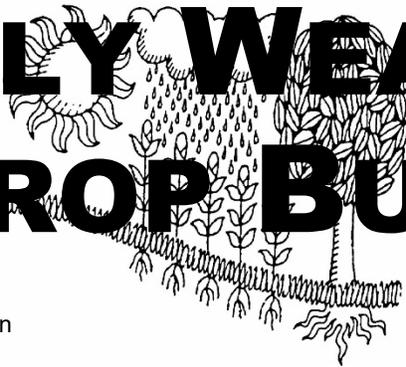
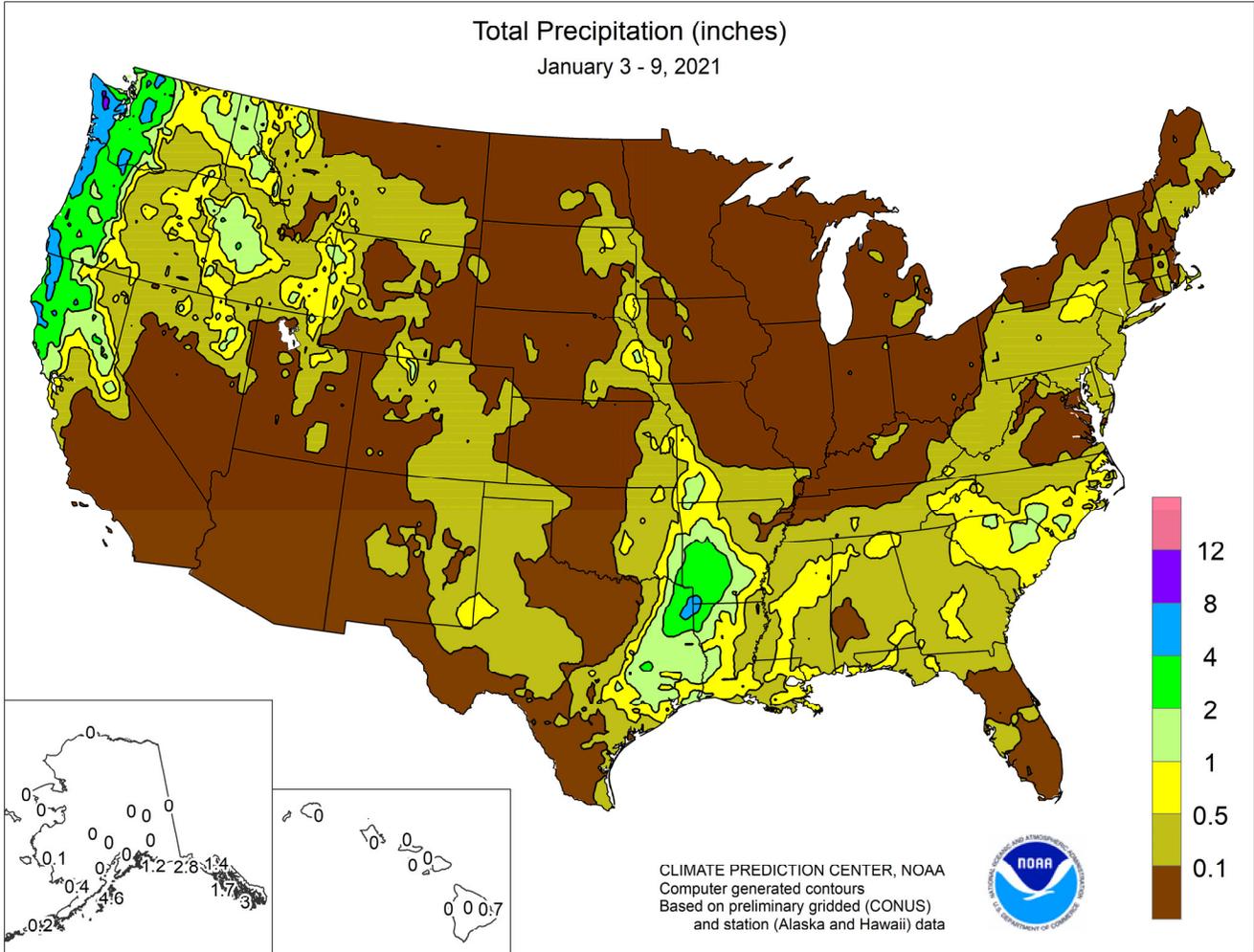


WEEKLY WEATHER AND CROP BULLETIN



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

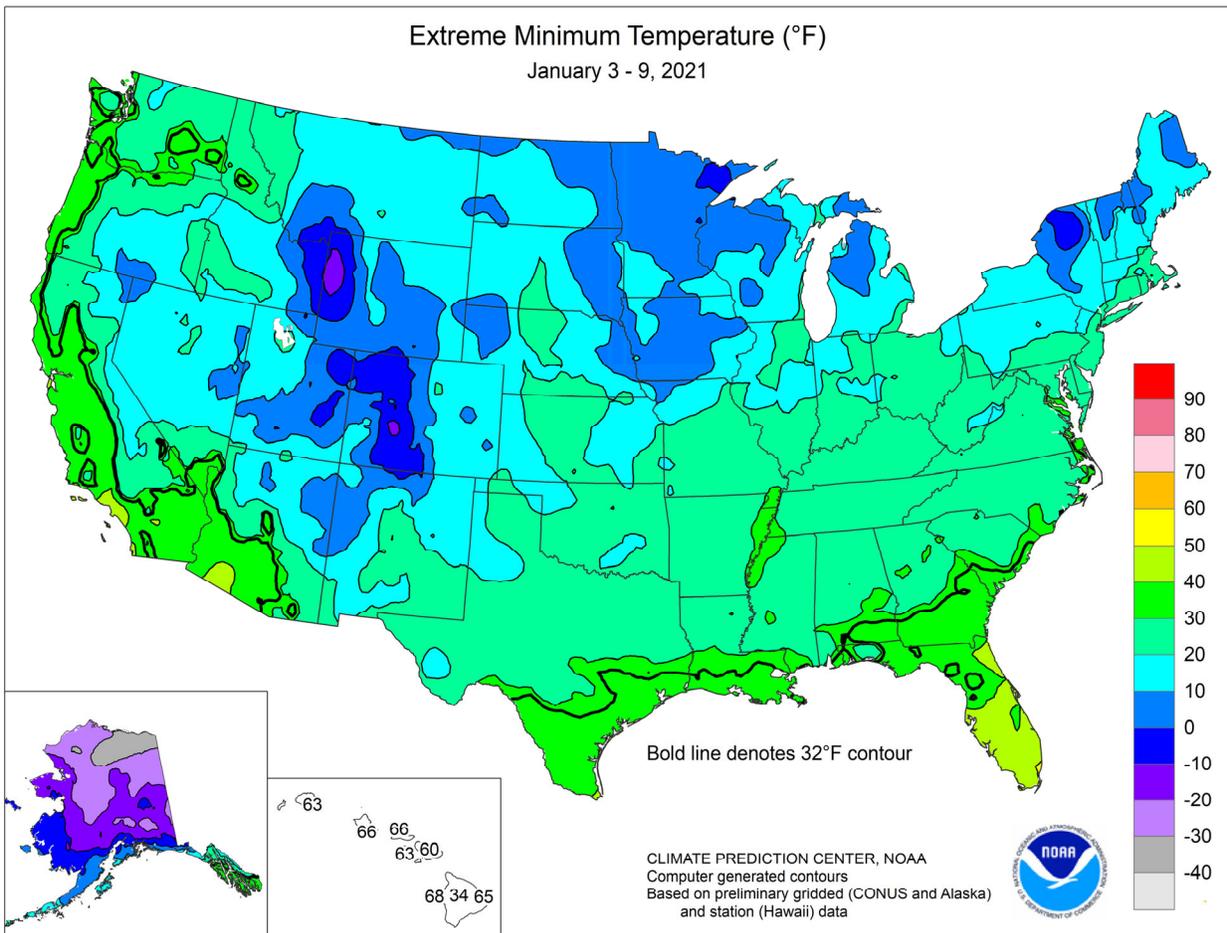
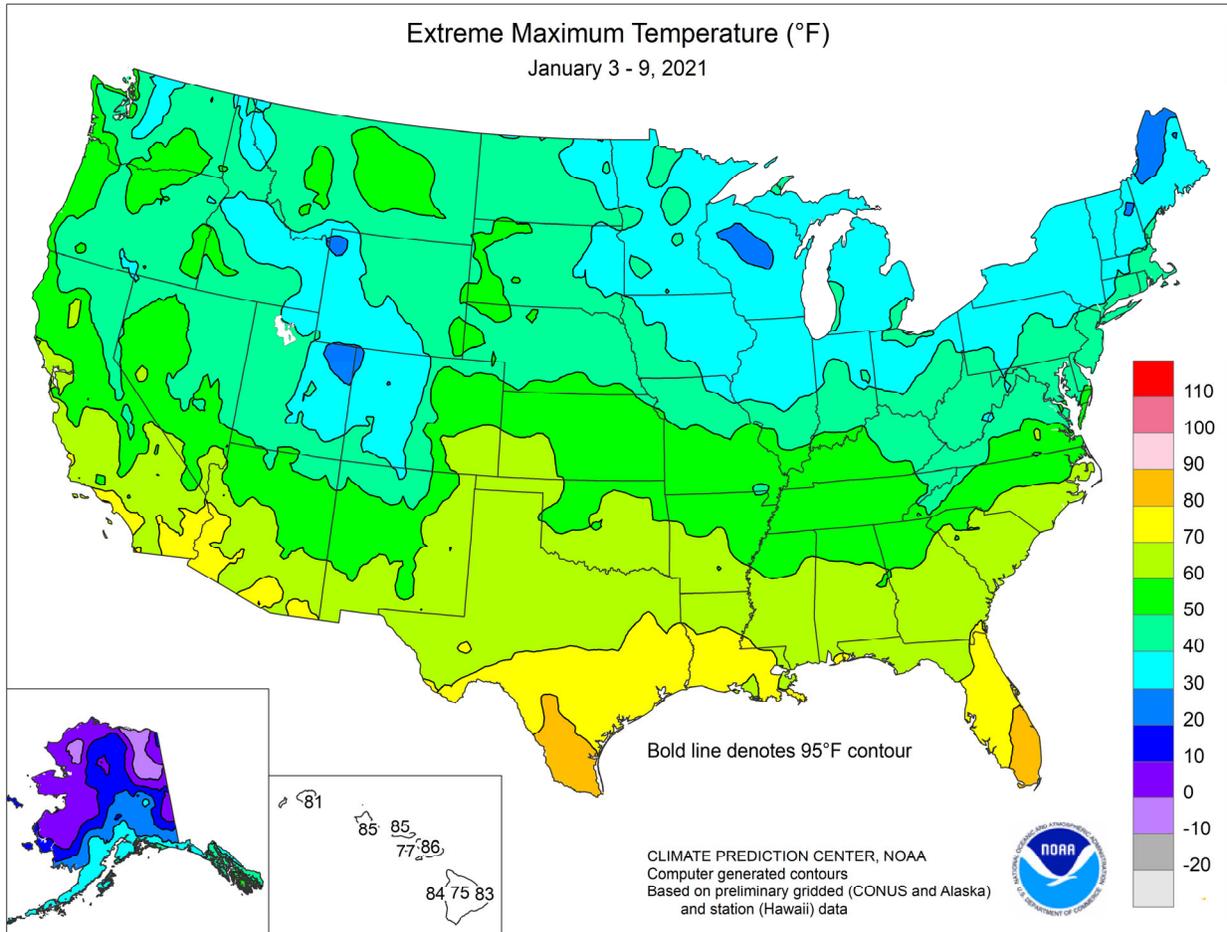
January 3 – 9, 2021

Highlights provided by USDA/WAOB

Large sections of the country, including much of the **Southwest, Plains, Midwest, and Northeast**, experienced dry weather. Late in the week, however, a developing storm system across **southern sections of the Rockies and Plains** produced some snow, much of which fell on January 10. Farther east, a storm system crossing the **South** sparked some rain and snow, mainly on January 6-7. The storm was not well organized, though, with rainfall in excess of 2 inches mostly limited to the **Arklatex region**. Elsewhere, a train of **Pacific** storms clipped the

Contents	
Extreme Maximum & Minimum Temperature Maps.....	2
Temperature Departure Map.....	3
January 5 Drought Monitor & Snow Cover Map.....	4
Satellite Images of Pacific Storminess and Southern Snow	5
National Weather Data for Selected Cities.....	6
December Weather Summary	9
December Precipitation & Temperature Maps	13
December Weather Data for Selected Cities	16
International Weather and Crop Summary.....	17
Bulletin Information &	
U.S. Crop Production Highlights	26

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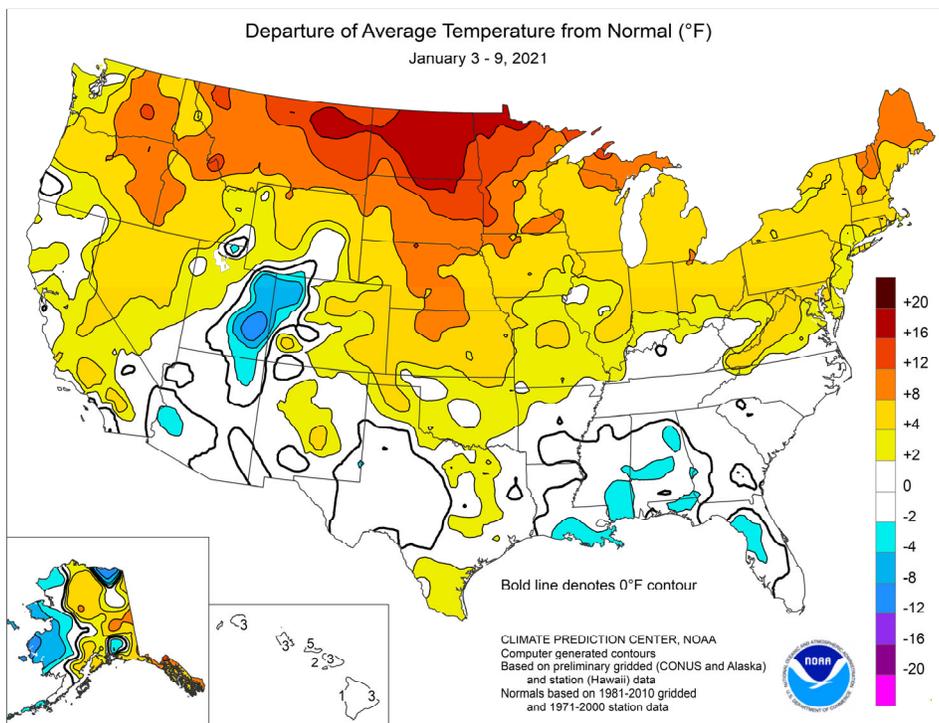


(Continued from front cover)

Northwest, delivering widespread rain and snow from the **Cascades** westward. Periodically, precipitation pushed as far inland as the **northern High Plains** and as far south as **northern California**. Arctic air was again blocked from reaching the **United States**, resulting in near- or above-normal temperatures across most of the country. Pockets of cooler-than-normal conditions were mostly confined to the **central Rockies** and environs. The warmest weather, relative to normal, again affected the **nation's northern tier**. Weekly temperatures averaged 10 to 20°F above normal from **northern Montana** to **Lake Superior**, including parts of the **Dakotas**.

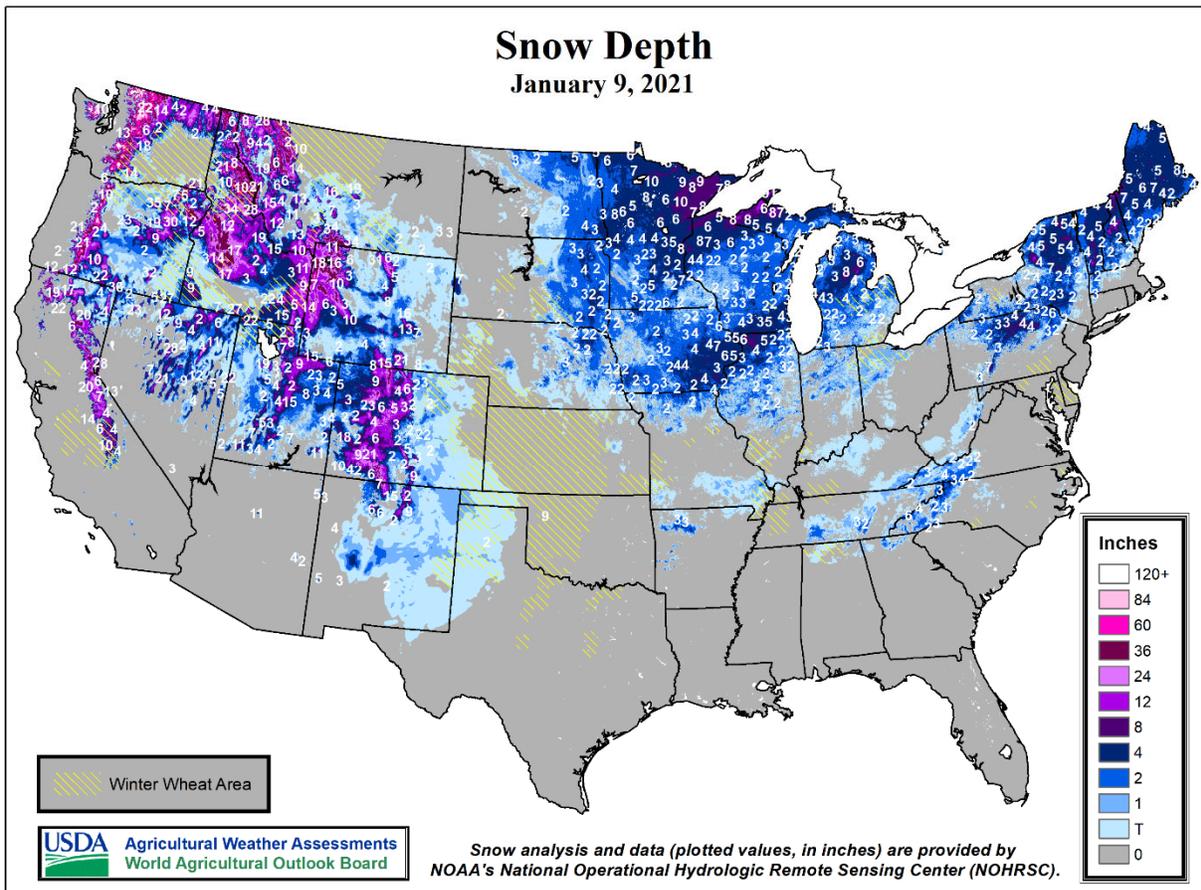
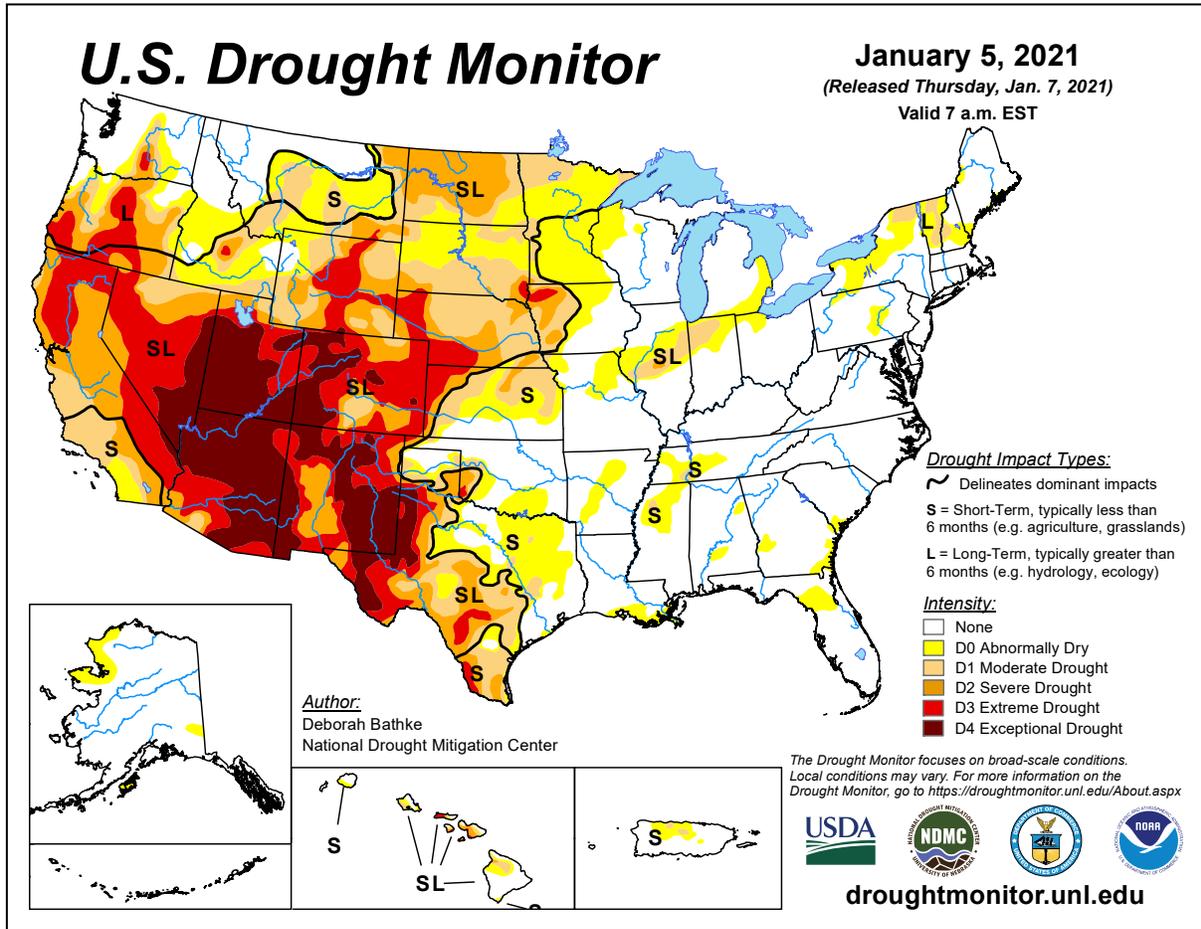
With **Arctic** air bottled up, far away from the **Lower 48 States**, there were few temperature records set in early January. In **western Montana**, the **Bozeman Yellowstone International Airport** posted a daily-record high of 50°F on January 3. **Bozeman** had not attained a 50-degree reading in January since January 26, 2015. On January 4 in **Minnesota**, daily-record highs included 39°F in **Hibbing** and 38°F in **International Falls**. Late in the week, dry air settled across **California** and the **Southwest**, contributing to large diurnal temperature variations. On January 8, **Santa Barbara, CA**, notched a daily-record high of 79°F—a sharp rise from that morning's low of 36°F. Similarly, **Ramona, CA**, began a string of days with high temperatures above 70°F, starting on the 6th, but also notched a daily record-tying low of 24°F on January 9.

Extremely tranquil weather prevailed in many areas of the country during the first 9 days of January. From January 1-9, no measurable snow fell in locations such as **Des Moines, IA**, and **Minneapolis-St. Paul, MN**, although upper Midwestern snow remained on the ground in the wake of late-December storms. In the **West**, precipitation occasionally reached as far south as **northern California**, where **Alturas** netted a daily-record total of 0.50 inch on January 4. By week's end, however, the average water equivalency of the high-



elevation **Sierra Nevada** snowpack stood at just 6 inches, one-half of normal for January 10 and barely one-fifth of the typical seasonal peak. Around mid-week, a storm system produced locally heavy rain in the **South**, where January 6-7 rainfall in **Arkansas** totaled 2.69 inches in **Texarkana** and 2.26 inches in **De Queen**. At week's end, a storm system emerging from the **central and southern Rockies** began to produce heavy snow, with the bulk of the precipitation in **Texas** falling on January 10. A day earlier, on the 9th, snowfall in **Colorado** had totaled 2.2 inches in **Colorado Springs** and 2.0 inches in **Pueblo**.

Highly variable temperatures prevailed in **Alaska**, with the coldest weather focused across the **state's western tier**. Meanwhile, significant precipitation was mostly confined to **Alaska's southern tier**. **Kodiak** received measurable precipitation on each of the first 9 days of the month, totaling 6.06 inches. On January 2-3, **Juneau** measured 4.0 inches of snow, which completely melted by the 6th amid much milder weather. In **southeastern Alaska**, wind gusts were clocked to 65 mph (on January 6) in **Sitka** and 64 mph (on January 8) in **Ketchikan**. Farther south, warm, mostly dry weather prevailed in **Hawaii**. On January 7, daily-record highs were tied in **Kahului, Maui** (87°F), and **Honolulu, Oahu** (85°F). Through January 9, month-to-date rainfall at the state's major airport observation sites ranged from 0.02 inch (2 percent of normal) in **Honolulu** to 2.03 inches (80 percent) in **Hilo**, on the **Big Island**.



weather.msfc.nasa.gov

6 Jan 2021
15:40 UTC



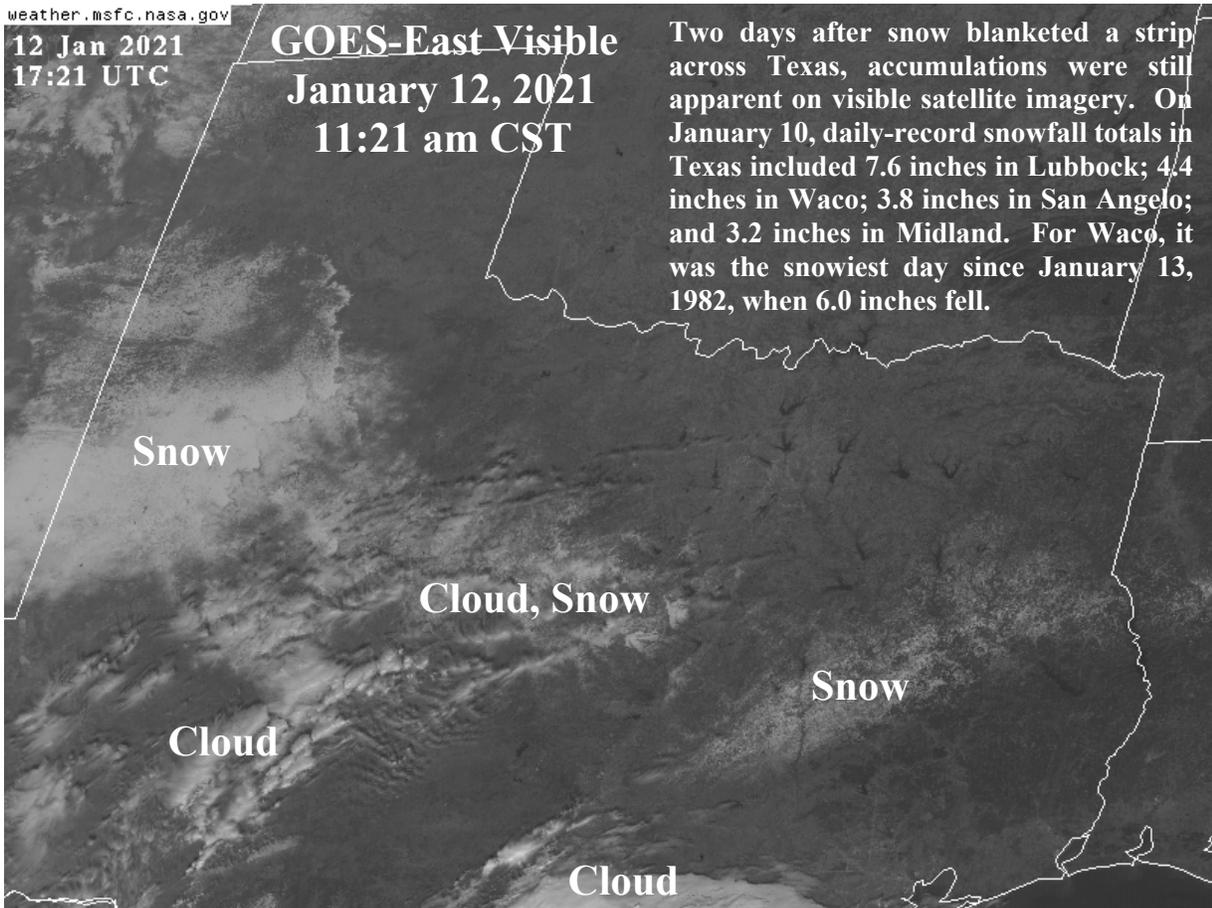
GOES-West IR
January 6, 2021
7:40 am PST

Consistent with La Niña, most of this winter's storms have affected the northern Pacific Coast of the United States and western Canada. Meanwhile, winter storminess has largely bypassed southern California and the Southwest, allowing drought to expand and intensify. According to the January 5 *U.S. Drought Monitor*, drought covered 78 percent of the western U.S. but less than 16 percent of Washington State.

weather.msfc.nasa.gov

12 Jan 2021
17:21 UTC

GOES-East Visible
January 12, 2021
11:21 am CST



Two days after snow blanketed a strip across Texas, accumulations were still apparent on visible satellite imagery. On January 10, daily-record snowfall totals in Texas included 7.6 inches in Lubbock; 4.4 inches in Waco; 3.8 inches in San Angelo; and 3.2 inches in Midland. For Waco, it was the snowiest day since January 13, 1982, when 6.0 inches fell.

Snow

Cloud, Snow

Snow

Cloud

Cloud

National Weather Data for Selected Cities

Weather Data for the Week Ending January 9, 2021

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	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	PRECIP	
																		.01 INCH OR MORE	.50 INCH OR MORE
AK ANCHORAGE	27	15	38	3	21	4	0.05	-0.12	0.03	1.50	111	0.05	21	85	65	0	7	2	0
AK BARROW	-2	-14	6	-26	-8	0	0.01	-0.02	0.01	0.75	353	0.01	25	82	70	0	7	1	0
AK FAIRBANKS	3	-13	16	-20	-5	0	0.00	-0.15	0.00	0.23	27	0.00	0	81	69	0	7	0	0
AK JUNEAU	42	35	46	28	38	10	1.10	-0.13	0.33	14.13	190	1.22	77	91	65	0	2	6	0
AK KODIAK	38	28	41	17	33	2	4.57	2.61	1.19	18.25	161	5.20	205	94	76	0	4	7	4
AK NOME	6	-2	10	-12	2	-4	0.04	-0.20	0.04	1.35	97	0.04	13	72	60	0	7	1	0
AL BIRMINGHAM	50	34	61	29	42	-1	0.14	-0.87	0.10	4.50	78	0.70	54	88	51	0	2	2	0
AL HUNTSVILLE	47	31	57	26	39	-2	0.51	-0.61	0.51	5.51	76	0.93	64	90	55	0	4	1	1
AL MOBILE	58	37	66	28	47	-3	0.41	-0.81	0.41	5.00	75	0.43	27	94	46	0	1	1	0
AL MONTGOMERY	54	36	63	30	45	-2	0.28	-0.67	0.28	2.84	46	0.97	81	89	48	0	2	1	0
AR FORT SMITH	51	31	61	25	41	2	1.19	0.57	0.81	4.92	120	1.28	158	96	51	0	5	2	1
AR LITTLE ROCK	50	32	63	27	41	0	0.75	-0.13	0.64	5.94	97	1.19	104	89	50	0	4	2	1
AZ FLAGSTAFF	50	15	59	10	33	3	0.00	-0.50	0.00	0.34	13	0.00	0	75	22	0	7	0	0
AZ PHOENIX	69	42	71	39	55	0	0.00	-0.22	0.00	0.45	37	0.00	0	49	16	0	0	0	0
AZ PRESCOTT	56	22	62	20	39	1	0.00	-0.28	0.00	0.06	4	0.00	0	64	18	0	7	0	0
AZ TUCSON	71	38	76	34	55	3	0.00	-0.22	0.00	0.25	19	0.00	0	37	11	0	0	0	0
CA BAKERSFIELD	59	42	67	35	51	4	0.00	-0.25	0.00	0.34	25	0.00	0	85	52	0	0	0	0
CA EUREKA	56	42	59	37	49	1	1.36	-0.20	0.54	5.32	52	1.52	75	89	71	0	0	5	1
CA FRESNO	57	43	62	39	50	5	0.00	-0.50	0.00	1.13	46	0.00	0	88	61	0	0	0	0
CA LOS ANGELES	64	47	71	45	56	-1	0.00	-0.62	0.00	1.63	57	0.00	0	95	49	0	0	0	0
CA REDDING	55	37	62	32	46	1	1.43	0.06	1.04	3.80	47	1.44	81	94	58	0	1	4	1
CA SACRAMENTO	56	40	58	34	48	3	0.22	-0.57	0.21	1.82	42	0.28	26	95	67	0	0	2	0
CA SAN DIEGO	64	47	67	43	55	-1	0.00	-0.46	0.00	0.60	28	0.00	0	90	57	0	0	0	0
CA SAN FRANCISCO	57	47	62	42	52	2	0.31	-0.66	0.29	1.87	35	0.50	39	92	67	0	0	2	0
CA STOCKTON	56	39	59	35	48	3	0.15	-0.43	0.15	1.95	66	0.16	21	94	68	0	0	1	0
CO ALAMOSA	38	1	42	-5	19	4	0.01	-0.05	0.01	0.38	78	0.01	14	87	37	0	7	1	0
CO CO SPRINGS	44	22	55	19	33	3	0.18	0.09	0.18	0.70	141	0.18	166	70	34	0	7	1	0
CO DENVER INTL	47	23	57	19	35	4	0.15	0.05	0.15	0.67	126	0.15	115	70	31	0	7	1	0
CO GRAND JUNCTION	35	12	40	6	23	-3	0.00	-0.14	0.00	0.31	40	0.00	0	83	54	0	7	0	0
CO PUEBLO	51	17	62	12	34	4	0.17	0.08	0.17	0.33	61	0.17	148	71	28	0	7	1	0
CT BRIDGEPORT	40	29	45	24	35	5	0.15	-0.56	0.15	4.54	107	0.50	53	79	51	0	6	1	0
CT HARTFORD	39	26	42	20	32	6	0.13	-0.56	0.12	5.30	123	0.52	58	83	54	0	7	2	0
DC WASHINGTON	45	35	48	32	40	4	0.31	-0.31	0.28	5.83	152	1.11	140	77	57	0	1	2	0
DE WILMINGTON	42	31	45	25	37	4	0.31	-0.34	0.31	6.36	148	1.20	143	80	53	0	3	1	0
FL DAYTONA BEACH	65	43	71	38	55	-3	0.07	-0.53	0.06	0.63	18	0.07	9	98	54	0	0	2	0
FL JACKSONVILLE	63	41	71	36	52	-1	0.46	-0.20	0.34	2.00	55	0.47	56	94	49	0	0	2	0
FL KEY WEST	73	64	78	60	68	-1	0.03	-0.40	0.02	1.48	53	0.04	7	87	64	0	0	2	0
FL MIAMI	75	58	84	52	66	-2	0.00	-0.36	0.00	1.57	62	0.00	0	87	42	0	0	0	0
FL ORLANDO	68	47	74	39	57	-3	0.18	-0.36	0.16	1.22	37	0.18	25	95	48	0	0	2	0
FL PENSACOLA	60	42	69	32	51	0	0.49	-0.45	0.49	5.77	99	0.99	81	87	47	0	1	1	0
FL TALLAHASSEE	60	38	70	31	49	-2	0.24	-0.62	0.24	7.57	152	4.45	405	92	51	0	1	1	0
FL TAMPA	68	50	72	46	59	-1	0.23	-0.27	0.16	2.90	93	0.23	36	86	47	0	0	2	0
FL WEST PALM BEACH	74	54	83	47	64	-2	0.00	-0.77	0.00	2.25	51	0.00	0	88	45	0	0	0	0
GA ATHENS	54	34	61	30	44	1	0.62	-0.24	0.47	5.02	105	2.00	183	84	47	0	2	2	0
GA ATLANTA	50	35	59	30	43	0	0.32	-0.52	0.19	3.80	76	1.52	142	86	50	0	2	2	0
GA AUGUSTA	57	34	65	28	46	1	0.56	-0.30	0.50	5.62	126	2.53	234	93	47	0	3	2	0
GA COLUMBUS	53	36	64	31	45	-2	0.35	-0.47	0.34	5.44	102	2.32	220	87	47	0	1	2	0
GA MACON	55	34	65	27	44	-1	0.36	-0.55	0.36	3.17	60	0.91	78	89	47	0	2	1	0
GA SAVANNAH	60	40	68	37	50	1	0.23	-0.50	0.15	2.22	57	0.51	53	88	51	0	0	2	0
HI HILO	82	66	83	65	74	3	0.67	-1.29	0.35	16.46	116	2.17	85	85	58	0	0	5	0
HI HONOLULU	83	71	85	66	77	3	0.02	-0.60	0.02	0.32	8	0.02	2	81	49	0	0	1	0
HI KAHULUI	85	66	86	60	75	3	0.00	-0.70	0.00	0.25	6	0.11	11	81	51	0	0	0	0
HI LIHUE	80	69	81	63	74	3	0.04	-0.88	0.03	2.08	32	0.04	3	89	65	0	0	2	0
IA BURLINGTON	31	23	35	18	27	2	0.00	-0.30	0.00	2.10	84	0.29	73	96	86	0	7	0	0
IA CEDAR RAPIDS	29	19	33	11	24	5	0.00	-0.22	0.00	0.67	38	0.00	0	93	82	0	7	0	0
IA DES MOINES	34	22	40	8	28	5	0.00	-0.23	0.00	1.92	111	0.00	0	94	69	0	7	0	0
IA DUBUQUE	28	19	33	9	24	5	0.00	-0.27	0.00	1.31	59	0.04	11	91	80	0	7	0	0
IA SIOUX CITY	34	22	42	10	28	8	0.46	0.33	0.46	0.82	82	0.46	262	94	77	0	7	1	0
IA WATERLOO	30	18	37	3	24	6	0.00	-0.19	0.00	0.82	56	0.00	0	94	78	0	7	0	0
ID BOISE	44	32	50	28	38	8	0.79	0.47	0.31	1.37	68	0.81	196	95	59	0	4	5	0
ID LEWISTON	47	37	53	32	42	8	0.11	-0.14	0.07	0.74	55	0.11	35	82	58	0	1	3	0
ID POCATELLO	39	21	46	16	30	6	0.17	-0.09	0.10	0.57	36	0.17	51	90	61	0	7	3	0
IL CHICAGO/O_HARE	36	28	39	24	32	8	0.06	-0.37	0.03	2.98	106	0.44	78	88	71	0	6	2	0
IL MOLINE	32	23	36	16	28	5	0.00	-0.37	0.00	3.41	128	0.65	135	90	78	0	7	0	0
IL PEORIA	32	25	34	22	28	3	0.23	-0.22	0.19	2.12	70	0.88	152	92	82	0	7	2	0
IL ROCKFORD	33	24	35	21	28	7	0.01	-0.33	0.01	2.28	94	0.54	120	88	74	0	7	1	0
IL SPRINGFIELD	33	25	37	17	29	2	0.12	-0.33	0.12	1.90	61	0.84	142	95	82	0	7	1	0
IN EVANSVILLE	42	29	53	26	35	3	0.02	-0.67	0.02	2.73	59	0.74	84	83	58	0	6	1	0
IN FORT WAYNE	35	29	37	22	32	7	0.07	-0.48	0.07	2.00	57	0.75	103	86	69	0	6	1	0
IN INDIANAPOLIS	37	28	44	20	32	4	0.00	-0.67	0.00	2.22	55	0.80	93	88	67	0	6	0	0
IN SOUTH BEND	36	26	40	17	31	6	0.08	-0.49	0.08	3.55	106	1.02	136	87	67	0	7	1	0
KS CONCORDIA	45	30	54	23	37	9	0.02	-0.09	0.02	0.70	68	0.02	16	86	60	0	4	1	0
KS DODGE CITY	48	24	61	20	36	4	0.00	-0.13	0.00	1.05	100	0.00	0	90	50	0	7	0	0
KS GOODLAND	45	21	54	14	33	4	0.04	-0.06	0.03	0.80	131	0.04	35	88	42	0	7	2	0
KS TOPEKA	44	25	51	16	34	5	0.15	-0.04	0.14	1.86	116	0.57	241	91	57	0	6	2	0

Based on 1981-2010 normals

*** Not Available

Weather Data for the Week Ending January 9, 2021

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	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	PRECIP	
																		01 INCH OR MORE	.50 INCH OR MORE
KY WICHITA	45	25	56	19	35	4	0.01	-0.16	0.01	1.93	135	0.28	124	93	59	0	6	1	0
KY LEXINGTON	39	29	47	24	34	1	0.13	-0.59	0.12	3.86	79	1.30	138	90	70	0	6	2	0
LA LOUISVILLE	41	31	51	26	36	1	0.12	-0.61	0.08	3.53	74	1.06	111	87	62	0	5	3	0
LA PADUCAH	44	30	53	27	37	3	0.00	-0.84	0.00	3.28	57	0.74	68	86	58	0	5	0	0
LA BATON ROUGE	61	37	72	31	49	-5	1.02	-0.07	0.77	5.28	91	1.06	77	89	46	0	1	2	1
LA LAKE CHARLES	60	39	72	31	50	-2	0.59	-0.67	0.59	4.96	79	0.59	37	97	53	0	1	1	1
LA NEW ORLEANS	62	43	73	39	52	-1	0.79	-0.36	0.79	4.81	71	0.79	53	82	48	0	0	1	1
LA SHREVEPORT	58	37	71	28	47	1	1.37	0.46	1.24	9.41	158	1.37	118	87	43	0	2	2	1
MA BOSTON	38	28	42	24	33	4	0.04	-0.72	0.03	4.01	84	0.54	54	77	55	0	7	2	0
MA WORCESTER	35	26	38	20	30	6	0.08	-0.67	0.06	6.69	139	0.64	65	78	55	0	7	3	0
MD BALTIMORE	44	33	47	29	38	5	0.20	-0.46	0.20	5.73	136	1.22	142	78	53	0	4	1	0
ME CARIBOU	28	19	31	7	23	12	0.08	-0.55	0.04	2.70	66	0.29	35	82	68	0	7	2	0
ME PORTLAND	36	24	41	20	30	7	0.04	-0.74	0.04	4.63	92	0.66	66	82	59	0	7	1	0
MI ALPENA	34	22	37	15	28	8	0.04	-0.37	0.02	1.28	56	0.04	6	94	73	0	7	2	0
MI GRAND RAPIDS	35	25	38	14	30	5	0.07	-0.46	0.06	2.42	76	0.34	49	93	70	0	7	2	0
MI HOUGHTON LAKE	32	19	36	3	26	7	0.07	-0.30	0.07	2.14	99	0.38	78	92	73	0	7	1	0
MI LANSING	34	24	37	11	29	5	0.09	-0.32	0.07	2.62	109	0.59	111	93	74	0	7	3	0
MI MUSKEGON	38	25	42	15	31	5	0.00	-0.51	0.00	2.70	84	0.31	47	85	60	0	7	0	0
MI TRAVERSE CITY	37	26	39	15	31	9	0.01	-0.66	0.01	0.67	20	0.01	1	90	64	0	7	1	0
MN DULUTH	30	14	33	9	22	12	0.01	-0.24	0.01	0.83	54	0.01	3	91	75	0	7	1	0
MN INT_L FALLS	30	13	40	2	21	17	0.02	-0.14	0.02	0.87	83	0.02	9	92	77	0	7	1	0
MN MINNEAPOLIS	30	17	38	12	23	8	0.01	-0.22	0.01	0.76	51	0.01	3	95	75	0	7	1	0
MN ROCHESTER	29	19	36	13	24	0	0.00	-0.20	0.00	0.13	8	0.00	0	93	80	0	7	0	0
MN ST. CLOUD	28	13	40	7	21	9	0.00	-0.17	0.00	0.44	41	0.00	0	93	72	0	7	0	0
MO COLUMBIA	38	30	49	25	34	5	0.00	-0.45	0.00	1.54	51	0.90	155	88	71	0	6	0	0
MO KANSAS CITY	41	27	52	19	34	6	0.29	0.06	0.28	2.12	115	0.86	288	92	63	0	6	2	0
MO SAINT LOUIS	40	31	51	29	35	4	0.00	-0.58	0.00	2.36	65	0.78	103	84	64	0	5	0	0
MO SPRINGFIELD	43	28	54	22	35	3	0.43	-0.19	0.33	2.94	77	1.45	185	95	61	0	6	2	0
MS JACKSON	54	35	66	30	45	-1	0.39	-0.65	0.39	5.63	86	0.63	47	89	49	0	1	1	0
MS MERIDIAN	54	33	65	29	44	-1	0.22	-0.80	0.22	3.82	60	0.22	17	86	44	0	4	1	0
MS TUPELO	51	35	59	29	43	1	0.42	-0.63	0.41	5.91	77	0.85	63	87	48	0	1	2	0
MT BILLINGS	44	27	50	21	35	9	0.19	0.08	0.10	0.55	82	0.19	132	75	41	0	7	2	0
MT BUTTE	37	13	43	2	25	6	0.06	-0.07	0.03	0.16	23	0.06	35	86	49	0	7	2	0
MT CUT BANK	41	24	48	16	33	11	0.01	-0.05	0.01	0.22	65	0.01	16	83	53	0	6	1	0
MT GLASGOW	41	23	48	19	32	19	0.00	-0.11	0.00	0.05	8	0.04	28	84	60	0	7	0	0
MT GREAT FALLS	45	27	51	17	36	12	0.18	0.05	0.18	0.28	39	0.18	112	72	37	0	6	1	0
MT HAVRE	43	22	56	15	33	15	0.02	-0.08	0.02	0.10	18	0.02	15	85	58	0	7	1	0
MT MISSOULA	41	27	45	25	34	10	0.02	-0.20	0.01	0.45	33	0.02	8	94	58	0	7	2	0
NC ASHEVILLE	44	30	50	23	37	0	0.30	-0.50	0.22	5.85	127	1.85	183	95	61	0	5	2	0
NC CHARLOTTE	51	33	60	27	42	2	0.76	-0.03	0.41	4.38	103	1.46	146	93	53	0	3	4	0
NC GREENSBORO	48	31	52	26	39	1	0.45	-0.24	0.24	4.76	124	0.80	91	94	56	0	6	2	0
NC HATTERAS	52	41	68	35	47	1	1.78	0.60	1.23	8.84	152	2.17	145	90	62	0	0	3	2
NC RALEIGH	49	32	55	27	41	0	1.02	0.24	0.67	8.08	201	2.51	256	96	62	0	4	2	1
NC WILMINGTON	55	37	71	31	46	1	0.91	0.08	0.70	3.81	81	1.06	99	92	55	0	1	4	1
ND BISMARCK	38	24	46	12	31	19	0.03	-0.08	0.02	0.29	44	0.03	21	94	69	0	7	2	0
ND DICKINSON	40	23	50	17	32	16	0.00	-0.09	0.00	0.00	0	0.00	0	90	52	0	7	0	0
ND FARGO	32	17	37	8	25	15	0.01	-0.17	0.01	0.59	54	0.01	5	94	77	0	7	1	0
ND GRAND FORKS	32	15	40	6	24	17	0.01	-0.12	0.01	0.42	54	0.01	7	91	75	0	7	1	0
ND JAMESTOWN	37	20	45	13	29	19	0.04	-0.07	0.03	0.30	52	0.04	29	88	70	0	7	2	0
NE GRAND ISLAND	41	28	47	20	34	10	0.23	0.12	0.19	1.07	136	0.23	159	87	70	0	6	3	0
NE LINCOLN	39	20	46	8	29	5	0.04	-0.09	0.03	1.13	98	0.04	24	92	67	0	6	2	0
NE NORFOLK	35	22	43	12	29	6	0.18	0.05	0.14	0.67	71	0.18	107	89	73	0	6	2	0
NE NORTH PLATTE	42	27	49	19	35	10	0.01	-0.08	0.01	0.74	129	0.01	9	85	55	0	7	1	0
NE OMAHA	37	23	42	14	30	7	0.19	0.04	0.17	1.31	104	0.19	94	95	73	0	6	2	0
NE SCOTTSBLUFF	46	20	53	12	33	6	0.02	-0.08	0.02	0.42	64	0.02	15	81	43	0	7	1	0
NE VALENTINE	42	28	50	20	35	12	0.00	-0.07	0.00	0.41	80	0.00	0	82	57	0	7	0	0
NH CONCORD	35	22	39	15	28	8	0.01	-0.60	0.01	4.27	107	0.58	73	82	57	0	7	1	0
NJ ATLANTIC_CITY	43	30	48	23	36	3	0.36	-0.38	0.36	6.38	138	1.33	140	88	59	0	4	1	0
NJ NEWARK	42	30	46	23	36	4	0.25	-0.57	0.24	4.65	96	0.97	92	82	53	0	5	2	0
NM ALBUQUERQUE	50	26	57	23	38	3	0.00	-0.10	0.00	0.21	32	0.00	0	60	23	0	7	0	0
NV ELY	44	13	49	8	29	4	0.06	-0.10	0.03	0.43	53	0.06	29	84	35	0	7	2	0
NV LAS VEGAS	58	40	61	38	49	1	0.00	-0.13	0.00	0.04	5	0.00	0	45	22	0	0	0	0
NV RENO	51	29	55	21	40	5	0.08	-0.18	0.08	0.35	25	0.08	25	80	32	0	5	1	0
NV WINNEMUCCA	45	27	52	19	36	7	0.16	-0.07	0.07	0.55	43	0.16	54	82	47	0	5	4	0
NY ALBANY	30	22	34	13	26	4	0.23	-0.35	0.20	4.50	123	0.81	111	92	74	0	7	2	0
NY BINGHAMTON	29	22	32	13	26	3	0.33	-0.21	0.32	6.65	189	0.86	123	93	76	0	7	2	0
NY BUFFALO	35	28	39	19	31	6	0.02	-0.78	0.02	4.51	92	0.76	73	87	68	0	5	1	0
NY ROCHESTER	34	27	37	17	30	5	0.12	-0.44	0.06	2.70	81	0.83	115	94	74	0	7	3	0
NY SYRACUSE	33	24	35	14	29	5	0.19	-0.43	0.15	3.60	90	0.99	123	87	71	0	7	3	0
OH AKRON-CANTON	37	29	41	19	33	7	0.18	-0.42	0.14	3.27	90	0.84	107	86	72	0	5	3	0
OH CINCINNATI	38	31	44	22	35	4	0.03	-0.65	0.03	2.96	70	1.22	136	85	62	0	5	1	0
OH CLEVELAND	36	30	41	22	33	5	0.12	-0.55	0.06	3.55	90	0.97	112	92	72	0	4	4	0
OH COLUMBUS	38	29	40	24	34	4	0.08	-0.56	0.08	3.32	87	1.12	135	90	68	0	5	1	0
OH DAYTON	37	30	40	22	33	6	0.05	-0.61	0.04	2.10	53	1.20	139	92	69	0	5	2	0
OH MANSFIELD	35	29	39	21	32	6	0.05	-0.64	0.03	2.49	59	0.60	66	95	74	0	6	2	0

Based on 1981-2010 normals

*** Not Available

Weather Data for the Week Ending January 9, 2021

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	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	PRECIP	
																		01 INCH OR MORE	.50 INCH OR MORE
OK TOLEDO	37	31	41	23	34	8	0.08	-0.44	0.05	1.98	59	0.71	106	83	65	0	3	2	0
OK YOUNGSTOWN	36	27	39	20	31	5	0.16	-0.45	0.14	4.62	122	1.00	126	91	68	0	6	3	0
OK OKLAHOMA CITY	47	30	58	23	38	-1	0.12	-0.16	0.12	3.43	152	0.72	196	91	60	0	5	1	0
OR TULSA	50	30	61	23	40	3	0.25	-0.13	0.18	4.24	142	0.92	186	94	51	0	5	2	0
OR ASTORIA	52	39	54	32	45	2	4.00	1.55	0.97	15.35	117	7.31	232	98	70	0	1	7	5
OR BURNS	40	25	46	14	33	8	0.39	0.08	0.22	1.12	56	0.41	102	90	68	0	6	4	0
OR EUGENE	51	39	54	35	45	5	2.09	0.41	0.82	8.96	89	2.61	120	94	67	0	0	5	2
OR MEDFORD	49	36	55	31	42	3	0.64	0.01	0.27	3.64	85	0.72	88	92	66	0	1	4	0
OR PENDLETON	49	36	55	30	43	9	0.31	-0.05	0.11	1.33	68	0.36	78	91	58	0	1	4	0
OR PORTLAND	51	42	53	34	47	6	2.03	0.85	0.75	7.80	111	2.80	184	94	61	0	0	5	3
OR SALEM	50	39	53	31	44	4	2.85	1.39	0.87	10.69	122	4.33	232	94	67	0	1	4	3
PA ALLENTOWN	38	27	41	20	33	5	0.31	-0.35	0.31	5.13	116	1.02	121	82	58	0	4	1	0
PA ERIE	36	31	38	21	33	6	0.16	-0.58	0.16	4.34	93	0.91	95	82	69	0	3	1	0
PA MIDDLETOWN	40	31	45	26	36	5	0.34	-0.30	0.34	5.21	129	1.06	128	79	57	0	4	1	0
PA PHILADELPHIA	42	32	45	25	37	4	0.20	-0.46	0.19	5.35	121	1.03	120	78	53	0	3	2	0
PA PITTSBURGH	36	28	41	20	32	4	0.45	-0.16	0.44	4.98	137	1.16	146	91	69	0	6	2	0
PA WILKES-BARRE	36	27	39	17	32	6	0.45	-0.06	0.43	4.28	129	0.78	120	84	64	0	6	2	0
PA WILLIAMSPORT	38	28	42	21	33	6	0.46	-0.13	0.39	5.61	153	0.99	133	83	62	0	5	3	0
RI PROVIDENCE	40	29	44	24	35	5	0.02	-0.83	0.02	7.66	144	0.25	23	79	53	0	7	1	0
SC CHARLESTON	59	38	69	31	49	1	1.06	0.26	0.55	2.78	67	1.08	105	93	54	0	1	3	1
SC COLUMBIA	54	34	62	27	44	-1	0.62	-0.18	0.48	6.40	152	3.54	352	93	52	0	3	3	0
SC FLORENCE	55	36	67	29	45	1	1.39	0.65	0.68	6.13	156	3.17	336	94	53	0	2	4	1
SC GREENVILLE	50	30	60	25	40	-2	0.71	-0.14	0.43	4.72	90	1.98	182	86	44	0	4	2	0
SD ABERDEEN	36	22	41	9	29	17	0.19	0.07	0.15	0.51	73	0.19	119	90	75	0	5	3	0
SD HURON	35	23	40	7	29	13	0.15	0.03	0.13	0.46	67	0.15	97	98	80	0	6	2	0
SD RAPID CITY	42	20	50	11	31	6	0.00	-0.09	0.00	0.28	50	0.00	0	81	46	0	7	0	0
SD SIOUX FALLS	36	21	41	5	28	12	0.33	0.20	0.33	0.75	86	0.33	190	93	74	0	6	1	0
TN BRISTOL	44	33	51	31	38	3	0.63	-0.11	0.54	4.54	106	1.03	110	87	64	0	3	3	1
TN CHATTANOOGA	48	33	57	29	41	1	0.39	-0.70	0.37	5.48	86	1.03	74	89	54	0	3	2	0
TN KNOXVILLE	45	31	52	27	38	0	0.37	-0.57	0.31	4.47	78	0.87	72	92	63	0	5	2	0
TN MEMPHIS	49	35	56	34	42	1	0.17	-0.77	0.17	7.09	101	1.00	81	85	49	0	0	1	0
TN NASHVILLE	46	32	58	29	39	1	0.03	-0.78	0.03	3.94	74	0.59	56	78	51	0	5	1	0
TX ABILENE	56	33	66	26	44	0	0.00	-0.22	0.00	1.82	121	0.02	7	84	42	0	4	0	0
TX AMARILLO	52	24	64	21	38	1	0.04	-0.10	0.04	0.27	30	0.04	22	78	33	0	7	1	0
TX AUSTIN	66	40	78	32	53	2	0.04	-0.46	0.03	2.70	88	0.04	6	82	33	0	1	2	0
TX BEAUMONT	62	42	75	34	52	0	1.28	-0.01	1.28	6.99	100	1.28	78	96	53	0	0	1	1
TX BROWNSVILLE	76	50	83	42	63	3	0.25	0.00	0.15	1.29	87	0.25	76	88	41	0	0	2	0
TX CORPUS CHRISTI	70	45	78	38	57	1	0.00	-0.37	0.00	1.70	74	0.00	0	95	50	0	0	0	0
TX DEL RIO	67	38	78	32	52	1	0.00	-0.16	0.00	1.24	145	0.00	0	86	33	0	1	0	0
TX EL PASO	62	29	66	26	46	2	0.00	-0.11	0.00	0.02	2	0.00	0	40	14	0	7	0	0
TX FORT WORTH	58	36	66	29	47	2	0.01	-0.44	0.01	2.98	94	0.02	4	86	40	0	2	1	0
TX GALVESTON	63	50	72	44	56	1	0.21	0.00	0.21	4.19	0	0.21	0	83	57	0	0	1	0
TX HOUSTON	66	42	76	35	54	1	1.04	0.30	1.04	5.49	118	1.04	111	91	44	0	0	1	1
TX LUBBOCK	53	26	63	20	39	0	0.04	-0.09	0.04	0.11	12	0.04	23	73	34	0	6	1	0
TX MIDLAND	54	28	64	23	41	-2	0.01	-0.10	0.01	0.52	70	0.01	8	83	36	0	6	1	0
TX SAN ANGELO	59	30	70	23	45	-1	0.00	-0.20	0.00	1.02	89	0.00	0	86	35	0	4	0	0
TX SAN ANTONIO	66	39	77	32	53	1	0.01	-0.36	0.01	0.85	35	0.01	2	83	35	0	2	1	0
TX VICTORIA	67	42	77	33	54	1	0.41	-0.16	0.40	2.97	97	0.41	56	96	50	0	0	2	0
TX WACO	61	35	69	26	48	1	0.06	-0.39	0.06	4.50	134	0.06	9	87	40	0	4	1	0
UT WICHITA FALLS	54	31	65	24	42	1	0.00	-0.25	0.00	1.21	61	0.00	0	95	49	0	5	0	0
UT SALT LAKE CITY	42	24	45	21	33	4	0.06	-0.24	0.04	0.39	21	0.06	15	91	48	0	7	2	0
VA LYNCHBURG	49	29	52	24	39	4	0.27	-0.40	0.27	5.85	143	1.02	118	85	46	0	5	1	0
VA NORFOLK	48	39	53	36	43	3	0.82	0.05	0.80	5.32	126	1.13	117	83	57	0	0	2	1
VA RICHMOND	47	32	50	26	40	2	0.91	0.23	0.91	8.23	200	1.56	181	87	54	0	4	1	1
VA ROANOKE	46	33	53	28	40	3	0.37	-0.28	0.20	4.58	122	0.96	117	85	52	0	4	2	0
VA WASH/DULLES	43	31	46	28	37	4	0.31	-0.26	0.30	6.92	188	1.14	157	83	58	0	5	2	0
VT BURLINGTON	30	22	36	11	26	7	0.10	-0.36	0.08	1.76	59	0.57	96	87	65	0	7	2	0
WA OLYMPIA	48	37	50	31	42	3	2.81	1.00	0.94	12.60	128	5.37	231	99	78	0	2	5	3
WA QUILLAYUTE	49	36	51	32	42	1	2.38	-0.96	1.13	22.43	130	6.71	157	96	78	0	1	6	1
WA SEATTLE-TACOMA	50	39	52	31	44	3	2.18	0.85	0.62	10.53	149	3.96	234	97	65	0	1	5	3
WA SPOKANE	40	34	43	30	37	9	1.13	0.68	0.45	3.81	132	1.52	263	93	71	0	2	4	0
WA YAKIMA	43	32	53	28	38	8	0.40	0.10	0.34	1.00	51	0.42	108	90	71	0	5	2	0
WI EAU CLAIRE	27	19	32	12	23	8	0.01	-0.19	0.01	0.20	15	0.01	4	92	83	0	7	1	0
WI GREEN BAY	30	22	35	15	26	9	0.01	-0.26	0.01	0.45	24	0.01	3	89	75	0	7	1	0
WI LA CROSSE	30	20	34	13	25	8	0.00	-0.24	0.00	0.29	17	0.00	0	90	76	0	7	0	0
WI MADISON	29	19	33	15	24	5	0.02	-0.26	0.02	1.17	55	0.04	11	97	83	0	7	1	0
WI MILWAUKEE	35	27	37	21	31	8	0.02	-0.39	0.01	2.56	100	0.44	83	88	74	0	7	2	0
WI BECKLEY	35	27	49	20	31	0	0.21	-0.44	0.12	13.85	363	0.63	75	96	79	0	7	5	0
WI CHARLESTON	39	30	45	23	34	0	0.13	-0.54	0.10	4.09	99	0.37	43	95	72	0	5	2	0
WI ELKINS	36	28	46	22	32	3	0.37	-0.34	0.27	4.56	110	0.85	94	86	66	0	7	3	0
WI HUNTINGTON	39	31	45	23	35	1	0.12	-0.54	0.09	4.32	104	0.39	45	89	66	0	5	2	0
WY CASPER	36	15	42	6	25	1	0.11	-0.01	0.09	0.80	120	0.11	74	84	56	0	7	3	0
WY CHEYENNE	43	21	50	15	32	3	0.05	-0.04	0.04	0.52	84	0.05	44	74	35	0	7	2	0
WY LANDER	37	16	43	12	26	5	0.00	-0.11	0.00	0.59	82	0.00	0	84	50	0	7	0	0
WY SHERIDAN	43	19	50	15	31	7	0.25	0.13	0.23	0.53	73	0.25	164	86	50	0	7	2	0

Based on 1981-2010 normals

*** Not Available

December Weather Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: Mild weather and occasional storms benefited winter wheat, with crop conditions on the Plains improving between late November and the end of the year. According to USDA/NASS, wheat rated in very poor to poor condition at the end of December stood at 5 percent in Montana, 8 percent in South Dakota, 15 percent in Nebraska, 17 percent in Kansas, and 34 percent in Colorado, compared to respective November 29 values of 10, 11, 26, 22, and 38 percent. 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 during December from Oregon and California to the High Plains. 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, drought coverage across the Lower 48 States 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. Spring and summer water-supply concerns began to mount in areas already experiencing below-average reservoir storage; that list included California, Colorado, Nevada, New Mexico, and Oregon. In contrast, a La Niña-driven storm track affected the Pacific Northwest, delivering heavy precipitation.

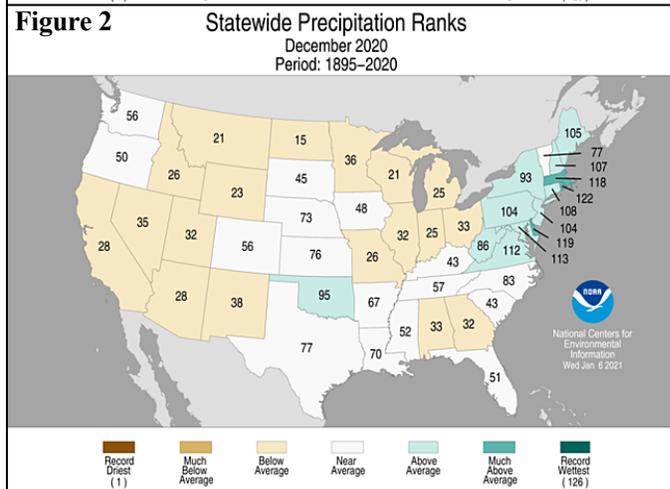
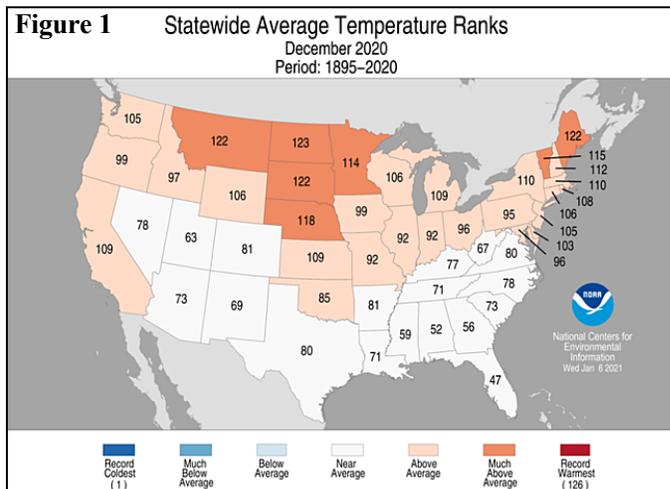
Although heavy snow bypassed much of the West, occasional December accumulations occurred from the Plains into the Midwest and Northeast. At mid-month, one of the most significant winter storms in several years deposited 1 to 3 feet of snow in parts of the Northeast. About a week later, a holiday storm 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. By December 26, freezes occurred as far south as northern Florida. Other cool spells in Florida peaked on December 1-2, 8-9, and 17-18. 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 several 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.

Historical Perspective: According to preliminary data provided by the National Centers for Environmental Information, the contiguous U.S. experienced its 21st-warmest, 33rd-driest December during the 1895-2020 period of record. The nation's average temperature of 35.7°F was 3.1°F above the 20th century mean, while precipitation averaged 1.99 inches (85 percent of normal).

The warmest December weather, relative to normal, stretched across the northern U.S. Average temperatures were among the ten highest December values on record in Maine, Montana, Nebraska, and the Dakotas (figure 1). In contrast, Florida—with its 47th-coolest December—was the lowest ranking state. Meanwhile, state precipitation rankings ranged from the 15th-driest December in North Dakota to the 5th-wettest December in Rhode Island (figure 2). Top-ten December wetness also affected Delaware and Massachusetts.



Summary: As the calendar turned to December, rain changed to snow and began to accumulate across portions of the Ohio Valley and lower Great Lakes region. Lexington, KY, received 3.8 inches of snow, including 2.3 inches on the 30th and 1.5 inches on the 1st. In Ohio, December 1 snowfall totaled 9.5 inches in Cleveland, 7.7 inches in Youngstown, and 1.4 inches in Dayton. With cold air trailing the storm, daily-record lows for December 1 dipped to 19°F in Batesville, AR, and 22°F in Austin, TX. Farther east, however, warmth surged northward along the Atlantic Seaboard in advance of a strong cold front. The 1st was the warmest December day on record in Maine locations such as Caribou and Houlton—both reached 60°F. The previous record in Caribou had been 58°F on December 5 and 12, 1950, while Houlton's monthly record had been 59°F on December 5, 1950, and December 11, 1969. Caribou also set a record high for any winter day; previously, the record had been 59°F on February 20, 1994. Elsewhere in New England, daily-record highs for December 1 reached 66°F in Burlington, VT, and 62°F in Bangor, ME.

In early December, warmth arrived across the Pacific Northwest, where Seattle, WA, registered a daily-record high of 60°F on December 2. Warmth replaced previously cool conditions in much of California, where Red Bluff posted a daily-record high of 74°F on December 4. A few days later, another round of Northwestern warmth produced a record-setting high for December 5 in Seattle (58°F), as well as Astoria, OR (61°F). Farther south, winds ramped up across southern California, peaking in many locations before daybreak on December 3. Pre-dawn gusts ranged from 70 to 95 mph in several locations, topping out in San Diego County at 95 mph on Big Black Mountain, north of Ramona, and 93 mph on Sill Hill. In Orange County, CA, the Bond Fire ignited late December 2 in Silverado Canyon, east of Santa Ana, quickly scorching 7,375 acres of vegetation and damaging or destroying nearly four dozen structures. Meanwhile, early-month snow blanketed portions of the Plains. December 2-3 snowfall totaled 2.6 inches in Dodge City, KS, and 1.3 inches in Amarillo, TX. Unofficial amounts topped a foot, with 14 inches of snow reported in Oklahoma communities such as Buffalo and Gage. The same storm system responsible for the southern Plains' early-month snow later delivered heavy precipitation in the East. Record-setting precipitation amounts for December 5 reached 3.04 inches in Salisbury, MD; 2.02 inches in Richmond, VA; 1.99 inches in Portland, ME; and 1.97 inches in Worcester, MA. Worcester also received 9.6 inches of snow on the 5th, a record for the date. December 5-6 snowfall in Caribou, ME, totaled 13.8 inches. At the height of the storm on December 5, peak wind gusts in Massachusetts included 58 mph at the Blue Hill Observatory and 56 mph in Plymouth.

Warmth broadly developed across the West early in the month and quickly expanded eastward. December 7 featured daily-record highs in California locations such as Death Valley (83°F), Ukiah (77°F), Stockton (76°F), and Santa Rosa (75°F). California's warmth lingered through December 8, when daily-record highs soared to 84°F in Oceanside Harbor and 80°F in Santa Barbara. In Wyoming, Sheridan posted a pair of daily-record highs (67 and 72°F, respectively) on December 7-8. Sheridan's high of 72°F represented its warmest December day since 1981, when a reading of 72°F occurred on December 6. The only warmer December days in Sheridan were observed in 1939, with

highs of 77 and 73°F, respectively, on December 5 and 6. Similarly, Miles City, MT, tied for its third-warmest December day, with a high of 67°F on December 8. It was the warmest December day in Miles City since December 4, 1979, when it was also 67°F. Elsewhere on the Plains, consecutive daily-record highs were established on December 8-9 in Rapid City, SD (68 and 70°F, respectively); Lincoln, NE (64 and 66°F); and Livingston, MT (61 and 62°F). Subsequently, a pair of daily records were set on December 9-10 in Fayetteville, AR (73 and 75°F); Springfield, MO (71 and 72°F); and Rockford, IL (55 and 57°F). Warmth also arrived in the South, where daily-record highs rose to 79°F (on December 9) in Dallas-Fort Worth, TX, and 78°F (on December 10) in Shreveport, LA. A final day of warmth in Texas led to record-setting highs for the 10th in San Angelo (83°F) and Abilene (82°F). Farther east, however, highs on December 8 in Florida peaked at 61°F in Melbourne and 64°F in Miami—lower than the previously mentioned daily records observed on that date in Sheridan (72°F), Rapid City (68°F), and Miles City (67°F). By the morning of December 9, lows in Florida fell to 29°F in Brooksville and 37°F in Melbourne and Daytona Beach. For Brooksville, it was the first freeze since January 22, 2020.

With the Southwest mired in drought, a minor storm system crossing the region brought only negligible relief. However, a 110-day dry spell (August 21 – December 8) ended in Phoenix, AZ, where rainfall on December 9-10 totaled 0.45 inch. During 2020, measurable precipitation fell on just 15 days in Phoenix, breaking the annual record low of 18 days in 1953 and 2002. Later, precipitation associated with the same storm system reached the nation's mid-section. On December 11-12, Grand Island, NE, received 6.4 inches of snow. On those dates, snowfall totaled 6 to 10 inches in several other Midwestern locations, including Dubuque, IA (9.4 inches), and Madison, WI (6.4 inches). On the 12th, Alpena, MI, attained daily records for snowfall (13.7 inches) and precipitation (1.03 inches). Elsewhere in Michigan, record-setting precipitation totals for December 12 included 1.56 inches in Grand Rapids and 1.47 inches in Holland. As the storm's trailing cold front moved eastward, Northeastern warmth was swept away. In New England, lingering mild weather on December 13 resulted in daily-record highs in Providence, RI (63°F), and Hartford, CT (61°F).

Colder weather in the Northeast set the stage for significant and widespread snowfall, along with sleet and freezing rain. The snow, which fell on December 16-17, affected major cities such as Philadelphia, New York, and Boston, as well as many interior locations. Philadelphia, which had received snowfall totaling just 0.3 inch during the entire 2019-2020 season, netted 6.6 inches on December 16-17. Similarly, New York's Central Park topped its 2019-2020 snowfall total of 4.8 inches, with the city reporting 10.5 inches during the mid-December storm. Farther inland, record-setting snowfall totals (locally 1 to 3 feet or more) buried large sections of New York and Pennsylvania, as well as portions of New England, on December 16-17. Binghamton, NY, received 40.0 inches of snow. Previously, Binghamton's highest 2-day snowfall had been 35.3 inches on March 14-15, 2017. Williamsport, PA, also set a 2-day snowfall record, with 24.7 inches (previously, 24.1 inches on January 12-13, 1964). Consecutive daily snowfall records were broken on December 16-17 in locations such as Binghamton (13.6 and 26.4 inches, respectively); Williamsport (13.7 and 11.0 inches);

Newark, NJ (5.5 and 5.9 inches); and New York's JFK Airport (3.8 and 3.4 inches). With a 9.3-inch total on the 16th, Harrisburg, PA, experienced its snowiest December day since December 23, 1963, when 10.1 inches fell. On December 17, daily-record snowfall topped a foot in Albany, NY (19.7 inches), and Boston (12.3 inches). December 16-17 totals included 22.9 inches in Albany and 12.7 inches in Boston. Binghamton set a record for any date with a 39-inch snow depth at daybreak on December 17; the previous standard had been 35 inches on March 15, 1993. A few days earlier, a previous storm had produced snow on the Plains and rain in the Southeast. In Kansas, December 13 snowfall totaled 1.9 inches in Goodland and 1.2 inches in Wichita. Daily-record snowfall amounts for the 13th included 3.4 inches in Oklahoma City, OK, and 3.0 inches in Dalhart, TX. On the same date but elsewhere in Texas, Houston's Hobby Airport netted a daily-record rainfall of 2.65 inches. The following day, heavy rain swept into the East, where daily-record rainfall totals for December 14 included 1.58 inches in Richmond, VA, and 1.18 inches in London, KY.

Although the north-central U.S. experienced a warm month, there was a minor cold spell around mid-month. Meanwhile, much of the West remained in drought, despite periods of generally light precipitation. In Wyoming, temperatures on the 13th dipped to daily-record levels in Laramie (-17°F) and Big Piney (-16°F). Despite a quick shot of cold air across the northern Plains, mild weather quickly returned. Grand Forks, ND, reported its first sub-zero reading of the winter with a low of -9°F on December 14. Elsewhere in North Dakota, Fargo went nearly 2 months (from October 29 to December 23) without reporting a snow depth of 1 inch or greater. Farther west, Pacific storminess delivered daily-record precipitation amounts on December 17 in Jerome, ID (0.55 inch), and Winnemucca, NV (0.37 inches). Logan, UT, received 4.0 inches of snow in a 24-hour period on December 17-18. On the 18th, Quillayute, WA, measured a daily-record rainfall of 2.40 inches. Meanwhile, record-breaking dry spells finally ended in Las Vegas, NV, and Bishop, CA. In Las Vegas, where rainfall totaled 0.04 inch on December 17, measurable rain did not fall for 240 consecutive days (April 21 – December 16). The previous record of 150 days had been set from February 22 – July 21, 1959. A similar streak in Bishop had ended earlier at 239 days (April 18 – December 12), when rainfall on December 13 totaled 0.01 inch. Previously, Bishop's longest spell without measurable rain had been 199 days, from April 23 – November 7, 2003.

As the holidays approached, a storm system crossing the northern U.S. delivered precipitation in the Northwest before inducing blizzard conditions on December 23 in the upper Midwest. A low-pressure system developing along the storm's trailing cold front contributed to heavy rain (and rain changing to snow) in the East on December 24-25. By December 26, freezes reached deep into the Southeast. In advance of the storm's arrival, Western temperatures rose to daily-record levels for December 20 in locations such as Anaheim, CA (83°F) and Sheridan, WY (60°F). Anaheim notched another record high (84°F) on December 21. Other daily-record highs for the 21st included 87°F in Woodland Hills, CA; 65°F in Walla Walla, WA; and 62°F in Portland, OR. In western Washington, where daily-record rainfall totals for December 21 included 1.82 inches in Bellingham and 1.64 inches in Seattle, heavy precipitation accompanied the mild weather. By December 22, warmth arrived on the

Plains, where daily-record highs in South Dakota soared to 68°F in Pierre and 67°F in Rapid City. Subsequently, temperatures plunged across the Plains and Midwest. On December 23, calendar-day temperatures fell more than 40°F in locations such as Moline, IL (from 63 to 17°F); Burlington, IA (from 60 to 16°F); Rochester, MN (from 47 to 5°F); and Sisseton, SD (from 42 to -1°F). The readings of 63°F in Moline and 47°F in Rochester were record highs for the date. In the upper Midwest, blizzard conditions developed as temperatures plunged. On December 23 in South Dakota, wind gusts ranged from 62 to 68 mph while snowfall totaled 1 to 3 inches in locations such as Aberdeen, Huron, Sisseton, and Sioux Falls. Elsewhere on the 23rd, wind gusts were clocked to 79 mph in Rapid City, SD; 71 mph in Estherville, IA; and 68 mph in Alliance, NE. Heavy snow fell in portions of the upper Great Lakes States, where Minneapolis-St. Paul, MN, netted a daily-record total (8.7 inches) for December 23. By December 24-25, the cold wave reached the Southeast, resulting in Jacksonville, FL, experiencing a temperature drop from 78 to 31°F in less than 18 hours. Jacksonville's only larger 24-hour temperature declines in December occurred on December 9-10, 1978 (from 81 to 30°F), and December 22-23, 1967 (from 82 to 34°F). In the Northeast, however, lingering warmth on the 25th led to record-high temperatures for Christmas Day in Burlington, VT (65°F); Scranton, PA (64°F); and Bangor, ME (61°F). In fact, consecutive daily-record highs were set on December 25-26 in Maine locations such as Millinocket (59 and 54°F, respectively), Houlton (58 and 56°F), and Caribou (57 and 55°F). On Christmas Eve, heavy rain erupted across the East in advance of a cold front. Record-setting rainfall totals for December 24 included 2.21 inches in Williamsport, PA; 1.94 inches in Wilmington, DE; and 1.76 inches in Raleigh-Durham, NC. Binghamton, NY, which had received 40 inches of snow on December 16-17, netted consecutive daily-record precipitation totals (1.55 and 0.80 inches, respectively) on December 24-25. In New England, Christmas Day precipitation totals were the highest on record in locations such as Providence, RI (2.95 inches); Worcester, MA (2.81 inches); and Hartford, CT (2.12 inches). By December 26, the Susquehanna River at Marietta, Pennsylvania, crested 0.61 foot above flood stage—the highest level in that location since July 2018. Meanwhile, December 24-25 snowfall totaled 17.3 inches in Erie, PA; 12.8 inches in South Bend, IN; 9.5 inches in Cleveland, OH; 9.0 inches in Jackson, KY; and 7.0 inches in Huntington, WV. Snow squalls lingered downwind of the Great Lakes through December 26, when Buffalo, NY, set daily records for snowfall (18.4 inches) and precipitation (1.48 inches).

Although cold conditions across the Midwest and East did not last long, late-December storminess persisted in several areas. On December 29, significant precipitation (rain and snow) erupted across the nation's mid-section, where daily-record totals topped an inch in Moline, IL (1.34 inches); Topeka, KS (1.21 inches); and Kansas City, MO (1.19 inches). On the same date, more than one-half foot of snow fell, setting records for the 29th, in Des Moines, IA (9.6 inches); Norfolk, NE (7.5 inches); and Lincoln, NE (6.5 inches). Another wave of precipitation quickly followed the first. December 30-31 precipitation reached 1.70 inches in Tulsa, OK, and 1.45 inches in Wichita Falls, TX. Elsewhere in Texas, New Year's Eve featured daily-record snowfall totals of 3.5 inches in Midland, 2.6 inches in Abilene, and 1.7 inches in San Angelo. Meanwhile, heavy rain developed

across eastern Texas and spread northeastward. Record-setting rainfall totals for December 31 included 3.75 inches in Shreveport, LA; 2.88 inches in Texarkana, AR; and 2.12 inches in Longview, TX. A separate area of rain near the East Coast set New Year's Eve records for wetness in New Bern, NC (1.70 inches), and North Myrtle Beach, SC (1.29 inches). The year ended with a storm system affecting the Northwest, where Spokane, WA, reported a daily-record snowfall of 8.1 inches on December 31. Quillayute, WA, received a monthly rainfall sum of 17.64 inches (136 percent of normal), aided by totals of an inch or greater on December 7, 18, 19, 21, 25, 26, and 30.

With Arctic air blocked from reaching the continental U.S. in late December, the year ended on a mild note. Vero Beach, FL, reported a low of 71°F on December 31, marking the record-breaking 204th day of the year with a minimum temperature of 70°F or greater (previously, 202 days in 2015). The balmy finish to 2020 capped the warmest year on record in many Southeastern cities, including Miami, FL (annual average temperature of 79.3°F); Naples, FL (77.8°F); and Savannah, GA (70.4°F). In those three cases, previous records had been set in 2015, 2017, or 2019, or a combination of those years. Farther north, annual average temperature records were achieved in New York's Central Park (57.3°F, tying 2012) and Harrisburg, PA (56.6°F, tying 1998). With an annual average temperature of 59.5°F, Roanoke, VA, tied a record set in 2012 and 2019. Meanwhile, the wettest year on record occurred in Crossville, TN (75.32 inches), and Roanoke (62.65 inches); previous records, 74.88 and 62.45 inches, respectively, had been set in 2018.

Early-month flooding and landslides in southeastern Alaska highlighted an active weather pattern across the state's southern tier. December 1 was the wettest day on record in Juneau, where 4.93 inches fell. The previous wettest December day in Juneau was 3.11 inches on December 19, 1937, while the wettest day during any month had been 4.62 inches on October 10, 1946. Juneau also experienced daily-record highs on December 1-2 and 4-5—respective readings reached 49, 52, 47, and 49°F. Following Ketchikan's extremely wet November, when 30.05 inches (181 percent of normal) fell, rain during the first 5 days of December totaled 14.57 inches. Ketchikan also clocked peak wind gusts to 55 mph on December 1 and 4. Other peak gusts on the 1st included 73 mph in Sitka and 62 mph in Juneau. At Haines Airport, near several major landslides, December 1-5 precipitation totaled 12.40 inches. Elsewhere in southeastern Alaska, Pelican's 9.75-inch total on December 1-2 eclipsed a 24-hour record for that location (previously, 8.41 inches on November 18-19, 2005). Around mid-month, cold air briefly engulfed eastern sections of interior Alaska, while mild, wet weather continued farther south. Anchorage reported 3.1 inches of snow on December 15-16, followed by a daily-record sum (8.0 inches) on December 19. A storm hit Alaska's west coast on December 22, with Nome (0.37 inch) and Kotzebue (0.32 inches) reporting daily-record precipitation totals and experiencing wind gusts to 50 and 59 mph, respectively. Stormy weather also returned across southeastern Alaska; on December 23 in Ketchikan, a daily-record rainfall total of 4.52 inches occurred, accompanied by a peak wind gust to 56 mph. Kodiak completed a very wet month, with 2.99 inches falling during the last 5 days of December, resulting in a monthly sum of 13.21 inches (151 percent of normal).

Warm weather prevailed for much of the month in Hawaii, while periodically heavy showers affected windward locations. Kahului, Maui, posted daily-record highs of 89°F on December 3, 5, 9, 10, and 14. Late in the month, Kahului's high of 90°F (on December 29) tied a monthly record previously achieved on December 24, 2019, and several earlier dates. During a brief cool spell, Kahului's low of 59°F on December 24 represented its first reading below the 60-degree mark since February 12. Not surprisingly, Kahului also wrapped up its warmest year on record, with an annual average temperature of 78.6°F (previously, 78.4°F in 2019). On the Big Island, Hilo (76.8°F) secured its warmest year on record, toppling the 2015 standard of 76.2°F. Meanwhile, December rainfall across Hawaii was highly variable. At the state's major airport observation sites, December rainfall ranged from 0.16 inch (5 percent of normal) in Kahului to 14.06 inches (122 percent) in Hilo, with data missing for the 31st. More than half (7.85 inches) of Hilo's rain fell on December 18-19. On Lihue, Kauai's wettest day of the month was December 19, when 1.01 inches fell—nearly half of the 2.05-inch total.

Fieldwork

Weather summary provided by USDA/NASS

Most of the nation's mid-section was warmer than average in December. Large parts of the northern Plains recorded temperatures 6°F or more above normal. In the western one-third of the nation, temperatures were slightly cooler than normal in a few areas, including the Southwest, while warmer-than-normal weather prevailed in California and the Pacific Northwest. Portions of the northern Rockies were 6°F or more above normal. Generally cooler-than-normal conditions were observed in the lower Mississippi Valley and the Southeast. Parts of Georgia and Florida were 3°F or more below normal. In contrast, the Northeast was generally warmer than normal, with parts of New England averaging 3°F or more above normal.

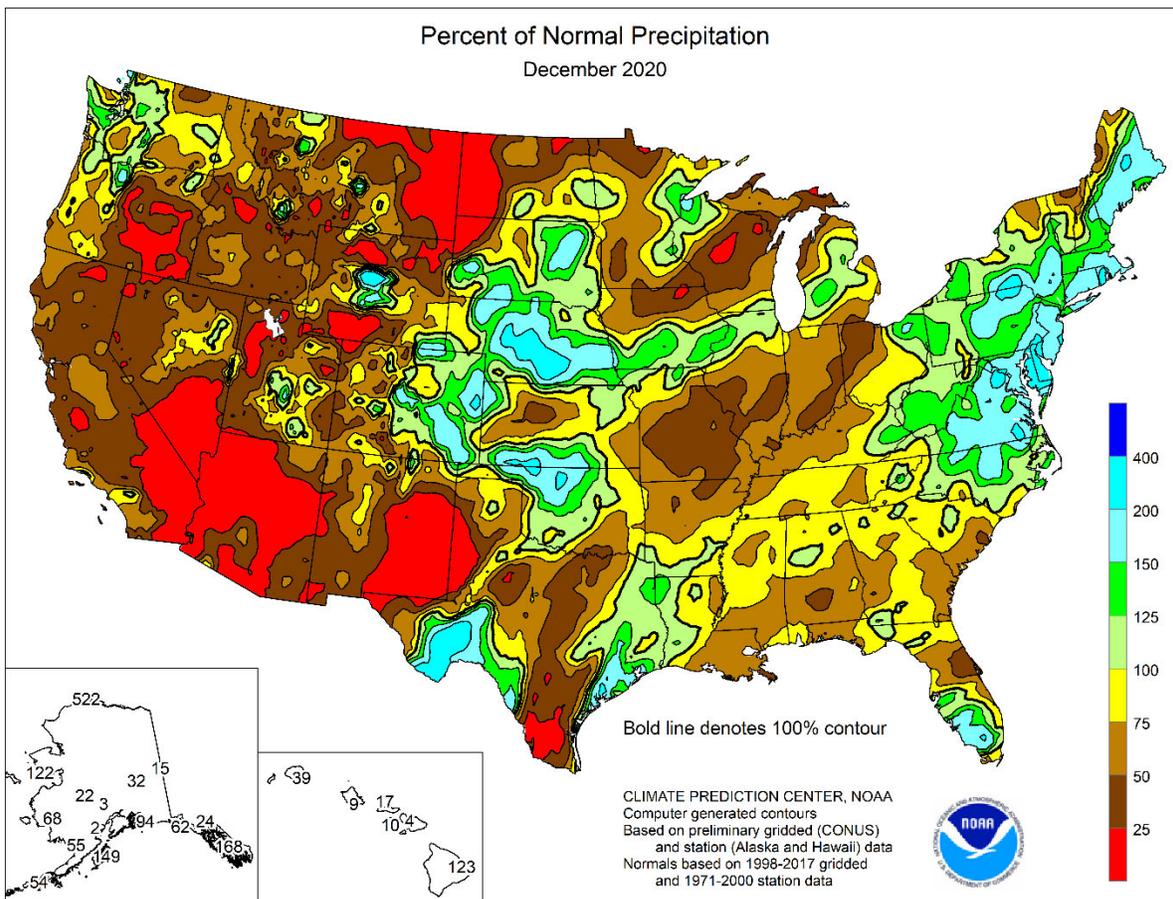
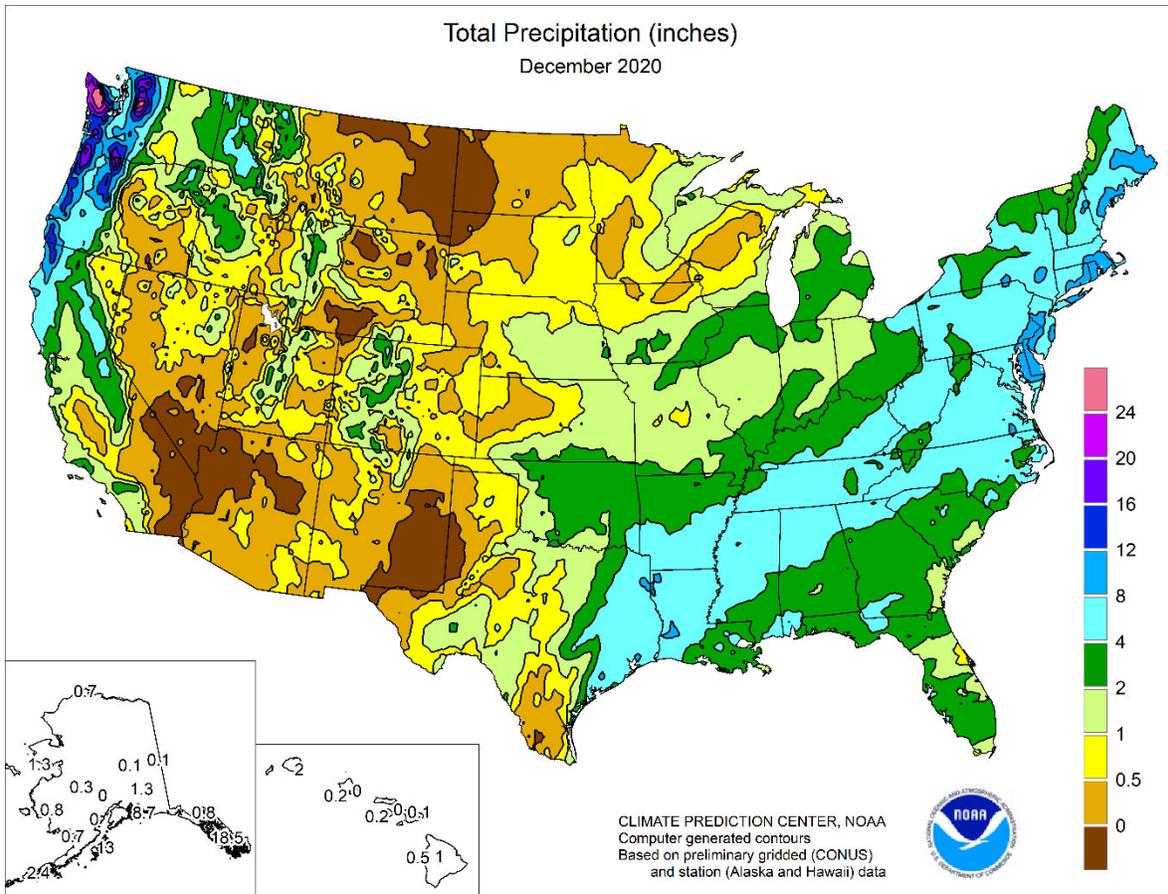
Much of the U.S. was drier than normal, but above-normal precipitation was observed in large parts of the mid-Atlantic and Northeast. Parts of the Delta, Texas, Florida, Nevada, the southern and central Plains, the Pacific Northwest, and the Rockies also received above-normal precipitation.

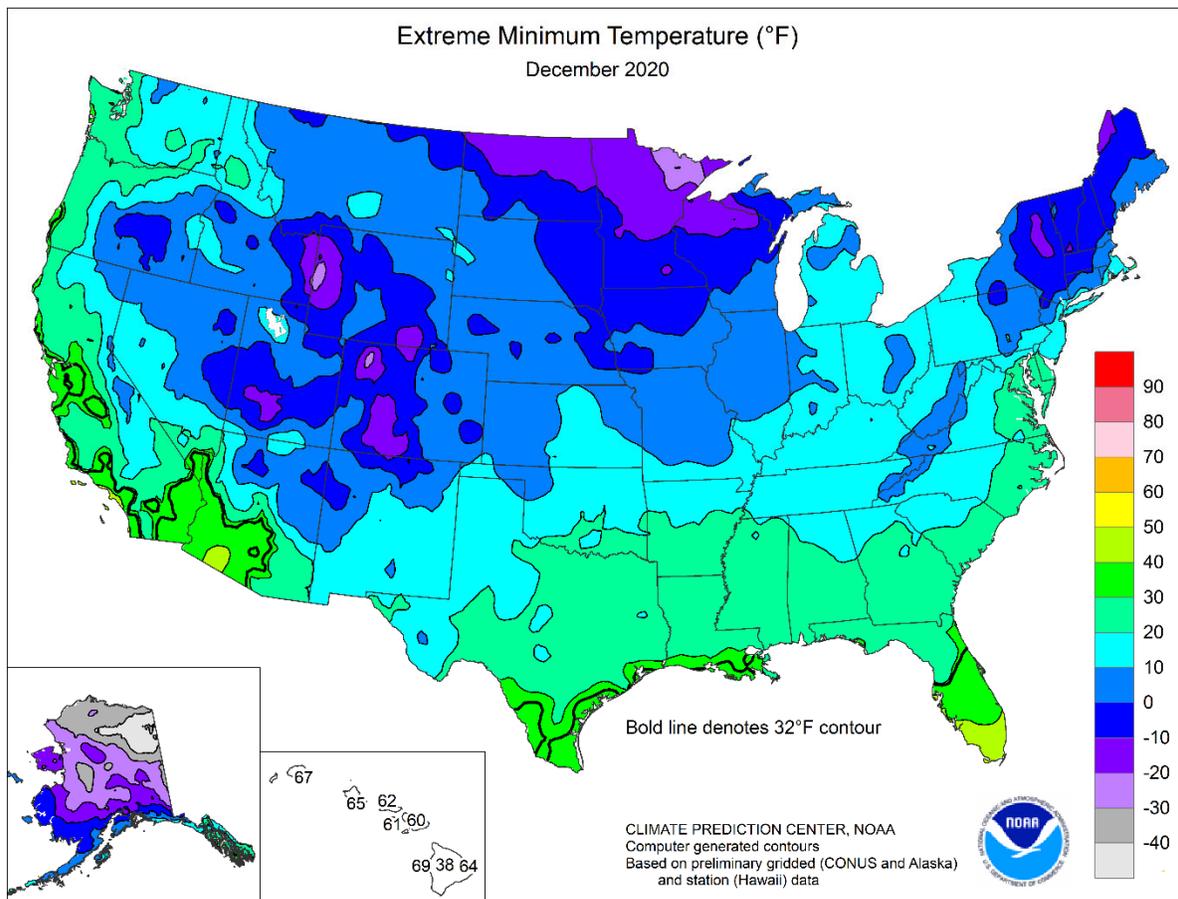
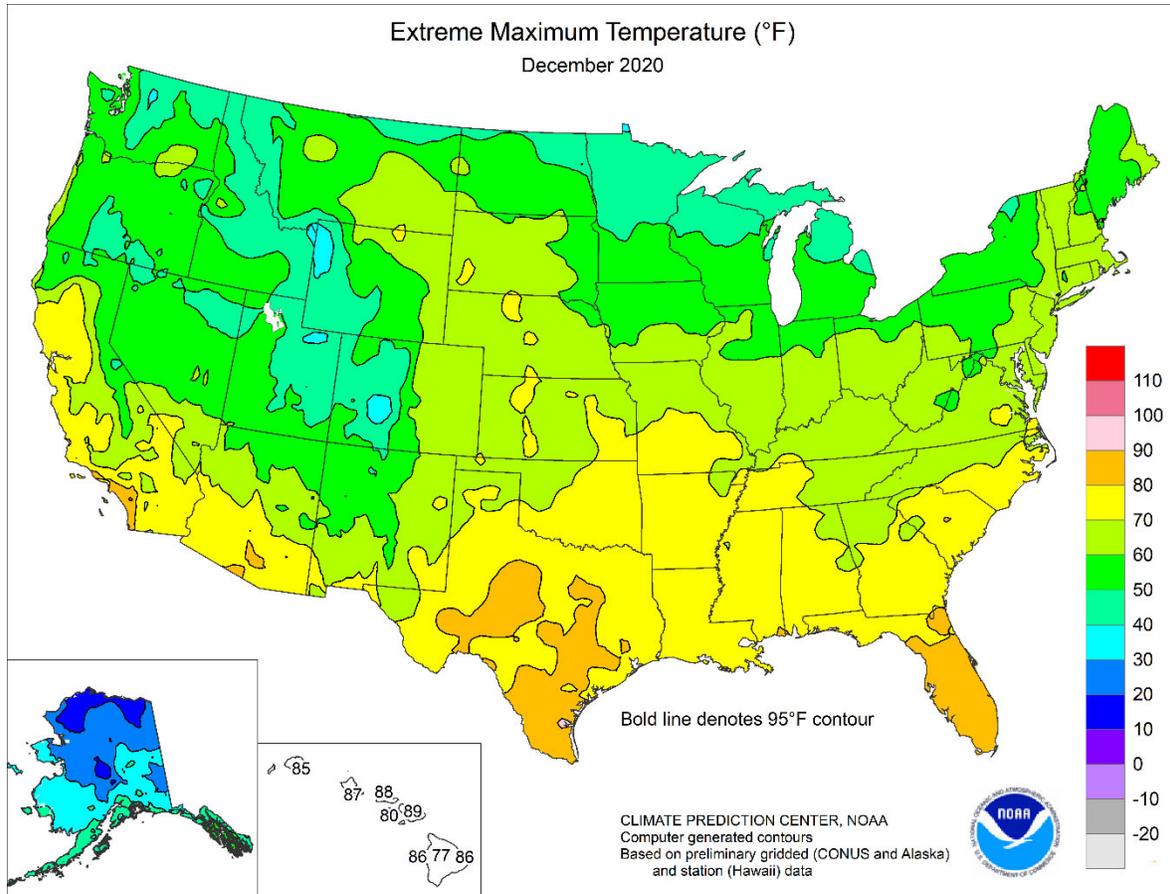
Nationwide, 92 percent of the winter wheat acreage had emerged by November 29, three percentage points ahead of last year and 1 point ahead of the 5-year average. As of November 29, forty-six percent of the 2021 winter wheat acreage was reported in good to excellent condition, 6 percentage points below the same time last year.

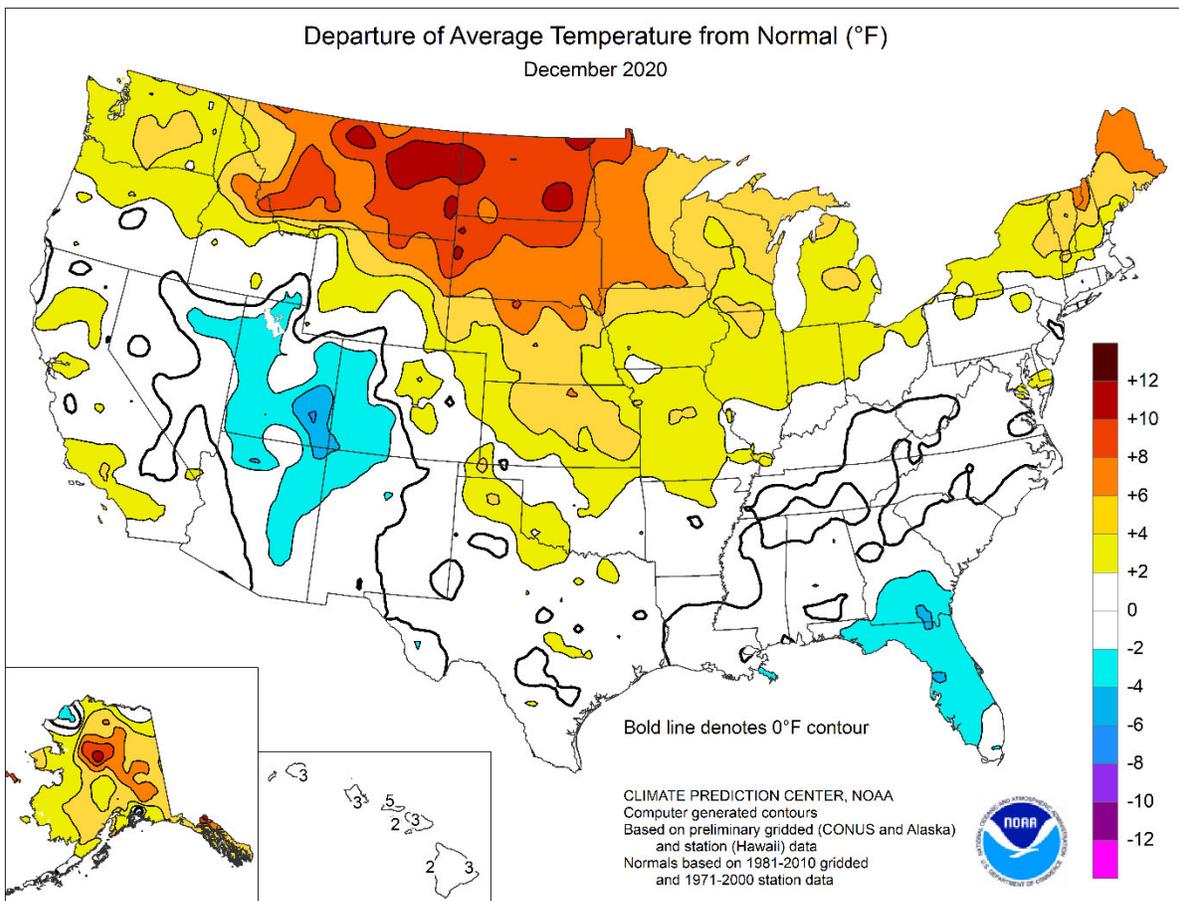
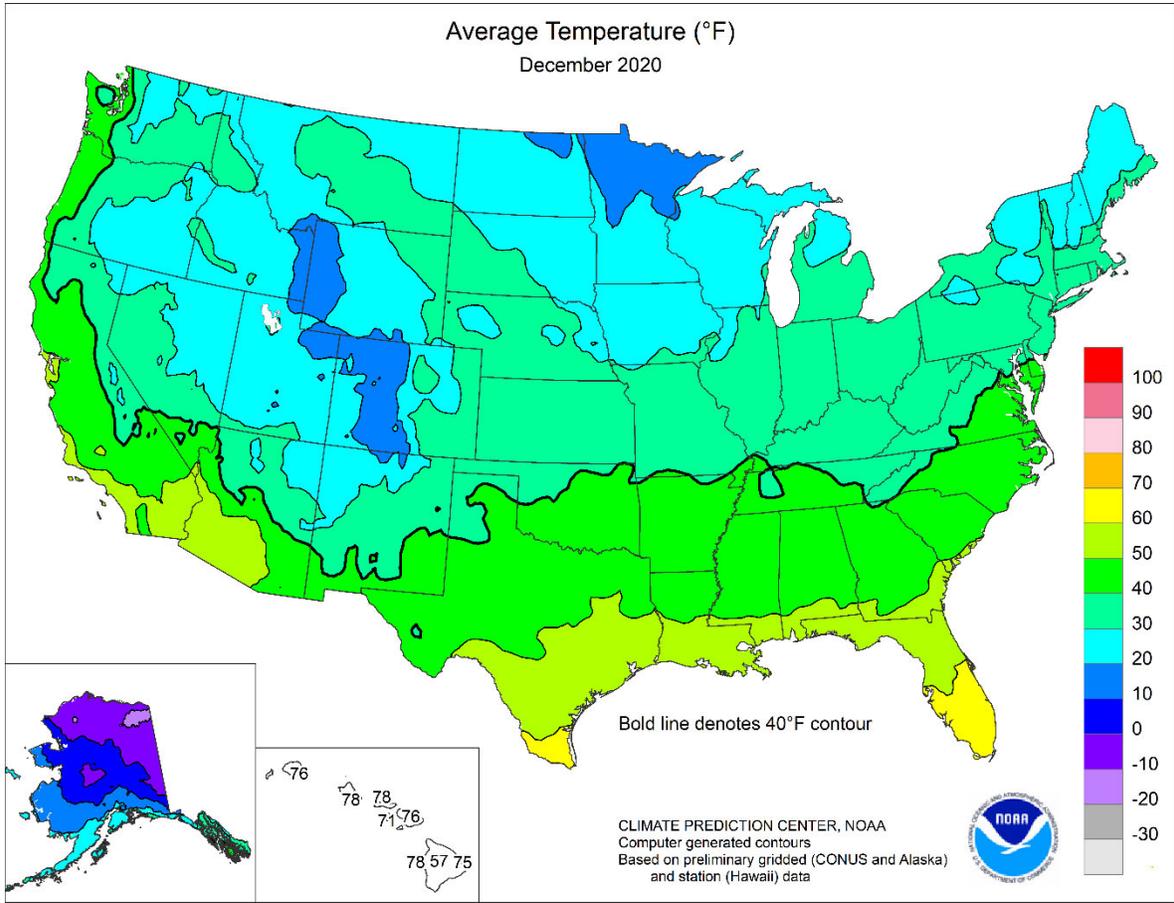
By November 29, eighty-four percent of the nation's cotton acreage was harvested, 2 percentage points ahead of last year and 5 points ahead of the 5-year average.

Ninety-six percent of the nation's peanut acreage was harvested as of November 29, two percentage points behind last year but equal to the 5-year average.

By November 29, ninety-seven percent of the nation's sunflower crop was harvested, 35 percentage points ahead of last year and 10 points ahead of the 5-year average.







National Weather Data for Selected Cities

December 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	23	4	1.45	0.33	WICHITA	38	4	1.65	0.45	TOLEDO	34	5	1.26	-1.41
BARROW	-5	0	0.74	0.57	KY LEXINGTON	35	-1	2.57	-1.35	YOUNGSTOWN	34	3	3.62	0.65
FAIRBANKS	1	0	0.23	-0.41	LOUISVILLE	40	2	2.47	-1.33	OK OKLAHOMA CITY	41	0	2.70	0.83
JUNEAU	37	7	12.90	7.06	PADUCAH	40	2	2.54	-2.07	TULSA	42	3	3.32	0.84
KODIAK	32	0	13.05	4.30	LA BATON ROUGE	52	-5	4.22	-0.20	OR ASTORIA	45	2	8.03	-1.85
NOME	13	3	1.31	0.22	LAKE CHARLES	53	-1	4.37	-0.32	BURNS	26	2	0.70	-0.87
AL BIRMINGHAM	46	0	3.80	-0.67	NEW ORLEANS	56	1	4.02	-1.22	EUGENE	43	3	6.35	-1.49
HUNTSVILLE	43	-1	4.58	-1.19	SHREVEPORT	50	2	8.04	3.25	MEDFORD	41	2	2.92	-0.54
MOBILE	51	-2	4.57	-0.50	MA BOSTON	36	1	3.47	-0.30	PENDELTON	36	3	0.96	-0.52
MONTGOMERY	48	0	1.87	-3.00	WORCESTER	32	3	6.05	2.24	PORTLAND	44	4	4.99	-0.50
AR FORT SMITH	43	1	3.65	0.38	MD BALTIMORE	39	2	4.51	1.17	SALEM	42	2	6.36	-0.50
LITTLE ROCK	44	1	4.75	-0.23	ME CARIBOU	26	8	2.41	-0.84	PA ALLENTOWN	34	1	4.11	0.54
AZ FLAGSTAFF	30	0	0.34	-1.52	PORTLAND	31	2	3.96	-0.06	ERIE	36	3	3.43	-0.28
PHOENIX	56	0	0.45	-0.47	MI ALPENA	29	4	1.24	-0.51	MIDDLETOWN	37	3	4.15	0.94
PRESCOTT	38	-1	0.06	-0.93	GRAND RAPIDS	32	3	2.08	-0.41	PHILADELPHIA	39	1	4.32	0.78
TUCSON	54	2	0.25	-0.72	HOUGHTON LAKE	28	4	1.76	0.10	PITTSBURGH	33	1	3.81	0.98
CA BAKERSFIELD	50	2	0.34	-0.70	LANSING	32	3	2.03	0.16	WILKES-BARRE	34	3	3.50	0.84
EUREKA	46	-2	3.80	-4.33	MUSKEGON	33	3	2.40	-0.15	WILLIAMSPORT	33	2	4.62	1.70
FRESNO	49	3	1.13	-0.65	TRAVERSE CITY	32	5	0.66	-1.81	RI PROVIDENCE	36	1	7.41	3.19
LOS ANGELES	59	2	1.63	-0.41	MN DULUTH	20	5	0.82	-0.39	SC CHARLESTON	50	-1	1.70	-1.39
REDDING	48	3	2.36	-3.91	INT_L FALLS	17	7	0.85	0.02	COLUMBIA	46	-1	2.86	-0.34
SACRAMENTO	48	2	1.54	-1.69	MINNEAPOLIS	25	5	0.75	-0.42	FLORENCE	46	-1	2.97	-0.02
SAN DIEGO	58	1	0.60	-0.93	ROCHESTER	25	0	0.13	-1.11	GREENVILLE	43	-1	2.73	-1.38
SAN FRANCISCO	53	3	1.37	-2.66	ST. CLOUD	22	6	0.44	-0.40	SD ABERDEEN	26	10	0.31	-0.22
STOCKTON	49	4	1.79	-0.42	MO COLUMBIA	37	5	0.65	-1.80	HURON	26	7	0.31	-0.22
CO ALAMOSA	17	-1	0.37	-0.03	KANSAS CITY	37	5	1.26	-0.28	RAPID CITY	32	7	0.28	-0.17
CO SPRINGS	34	4	0.52	0.13	SAINT LOUIS	38	3	1.58	-1.26	SIOUX FALLS	27	8	0.42	-0.28
DENVER INTL	33	3	0.52	0.12	SPRINGFIELD	38	3	1.49	-1.53	TN BRISTOL	37	-1	3.52	0.17
GRAND JUNCTION	27	-2	0.31	-0.28	MS JACKSON	49	1	5.00	-0.17	CHATTANOOGA	44	1	4.44	-0.47
PUEBLO	33	3	0.16	-0.26	MERIDIAN	48	0	3.60	-1.48	KNOXVILLE	40	-1	3.59	-0.93
CT BRIDGEPORT	37	2	4.05	0.74	TUPELO	46	2	5.05	-1.22	MEMPHIS	44	1	6.08	0.33
HARTFORD	33	2	4.78	1.37	MT BILLINGS	35	8	0.35	-0.16	NASHVILLE	42	1	3.35	-0.89
DC WASHINGTON	41	2	4.72	1.68	BUTTE	24	6	0.11	-0.42	TX ABILENE	48	3	1.80	0.58
DE WILMINGTON	37	1	5.16	1.70	CUT BANK	30	8	0.20	-0.06	AMARILLO	39	2	0.23	-0.48
FL DAYTONA BEACH	58	-3	0.56	-2.05	GLASGOW	27	11	0.01	-0.43	AUSTIN	55	2	2.66	0.28
JACKSONVILLE	52	-3	1.54	-1.26	GREAT FALLS	34	9	0.10	-0.45	BEAUMONT	54	0	5.71	0.41
KEY WEST	70	-2	1.44	-0.77	HAVRE	30	11	0.08	-0.35	BROWNSVILLE	64	2	1.04	-0.12
MIAMI	69	-1	1.57	-0.47	MISSOULA	28	4	0.43	-0.63	CORPUS CHRISTI	58	0	1.70	-0.12
ORLANDO	59	-3	1.04	-1.52	NC ASHEVILLE	40	0	4.00	0.43	DEL RIO	55	3	1.24	0.59
PENSACOLA	54	1	4.78	0.20	CHARLOTTE	43	1	2.93	-0.30	EL PASO	45	0	0.02	-0.78
TALLAHASSEE	51	-2	3.13	-0.75	GREENSBORO	41	-1	3.97	1.01	FORT WORTH	49	2	2.96	0.39
TAMPA	61	-2	2.67	0.20	HATTERAS	50	1	6.67	2.38	GALVESTON	59	1	3.98	0.00
WEST PALM BEACH	67	-1	2.25	-1.11	RALEIGH	43	0	5.57	2.54	HOUSTON	55	1	4.45	0.73
GA ATHENS	46	1	3.02	-0.67	WILMINGTON	49	1	2.75	-0.84	LUBBOCK	42	1	0.07	-0.70
ATLANTA	46	1	2.28	-1.61	ND BISMARCK	26	10	0.26	-0.25	MIDLAND	45	1	0.51	-0.08
AUGUSTA	47	0	3.09	-0.28	DICKINSON	29	11	0.00	-0.28	SAN ANGELO	48	2	1.02	0.14
COLUMBUS	48	-1	3.11	-1.16	FARGO	22	8	0.58	-0.28	SAN ANTONIO	54	2	0.83	-1.07
MACON	47	-1	2.26	-1.78	GRAND FORKS	21	9	0.41	-0.20	VICTORIA	55	0	2.56	0.24
SAVANNAH	52	0	1.72	-1.22	JAMESTOWN	25	11	0.26	-0.18	WACO	49	1	4.44	1.69
HI HILO	75	3	14.29	2.71	NE GRAND ISLAND	32	6	0.84	0.20	WICHITA FALLS	46	3	1.21	-0.42
HONOLULU	78	3	0.30	-2.92	LINCOLN	30	3	1.09	0.12	UT SALT LAKE CITY	30	0	0.33	-1.09
KAHULUI	76	3	0.15	-3.17	NORFOLK	31	7	0.49	-0.28	VA LYNCHBURG	40	2	4.83	1.61
LIHUE	76	3	2.04	-3.18	NORTH PLATTE	31	6	0.72	0.28	NORFOLK	46	2	4.19	0.94
IA BURLINGTON	31	2	1.81	-0.28	OMAHA	30	4	1.12	0.07	RICHMOND	41	0	6.67	3.43
CEDAR RAPIDS	26	3	0.67	-0.76	SCOTTSBLUFF	32	6	0.40	-0.12	ROANOKE	41	2	3.61	0.69
DES MOINES	29	3	1.92	0.50	VALENTINE	32	8	0.41	0.00	WASH/DULLES	38	2	5.78	2.82
DUBUQUE	26	3	1.27	-0.58	NH CONCORD	30	3	3.69	0.50	VT BURLINGTON	31	5	1.19	-1.20
SIoux CITY	27	5	0.36	-0.46	NJ ATLANTIC_CITY	39	1	5.05	1.39	WA OLYMPIA	41	3	7.23	-0.22
WATERLOO	27	4	0.82	-0.40	NEWARK	38	1	3.67	-0.11	QUILLAYUTE	44	3	15.72	2.73
ID BOISE	33	2	0.56	-1.02	NM ALBUQUERQUE	36	-1	0.21	-0.31	SEATTLE-TACOMA	44	4	6.56	1.21
LEWISTON	37	4	0.63	-0.38	NV ELY	26	1	0.37	-0.22	SPOKANE	32	5	2.28	-0.02
POCATELLO	26	2	0.40	-0.83	LAS VEGAS	49	1	0.04	-0.48	YAKIMA	33	4	0.58	-0.97
IL CHICAGO/O_HARE	33	5	2.55	0.31	RENO	36	1	0.27	-0.78	WI EAU CLAIRE	24	5	0.19	-0.84
MOLINE	31	4	2.76	0.59	WINNEMUCCA	31	1	0.39	-0.57	GREEN BAY	28	7	0.44	-1.07
PEORIA	32	4	1.24	-1.19	NY ALBANY	30	1	3.69	0.77	LA CROSSE	28	6	0.29	-1.07
ROCKFORD	31	6	1.74	-0.24	BINGHAMTON	29	2	5.79	2.98	MADISON	26	3	1.13	-0.62
SPRINGFIELD	34	3	1.06	-1.46	BUFFALO	34	3	3.75	-0.11	MILWAUKEE	32	5	2.12	0.09
IN EVANSVILLE	38	3	1.98	-1.76	ROCHESTER	33	3	1.87	-0.74	WV BECKLEY	34	0	13.22	10.25
FORT WAYNE	33	4	1.25	-1.52	SYRACUSE	34	4	2.61	-0.59	CHARLESTON	37	0	3.72	0.47
INDIANAPOLIS	34	2	1.42	-1.72	OH AKRON-CANTON	34	3	2.43	-0.40	ELKINS	33	1	3.71	0.47
SOUTH BEND	32	3	2.54	-0.06	CINCINNATI	36	2	1.75	-1.60	HUNTINGTON	37	0	3.94	0.65
KS CONCORDIA	36	6	0.67	-0.20	CLEVELAND	34	2	2.57	-0.50	WY CASPER	26	3	0.69	0.18
DODGE CITY	37	4	1.05	0.18	COLUMBUS	34	1	2.20	-0.75	CHEYENNE	31	3	0.47	-0.04
GOODLAND	33	3	0.76	0.27	DAYTON	35	4	0.90	-2.20	LANDER	24	3	0.59	0.01
TOPEKA	36	4	1.29	-0.07	MANSFIELD	33	4	1.89	-1.38	SHERIDAN	32	9	0.28	-0.29

International Weather and Crop Summary

January 3-9, 2021

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

HIGHLIGHTS

EUROPE: Wet weather prevailed across much of the continent, with below-normal temperatures in western Europe contrasting with abnormal warmth in eastern crop areas.

MIDDLE EAST: Warm, dry weather maintained moderate to severe drought across much of Turkey, though much-needed rain approached from the west.

NORTHWESTERN AFRICA: Heavy rain alleviated drought in Morocco, while sunny skies favored winter grain development in eastern growing areas.

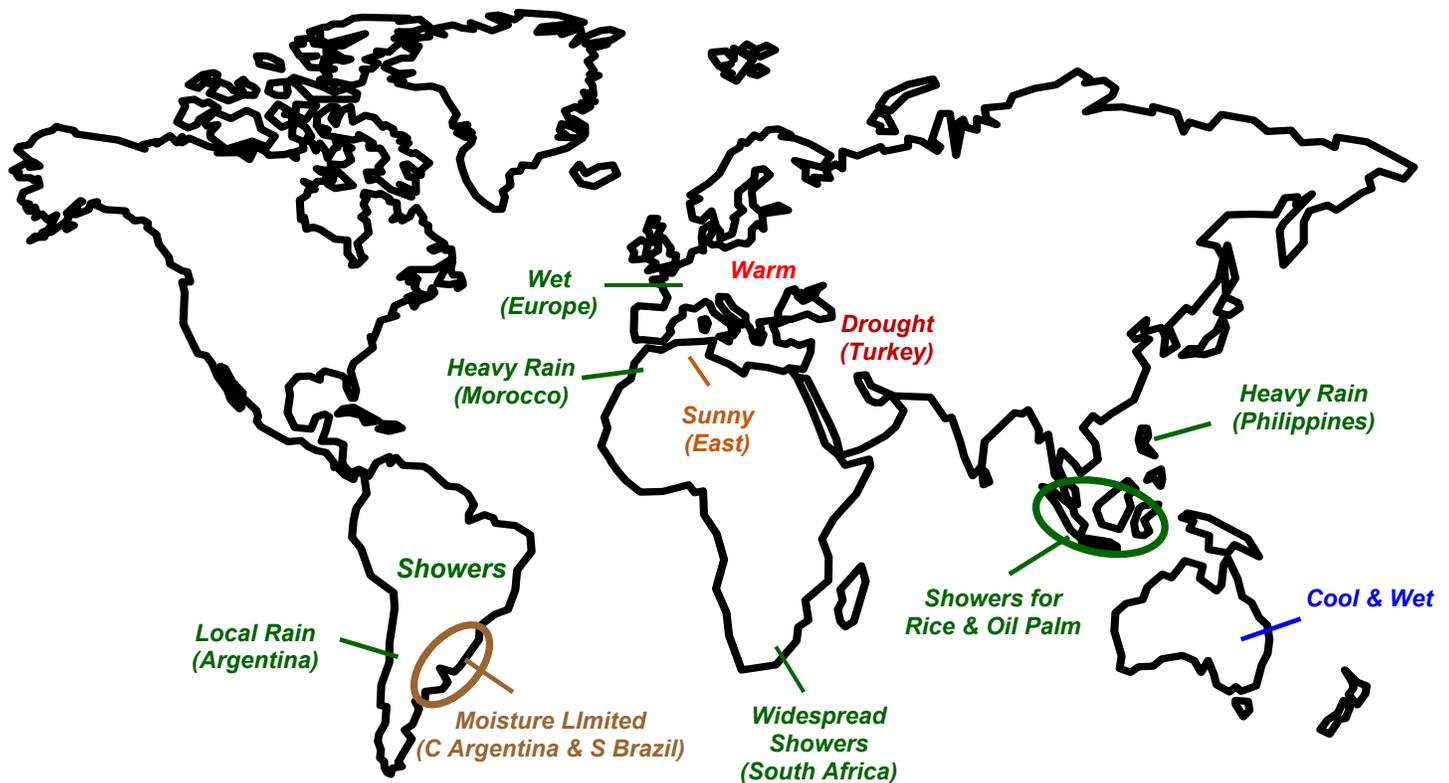
SOUTHEAST ASIA: Heavy showers sustained ample moisture supplies for rice and oil palm in the Philippines, Malaysia, and Indonesia.

AUSTRALIA: Soaking rain and cooler-than-normal weather further benefited summer crops.

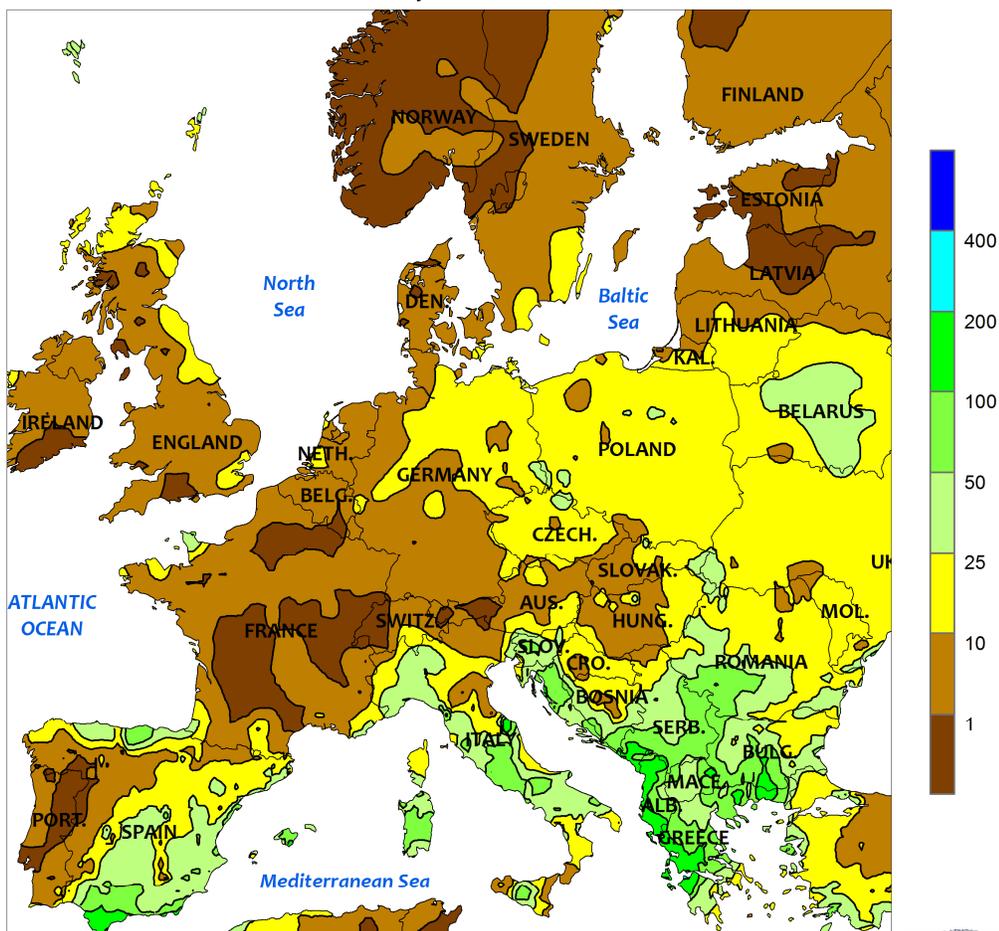
SOUTH AFRICA: Showers maintained favorable conditions for corn, sugarcane, and other rain-fed summer crops.

ARGENTINA: Rain returned to western and southern farming regions, but dryness persisted for corn and soybeans over much of central Argentina.

BRAZIL: Scattered showers benefited summer crops throughout much of Brazil, although dryness remained a concern for some southern crops.



EUROPE
Total Precipitation (mm)
January 3 - 9, 2021



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

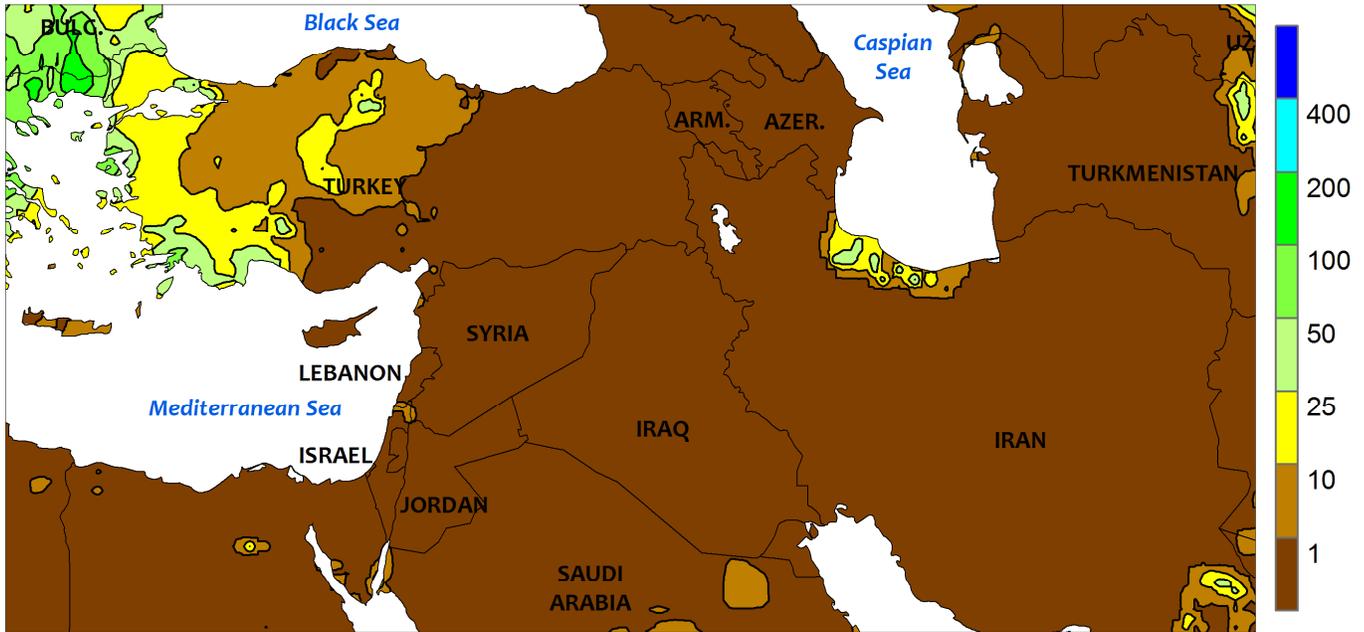


EUROPE

Widespread rain and snow prevailed, with unseasonable warmth in eastern growing areas contrasting with cold weather over the western half of the continent. Light to moderate precipitation (1-25 mm liquid equivalent) was reported across much of England, France, and southwestern Germany. Meanwhile, moderate to heavy rain and snow (10-100 mm, locally more) was reported across much of eastern Europe as well as the Mediterranean region. The wet weather maintained adequate to abundant moisture supplies for dormant (center and north) to vegetative (south) winter grains and oilseeds and eased short-term dryness in

eastern Germany, western Poland, and northern Austria. Unseasonable warmth (2-6°C above normal) across eastern portions of the continent kept crop areas uncharacteristically devoid of snow cover, with temperatures averaging more than 8°C above normal in Greece and the southern Balkans. Conversely, colder-than-normal conditions (2-7°C below normal) persisted over western Europe, though minimum temperatures stayed above the threshold for potential winterkill; however, some burnback to winter grains was possible in northern Spain, where readings dipped to -10 to -6°C.

MIDDLE EAST
 Total Precipitation (mm)
 January 3 - 9, 2021



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

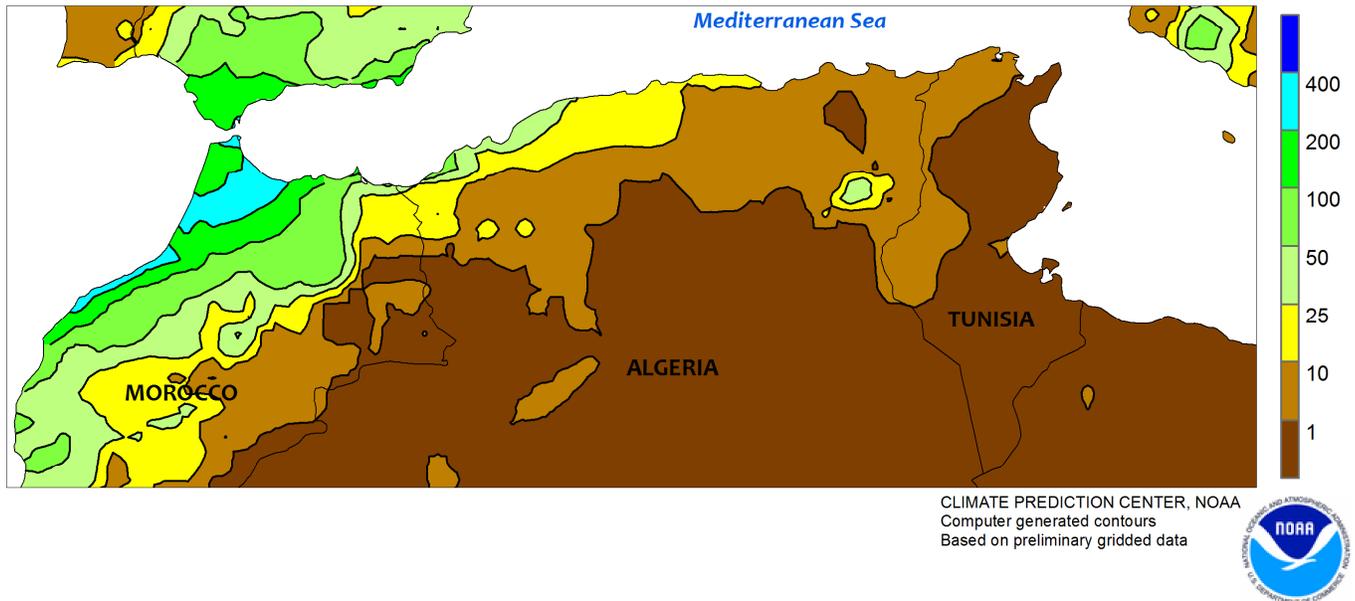


MIDDLE EAST

Dry weather exacerbated drought in Turkey, though rain approached western portions of the country during the latter half of the week. Moderate to heavy showers (5-50 mm) overspread western Turkey at the end of the period, easing drought and providing much-needed moisture for winter crops. However, central Turkey’s Anatolian Plateau — a key winter grain area — remained mostly dry, with season-to-date precipitation (since September 1) averaging less than 50 percent of normal; this ranked as the second driest over the past 30 years, topped only by the drought of 2013-

14. Similar deficits extended eastward into the Armenian Highlands and southward to the Mediterranean Coast and GAP Region in southeastern Turkey. In contrast, sunny skies favored dormant (north) to vegetative (south) winter wheat and barley from the eastern Mediterranean Coast into Iran, where near- to above-normal autumn precipitation boosted moisture supplies for wheat and barley establishment. Temperatures during the period averaged up to 8°C above normal in Turkey, while cold conditions (2-5°C below normal) lingered over Iran.

NORTHWESTERN AFRICA
Total Precipitation (mm)
January 3 - 9, 2021

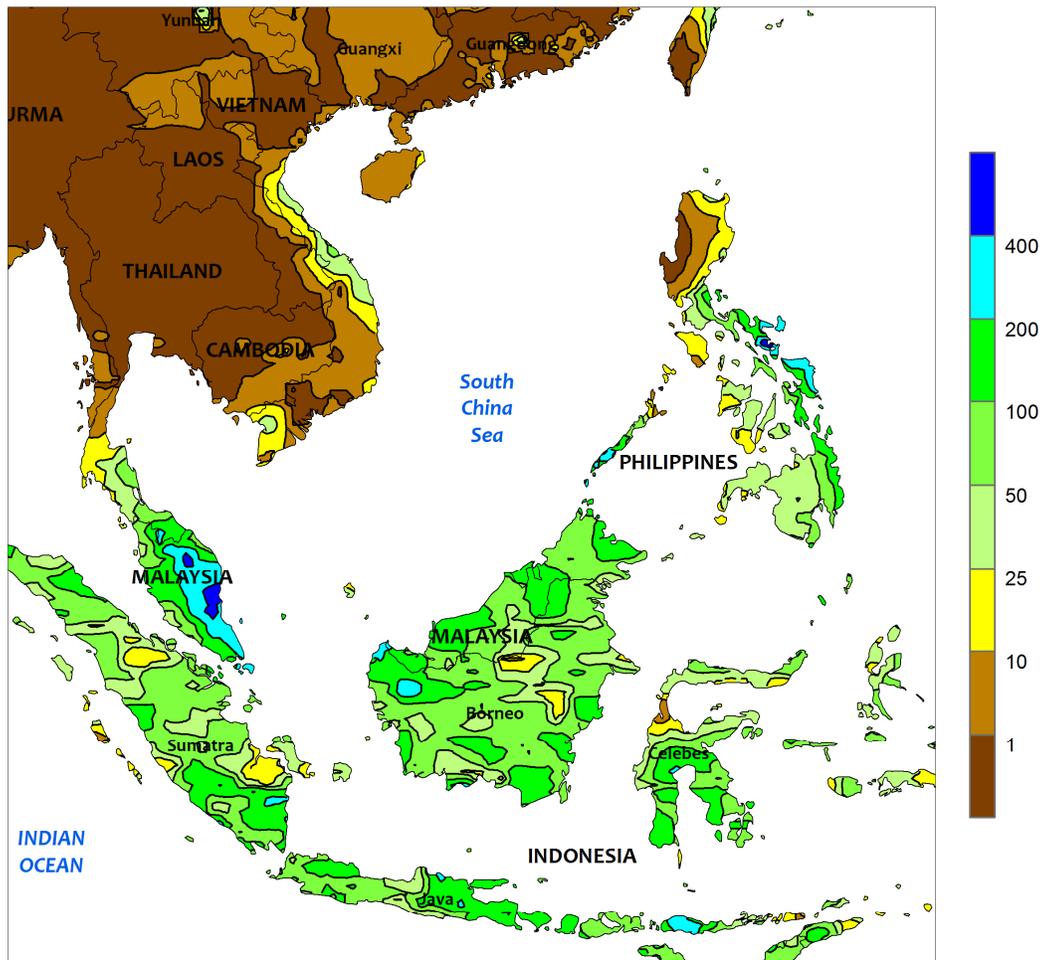


NORTHWESTERN AFRICA

Heavy rain alleviated lingering drought in Morocco, while mostly dry weather favored winter grain development in eastern growing areas. A pair of Atlantic disturbances tracked along a stalled frontal boundary stretching eastward over the Strait of Gibraltar into the western Mediterranean Sea, producing moderate to excessive rainfall (10-110 mm, locally more than 200 mm) across Morocco. Consequently, lingering long-term precipitation deficits brought on by a second consecutive year of severe drought in western and southern Morocco were nearly eradicated. The moisture was

beneficial for winter wheat and barley, although the severity of this season’s drought — which extended from October through December — may have prevented some producers from sowing winter grains altogether. Moderate to heavy showers (10-35 mm) extended eastward into north-central Algeria, maintaining good moisture supplies for vegetative winter grains. Mostly sunny skies in northeastern Algeria and northern Tunisia benefited wheat and barley development following recent rainfall, though some showers (2-10 mm) were reported at week’s end.

SOUTHEAST ASIA
Total Precipitation (mm)
January 3 - 9, 2021



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

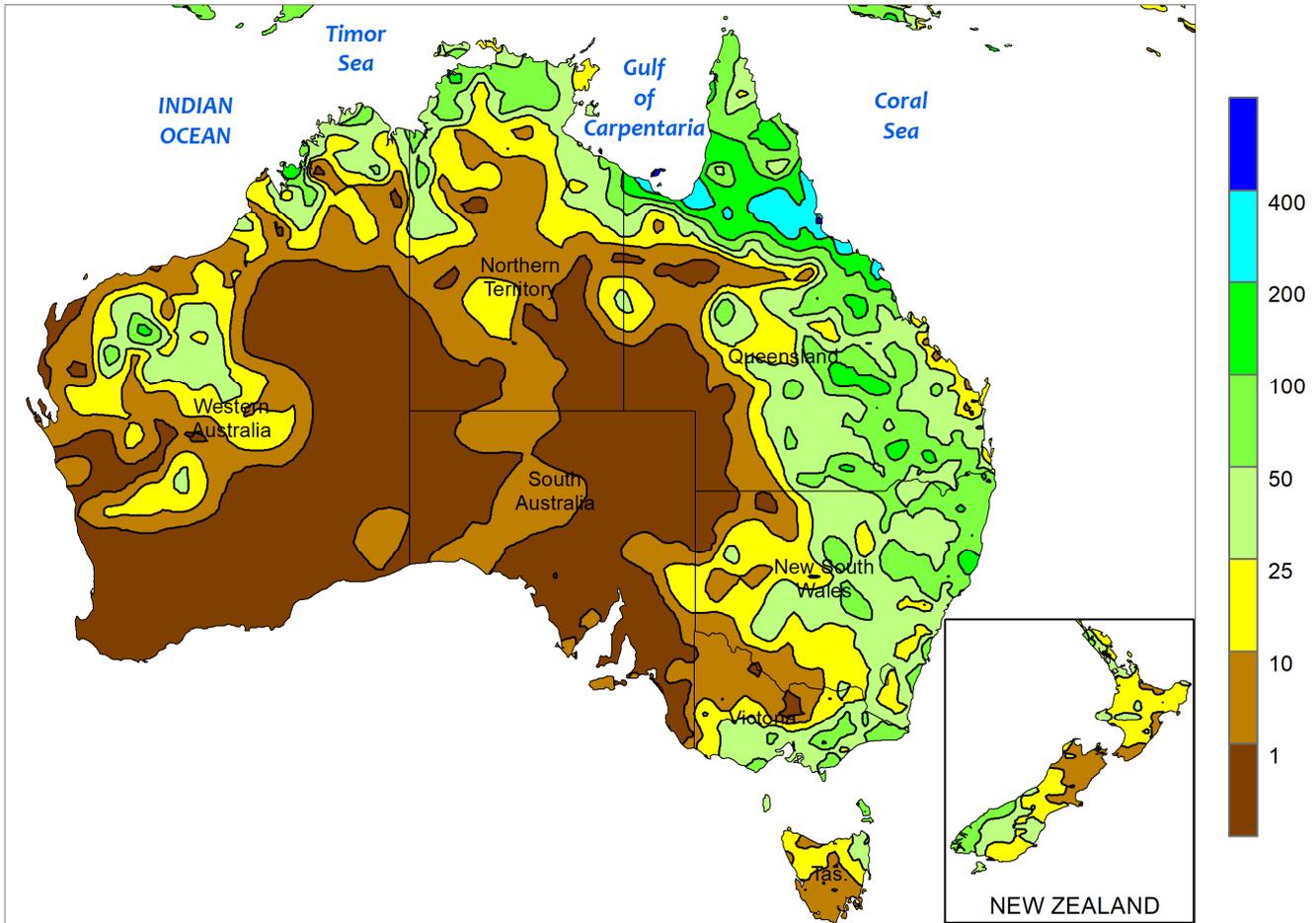


SOUTHEAST ASIA

Above-average rainfall continued across much of the Philippines, Malaysia, and Indonesia. In the Philippines, large sections received 25 to 100 mm of rain, with the eastern Visayas reporting over 200 mm. The consistently heavy showers sustained abundant moisture supplies for

rice and corn. Similarly, wet weather (50-200 mm, locally more) in Malaysia and Indonesia supported good oil palm prospects as well as provided rice with ample water. In fact, 60-day rainfall totals in southern Indonesia (Java) are the highest in over 10 years.

AUSTRALIA
Total Precipitation (mm)
January 3 - 9, 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

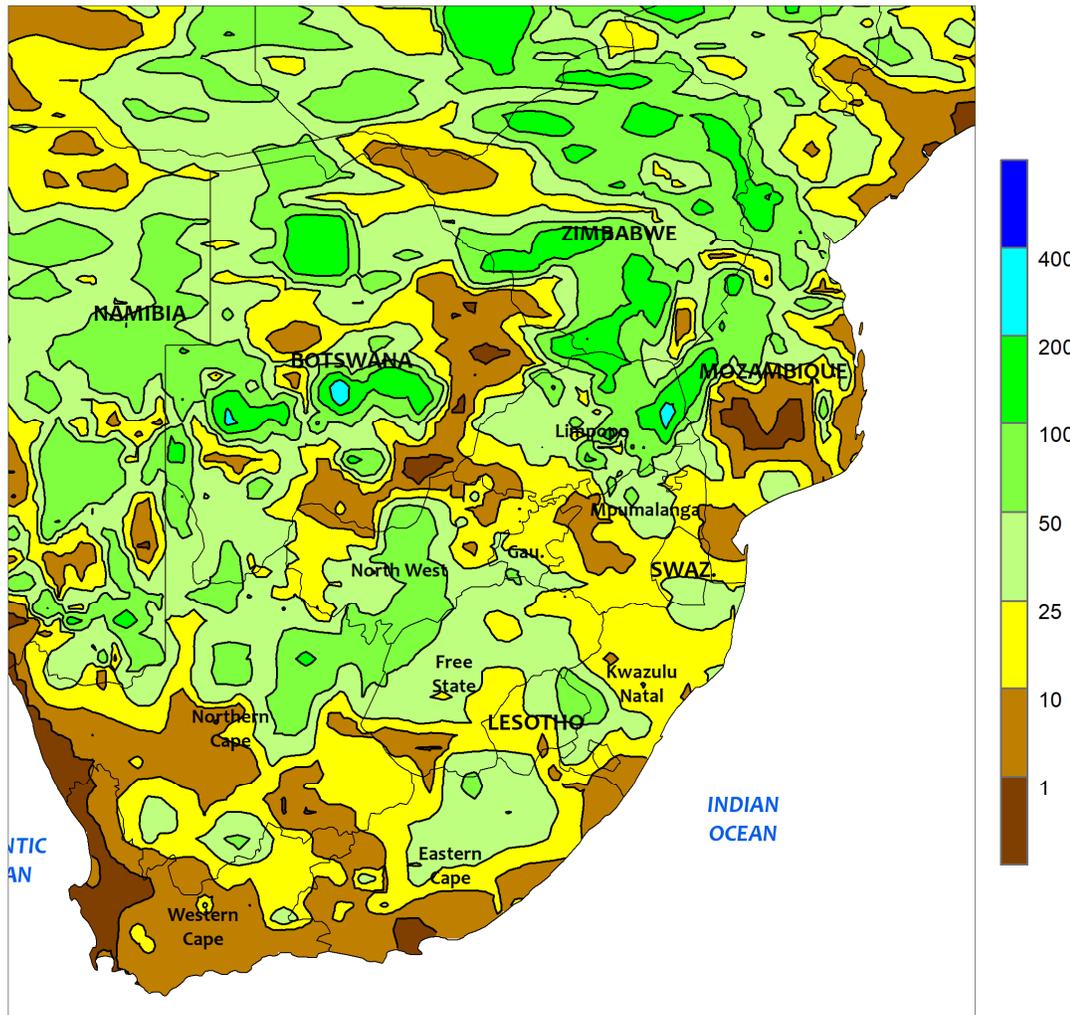


AUSTRALIA

In southern Queensland and New South Wales, soaking rain and cooler-than-normal weather further benefited cotton, sorghum, and other summer crops. The rain (15-50 mm, locally near 100 mm) helped maintain relatively low irrigation requirements while further increasing topsoil moisture for dryland crops. Temperatures

averaged 2 to 4°C below normal in eastern Australia, with maximum temperatures generally in the upper 20s and lower 30s degrees C. Elsewhere in the wheat belt, mostly dry weather (generally less than 5 mm) in Western Australia, South Australia, and northern Victoria favored final winter crop harvesting.

SOUTH AFRICA
 Total Precipitation (mm)
 January 3 - 9, 2021



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

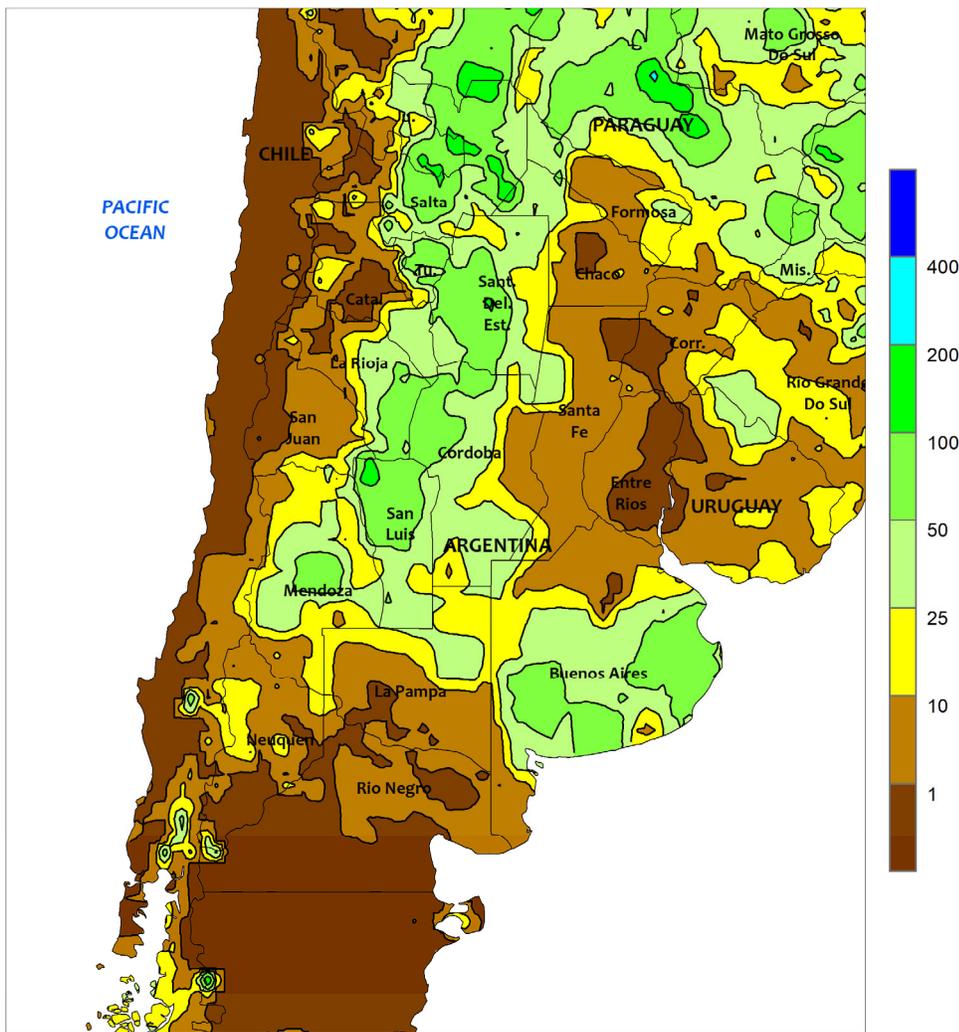


SOUTH AFRICA

Widespread showers maintained favorable yield prospects for rain-fed summer crops. Rainfall totaling 10 to 50 mm – locally approaching 100 mm – overspread the corn belt (North West and Free State eastward through Limpopo and Mpumalanga) and similar amounts were recorded in the sugarcane plantations in KwaZulu-Natal. Weekly temperatures averaged near to above normal in the aforementioned regions, with daytime highs reaching the

upper 30s (degrees C) confined to outlying sections of Limpopo and irrigated sugarcane areas in eastern Mpumalanga. Elsewhere, seasonable warmth and dryness fostered development of tree and vine crops in Western Cape, but unseasonable wetness (rainfall totaling higher than 50 mm) across the remainder of the Cape Provinces increased moisture supplies for corn, cotton, and other predominantly irrigated summer crops.

ARGENTINA
Total Precipitation (mm)
January 3 - 9, 2021



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

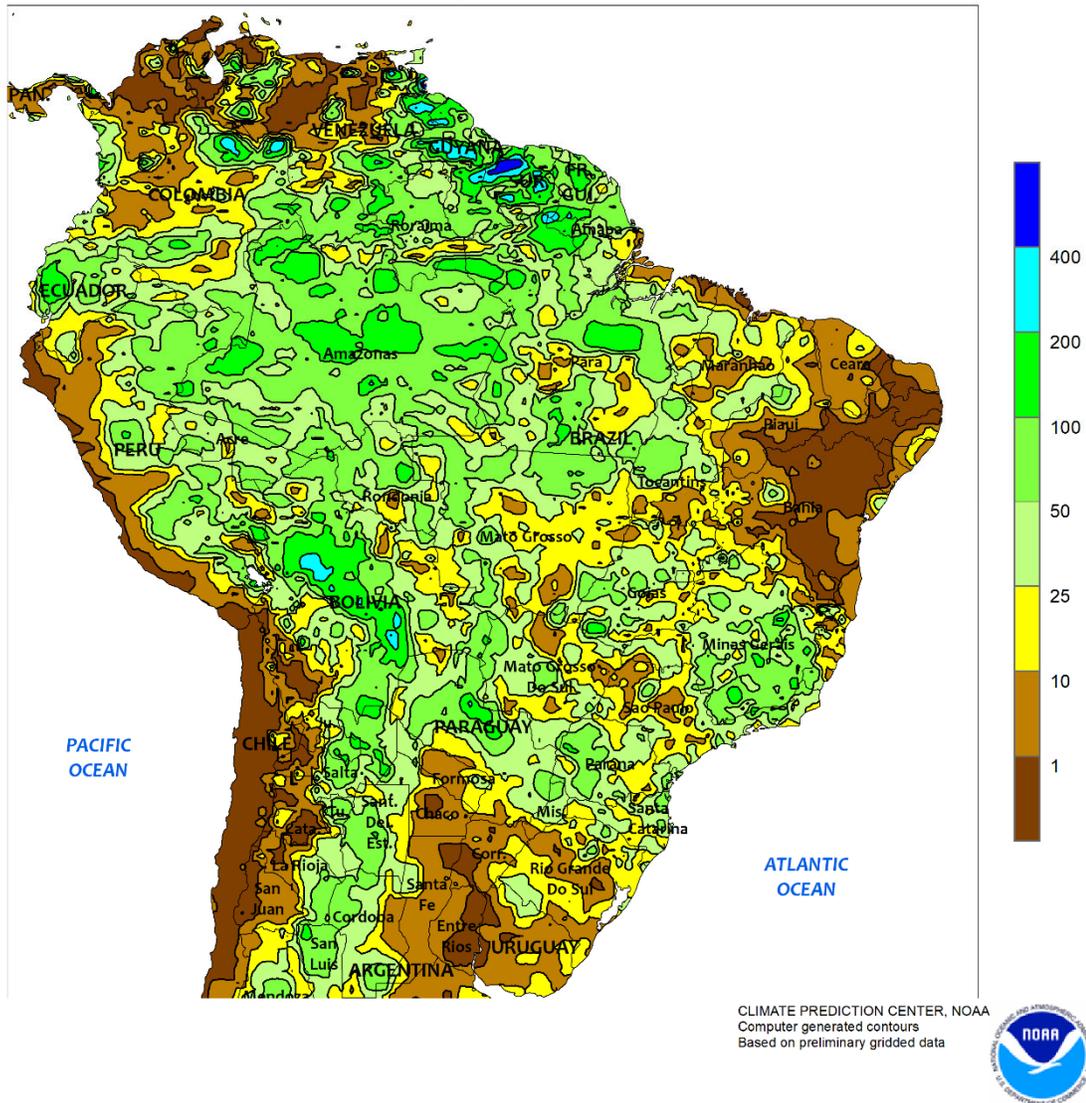


ARGENTINA

Showers intensified over Argentina’s southern and western farming areas as unseasonable dryness dominated a key farming region of central Argentina. Rainfall totaled 25 to 75 mm from La Pampa eastward through south-central Buenos Aires and northward through Salta. In contrast, mostly dry weather (rainfall totaling less than 10 mm) prevailed from northern Buenos Aires to Formosa, reaching westward into Santa Fe and eastern sections of Cordoba. Weekly temperatures averaged near to below normal, owing to the passage of a cold front that dropped temperatures into the 10s (degrees C), although daytime highs reached the middle 30s on several days. The dryness and occasional warmth

maintained stress on corn, soybeans, and other summer crops advancing through reproductive and filling stages of development. Warmer conditions prevailed farther north, where daytime highs more frequently reached the middle 30s. According to the government of Argentina, corn and soybeans were 87 and 94 percent planted, respectively, as of January 7, similar to last year’s pace for both crops. Cotton was 89 percent planted, with progress still lagging that of last year by 10 points. Meanwhile, wheat was 97 percent harvested, 3 points ahead of last year’s pace; in the leading production state of Buenos Aires, harvesting was 94 percent complete, 10 points ahead of last year’s pace.

BRAZIL
Total Precipitation (mm)
January 3 - 9, 2021



BRAZIL

Scattered showers overspread major farming regions of central and southern Brazil, sustaining generally adequate levels of moisture for soybeans and other main-season summer crops. However, many locations continued to receive below-normal amounts of rainfall (less than 25 mm) and were in need of rain to prevent losses in yield potential. Of particular note, much of Rio Grande do Sul recorded less than 10 mm, reflecting the dry trend that has dominated since early December. According to the government of Rio Grande do Sul, corn and soybeans were 94 and 99 percent planted, respectively, as of January 7; corn was most

advanced in development, with 34 percent mature or already harvested, while just 20 percent of soybeans had reached flowering. In Parana, more than 75 percent of both first-crop corn and soybeans reached reproduction as of January 4. Elsewhere, pockets of dryness also lingered over Sao Paulo – reducing moisture for sugarcane and other summer crops – as well as in Mato Grosso and portions of the northeastern interior (notably western Bahia and Piaui). Summer warmth prevailed regionwide, with daytime highs reaching the middle and upper 30s (degrees C) in Mato Grosso and traditionally warmer locations in the northeastern interior.

U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on January 12, 2021. Forecasts refer to January 1.

The U.S. **all orange** forecast for the 2020-2021 season is 4.53 million tons, down 2 percent from the previous forecast and down 13 percent from the 2019-2020 final utilization. The Florida all orange forecast, at 54.0 million boxes (2.43 million tons), is down 4 percent from the previous forecast and down 20 percent from last season. In Florida, early, midseason, and Navel varieties are forecast at 20.0 million boxes (900,000 tons), down 9 percent from the previous forecast and down 33 percent from last season. The Florida Valencia orange forecast, at 34.0 million boxes (1.53 million tons), is unchanged from the previous forecast but down 10 percent from last season.

The California all orange forecast is 51.0 million boxes (2.04 million tons), up 1 percent from the previous forecast but down 4 percent from last season's final utilization. The California Navel orange forecast, at 42.0 million boxes (1.68 million tons), is unchanged from the previous forecast but down 5 percent from last season. The California Valencia orange forecast, at 9.0 million boxes (360,000 tons), is up 6 percent from the previous forecast but unchanged from last season's final utilization. The Texas all orange forecast, at 1.50 million boxes (64,000 tons), is unchanged from the previous forecast but up 12 percent from last season's final utilization.

Selected U.S. Annual Average Temperature Records for Warmest Year

This information was compiled by USDA's World Agricultural Outlook Board, based on data provided by NOAA's National Weather Service. All annual average temperature readings are provided in degrees Fahrenheit.

Location	Average	Previous Record	Location	Average	Previous Record
Miami, FL	79.3°F	79.1 in 2015, '17, '19	Tampa, FL	76.3°F	76.3 in 2017
Fort Lauderdale, FL	78.7	78.7 in 2015	Lakeland, FL	75.7	75.7 in 2015
Kahului, HI	78.6	78.4 in 2019	Sanford, FL	75.1	75.1 in 2015
West Palm Beach, FL	78.2	78.0 in 2015	Leesburg, FL	74.8	74.8 in 2017
Naples, FL	77.8	77.7 in 2019	Craig Airport, FL	71.9	71.8 in 2015
Fort Myers, FL	77.1	77.0 in 1990, 2015	Savannah, GA	70.4	69.8 in 2019
Hilo, HI	76.8	76.2 in 2015	Roanoke, VA	59.5	59.5 in 2012, 2019
Saint Petersburg, FL	76.4	76.4 in 2015	New York's Central Park	57.3	57.3 in 2012
Sarasota-Bradenton, FL	76.3	76.2 in 2019	Harrisburg, PA	56.6	56.6 in 1998

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