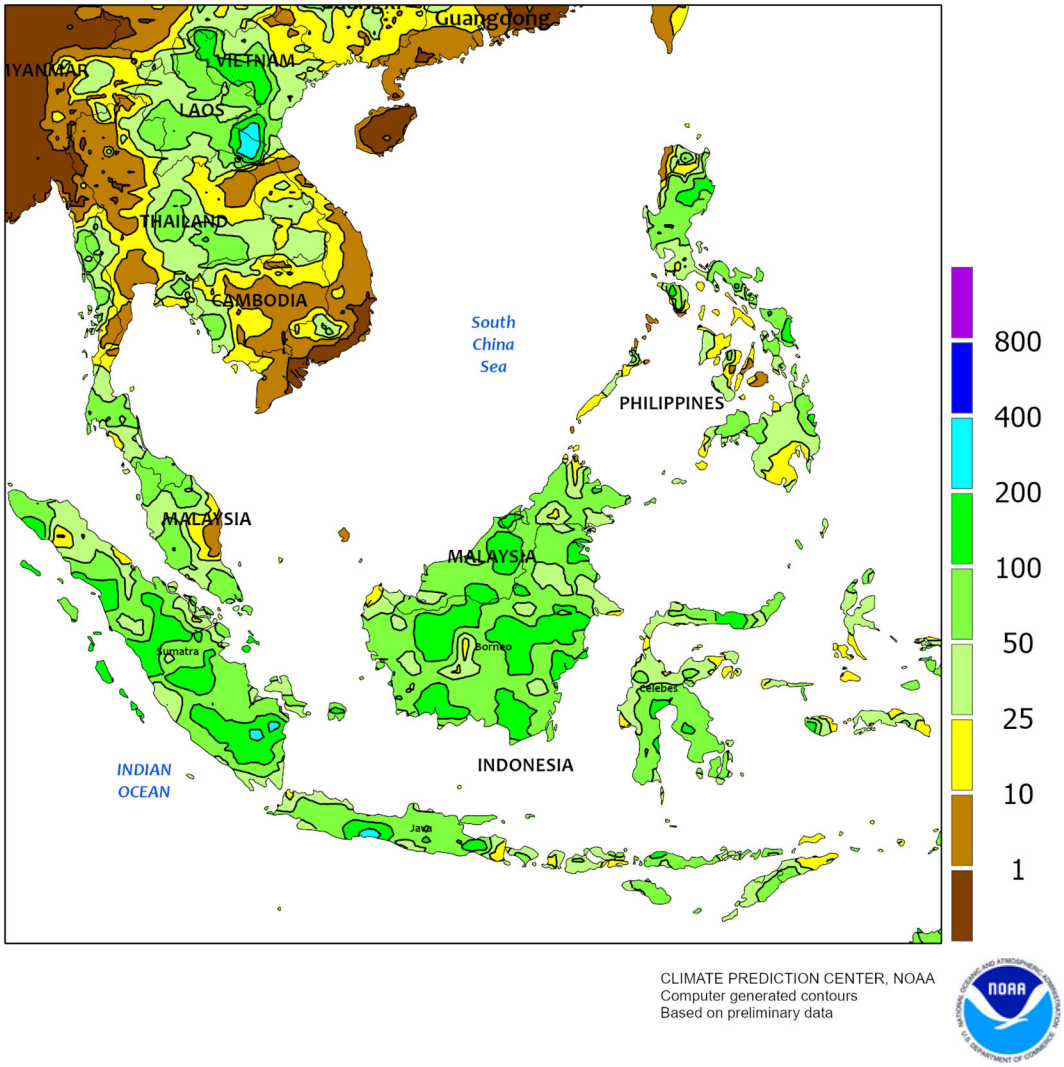
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

EASTERN ASIA

Much-warmer-than-normal weather at the beginning of the week in eastern and southern China was followed by showers and cooler weather by mid-week. Early spring heat engulfed much of China with temperatures averaging up to 11°C above normal in some locales in the southwest. The continued unseasonably high temperatures have set the month as the warmest March in the last 30 years. The conditions promoted rapid vegetative development of winter and spring crops but also increased water demands. By mid-week, however, showers (less than 10 mm in wheat areas, upwards of 100 mm for rapeseed and rice) brought needed moisture and lower temperatures (nearly 15°C cooler in some areas). In other parts of the region, warmth along with widespread rain (25-100 mm or more) facilitated rice sowing along southern portions of the Korean Peninsula and the southern half of Japan.

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

SOUTHEAST ASIA
Total Precipitation(mm)
March 13 - 19, 2022

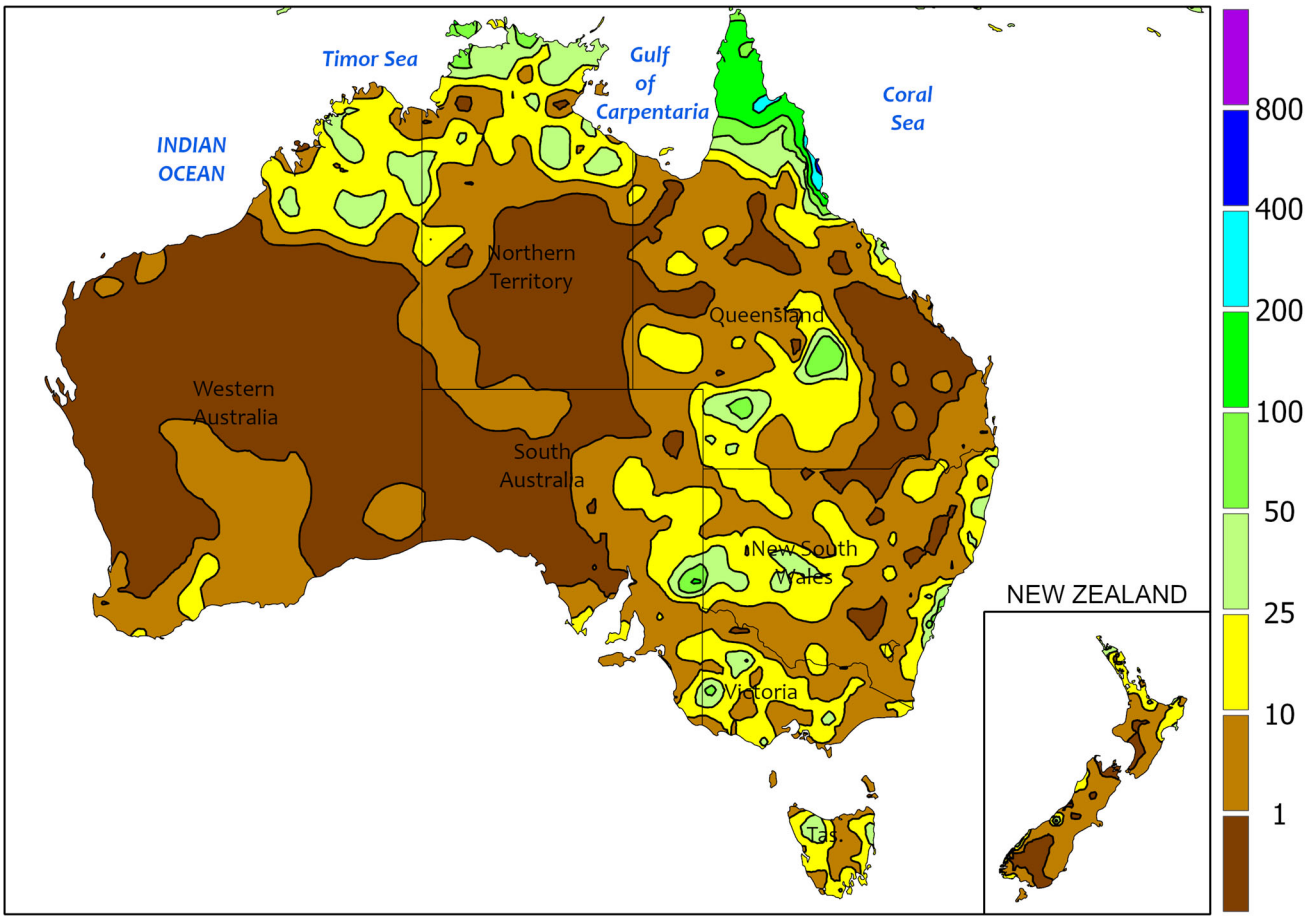


SOUTHEAST ASIA

Rainfall prevailed across much of the region, with the seasonably wetter south receiving the highest totals. Late-season showers (25-100 mm) in southern Indonesia (Java) maintained one of the wettest water years (August-July) in the last 30 years (third wettest with over 1,700 mm) and ensured ample irrigation reserves for dry-season rice and other crops sown in the coming weeks. Continued wet weather has also sustained good moisture conditions for oil palm in other parts of Indonesia and neighboring Malaysia. Elsewhere, heat was building across Thailand and its neighbors earlier than normal as temperatures soared to 40°C in some western sections, causing stress to second-crop rice and other crops. Typically, these temperatures are not achieved until mid-April.

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

AUSTRALIA
Total Precipitation(mm)
March 13 - 19, 2022



Gridded data from the Australian Bureau of Meteorology: www.bom.gov.au/
Creative Commons License found at:
https://creativecommons.org/licenses/by/3.0/au/legalcode

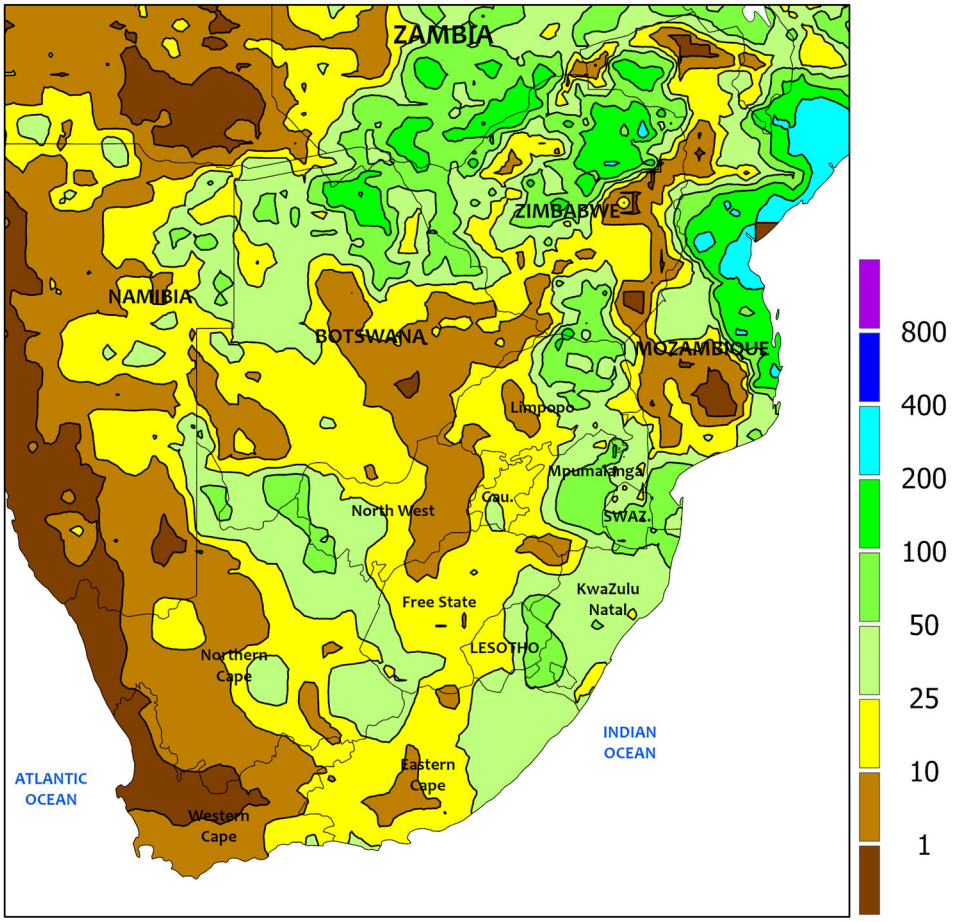
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

AUSTRALIA

In the wake of last week's widespread rain, showers were more widely scattered across eastern Australia. In major summer crop producing areas of New South Wales, rainfall amounts approached 25 mm in the wettest areas, while lesser amounts were observed in most other locations. Farther north, mostly dry (less than 5 mm) weather benefited cotton and sorghum in southern Queensland, aiding drydown of mature crops and helping the harvest gain momentum. Additionally, the drier weather helped reduce local flooding, which lingered in only a few locations as swollen rivers continued to recede. Temperatures averaged near to below normal (up to 2ºC below normal) in eastern Australia, with maximum temperatures mostly in the upper 20s and lower 30s (degrees C).

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

SOUTH AFRICA
Total Precipitation(mm)
March 13 - 19, 2022

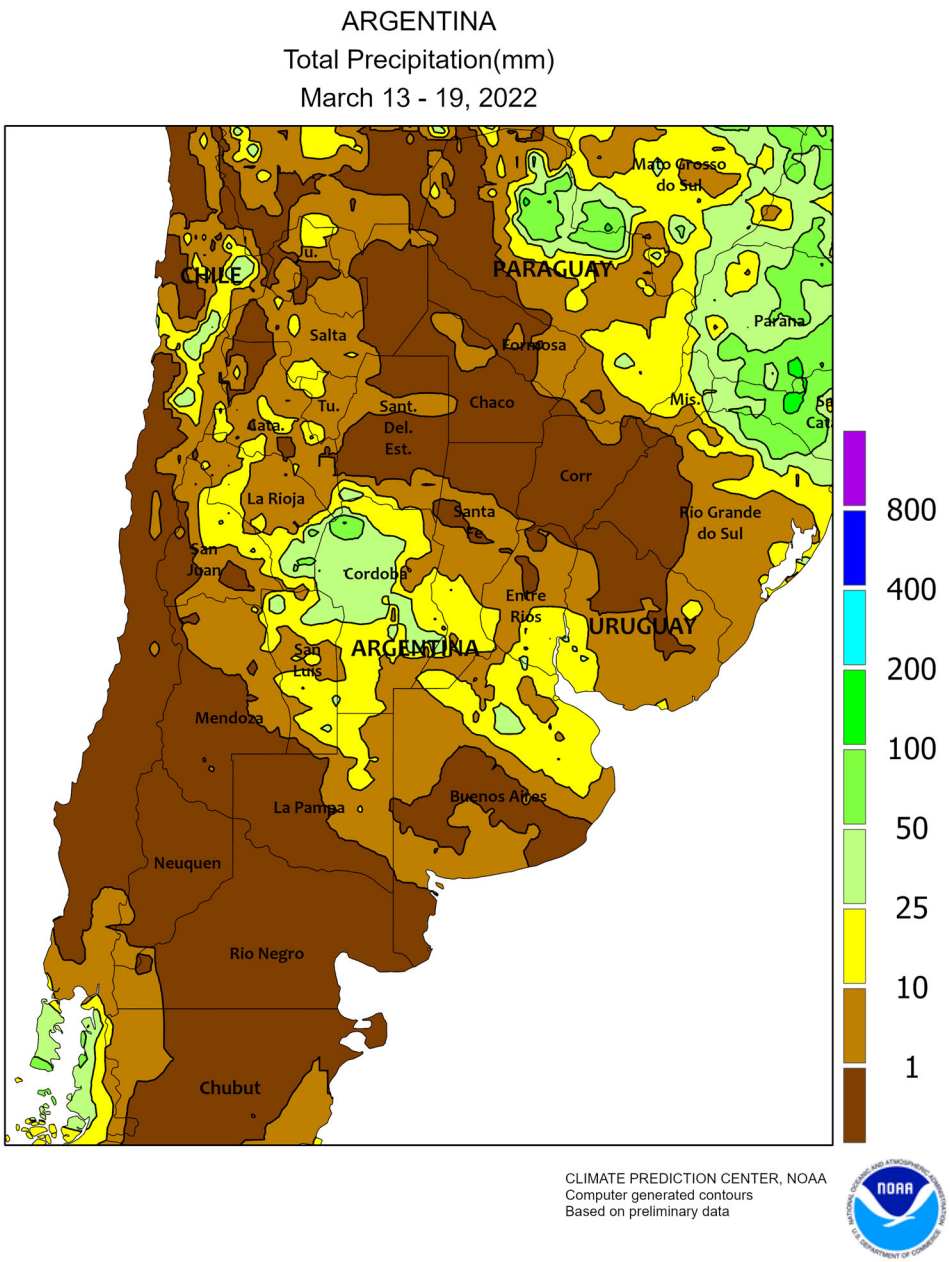


CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

SOUTH AFRICA

Mild, showery weather maintained overall favorable conditions for corn and other summer crops in many major eastern farming areas. Rainfall totaled 25 to 50 mm – locally higher – from eastern Limpopo southward through KwaZulu-Natal and neighboring locations in Eastern Cape. Drier conditions (rainfall totaling as little as 3 mm) prevailed from western Limpopo southward through central Free State, while heavier rain (25-85 mm) fell at the western edge of the corn belt and in farming areas of the Orange River Valley (northeastern sections of Northern Cape). Meanwhile, mostly dry, sunny weather prevailed in tree and vine crop areas of Western Cape. Near- to below-average temperatures (highest daytime temperatures ranging from the middle and upper 20s to the lower 30s degrees C) favored growth of rain-fed summer crops in the absence of stressful heat.

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

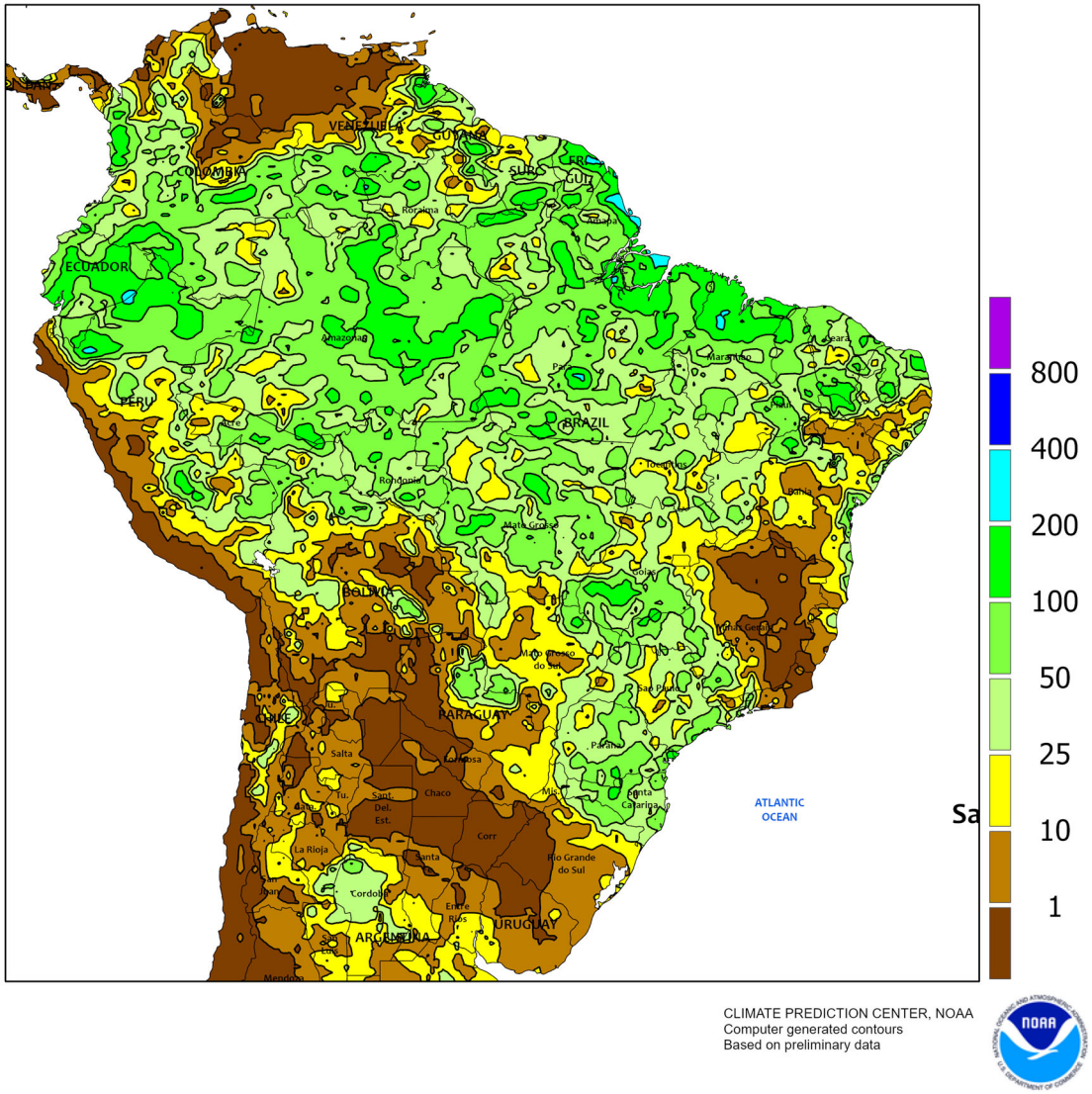


ARGENTINA

Cooler, albeit considerably drier weather lowered moisture demands and growth rates of summer grains, oilseeds, and cotton throughout the main agricultural districts. Moderate to locally heavy showers (rainfall totaling 10-25 mm) were mostly confined to locations stretching from northern Cordoba to northern Buenos Aires and southern Uruguay. Lighter rain (less than 10 mm) fell farther south, while much of northern Argentina (Salta eastward through Corrientes) was completely dry. Weekly temperatures averaged near to below normal nearly nationwide, although daytime highs reached the middle and upper 30s (degrees C) in far northern production areas (Formosa and environs). Highest daytime temperatures in central Argentina reached the lower 30s; nighttime lows dropped below 10°C throughout the region, though frost – if any – was likely confined to traditionally cooler locations in southern Buenos Aires. According to the government of Argentina, sunflowers were 38 percent harvested as of March 17, 19 points behind last year's pace; harvesting was 18 percent completed in Buenos Aires, Argentina's largest producer, compared with 43 percent last year.

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

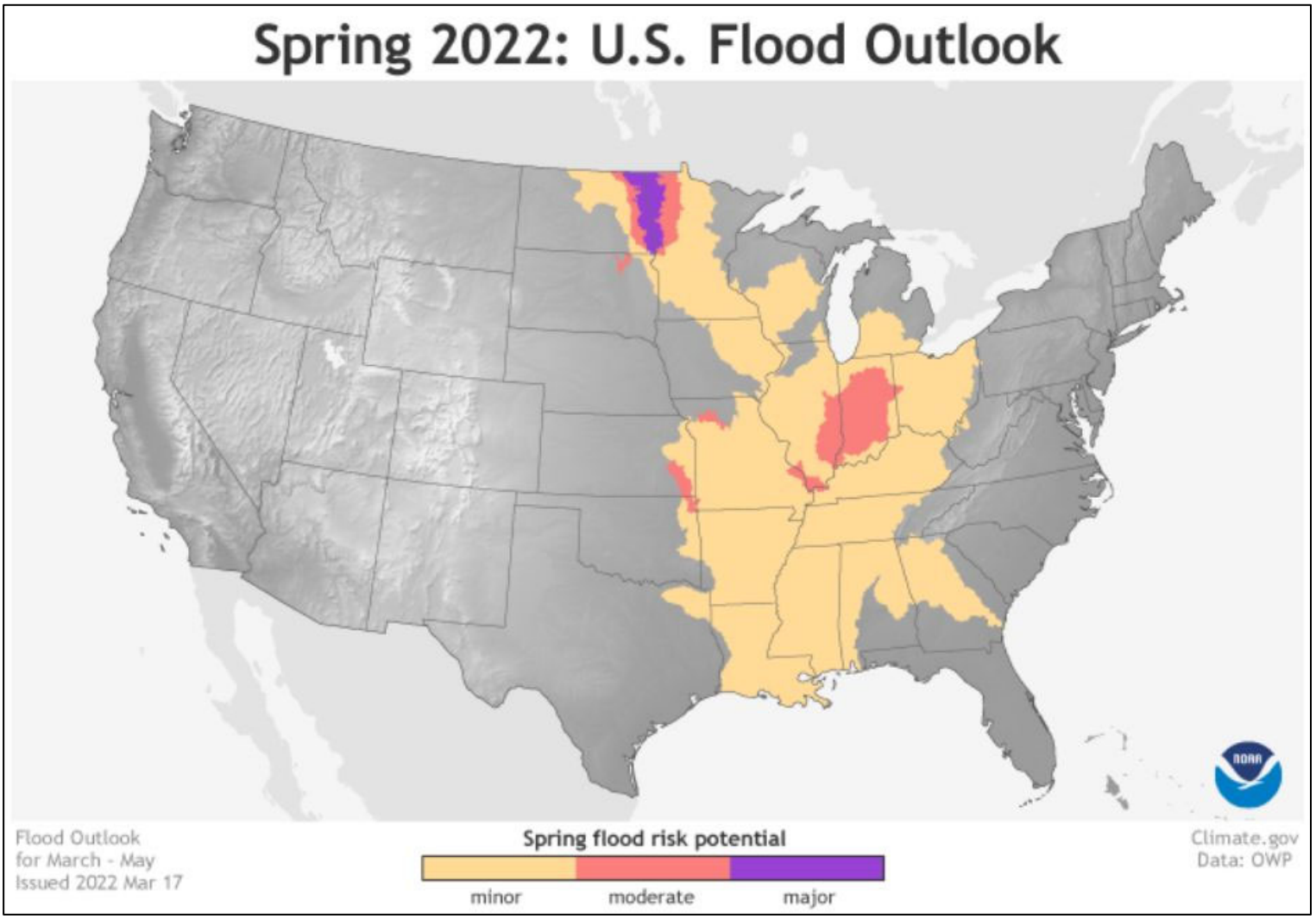
BRAZIL
Total Precipitation(mm)
March 13 - 19, 2022



BRAZIL

Moderate to heavy showers overspread much of the south, bringing additional drought relief to immature summer crops. The heaviest rainfall (25-50 mm) spanned farming areas from Paraná to southwestern Minas Gerais, benefiting corn and specialty crops, including sugarcane and coffee. Pockets of dryness (rainfall totaling below 10 mm) persisted, however, in Mato Grosso do Sul and Rio Grande do Sul, where moisture remained limited for crops that included late-planted soybeans and second-crop corn. According to the government of Paraná, first-crop corn and soybeans were 75 and 68 percent harvested, respectively, as of March 14, with 87 percent of the second corn crop planted. In Rio Grande do Sul, corn was 68 percent harvested as of March 17, with only 13 percent of the crop still immature; meanwhile, 9 percent of soybeans have been harvested and 53 percent of the crop was in flowering to filling stages of development. Abundant rainfall (25-100 mm, locally higher) covered key farming areas farther north (Mato Grosso and Goiás northeastward into Maranhão), maintaining favorable prospects for second-crop corn and cotton. According to the government of Mato Grosso, soybeans were 97 percent harvested as of March 11, 6 points ahead of the 5-year average pace, and corn was 98 percent planted, 2 points above average. Weekly average temperatures were within 1°C of normal in nearly every major Brazilian farming area, with highest daytime temperatures mostly reaching the lower and middle 30s (degrees C).

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



The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. The contents may be redistributed freely with proper credit.

Correspondence to the meteorologists should be directed to:
***Weekly Weather and Crop Bulletin*, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**
Internet URL: **www.usda.gov/oce/weather-drought-monitor**
E-mail address: ***brad.rippey@usda.gov***

An archive of past Weekly Weather and Crop Bulletins can be found at **https://usda.library.cornell.edu/**, keyword search "*Weekly Weather and Crop Bulletin*".