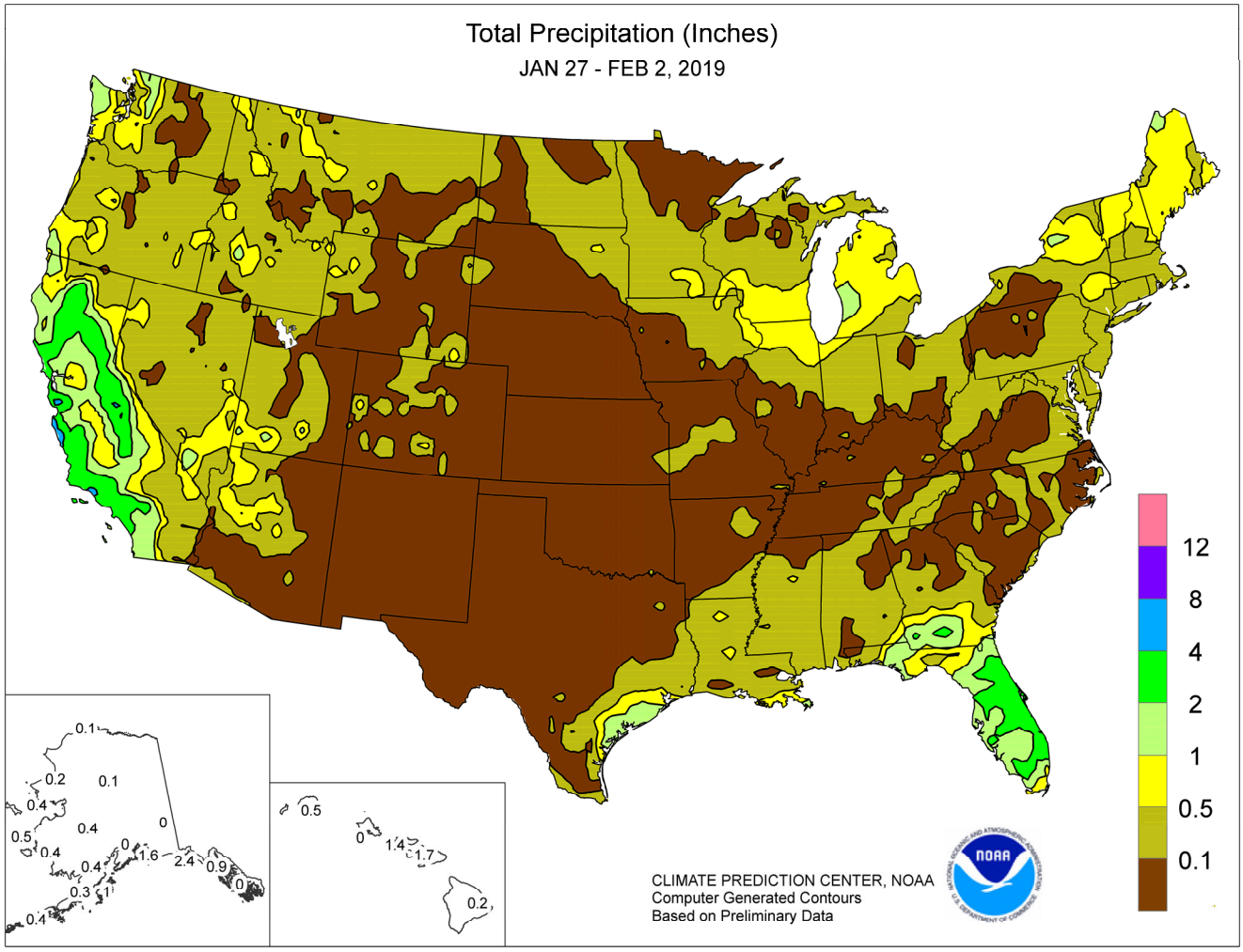
Volume 106, No. 6 http://www.usda.gov/oce/weather February 5, 2019

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

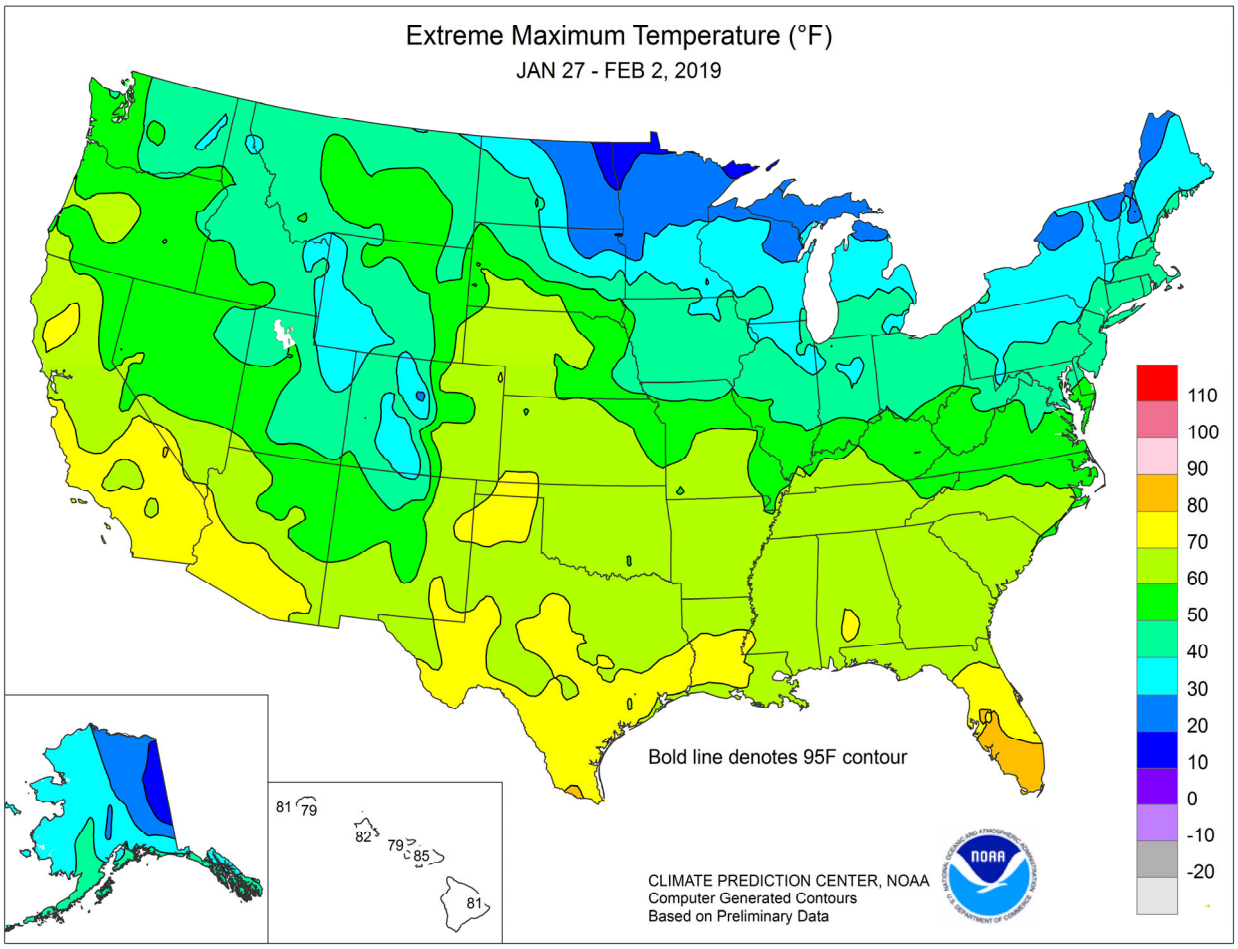
January 27 – February 2, 2019

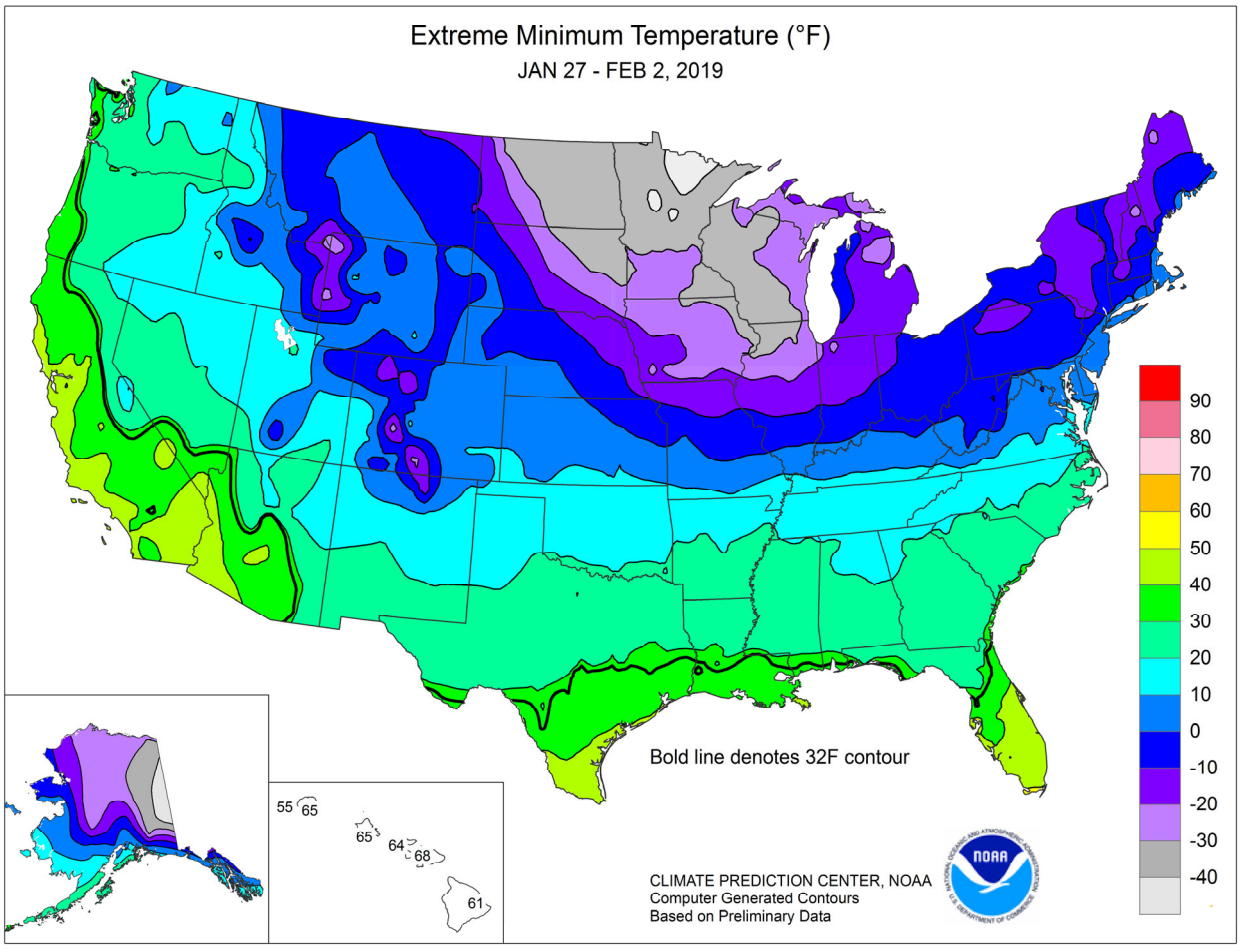
Highlights provided by USDA/WAOB

A brutal but short-lived **Arctic** outbreak swept across the **Midwest** and **Northeast** in late January, severely stressing livestock and disrupting agricultural and municipal operations. Snow and gusty winds preceded and accompanied the cold wave, further hampering routine activities. In addition, a portion of the soft red winter wheat belt, stretching from **central Missouri into northwestern Ohio**, experienced near- or sub-zero temperatures without the benefit of snow cover, leading to an increased risk of winterkill and soil heaving. In early

(Continued on page 3)

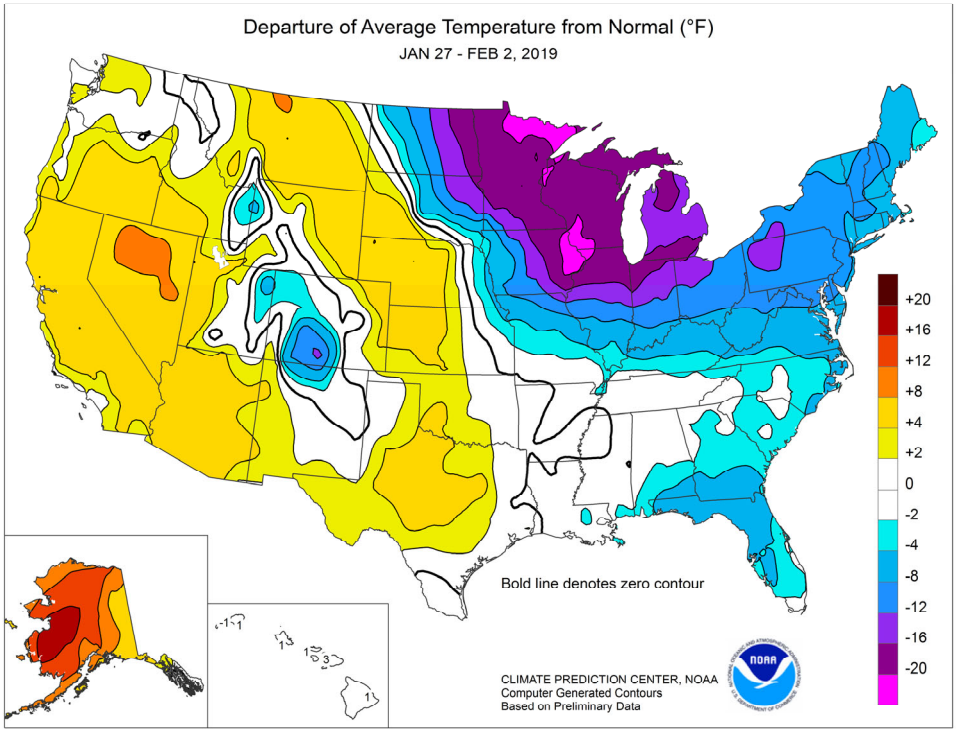
Contents


Extreme Maximum Temperature (°F)
JAN 27 - FEB 2, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95F contour
81
79
82
79
85
81
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
JAN 27 - FEB 2, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32F contour
55
65
65
64
68
61
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

(Continued from front cover)

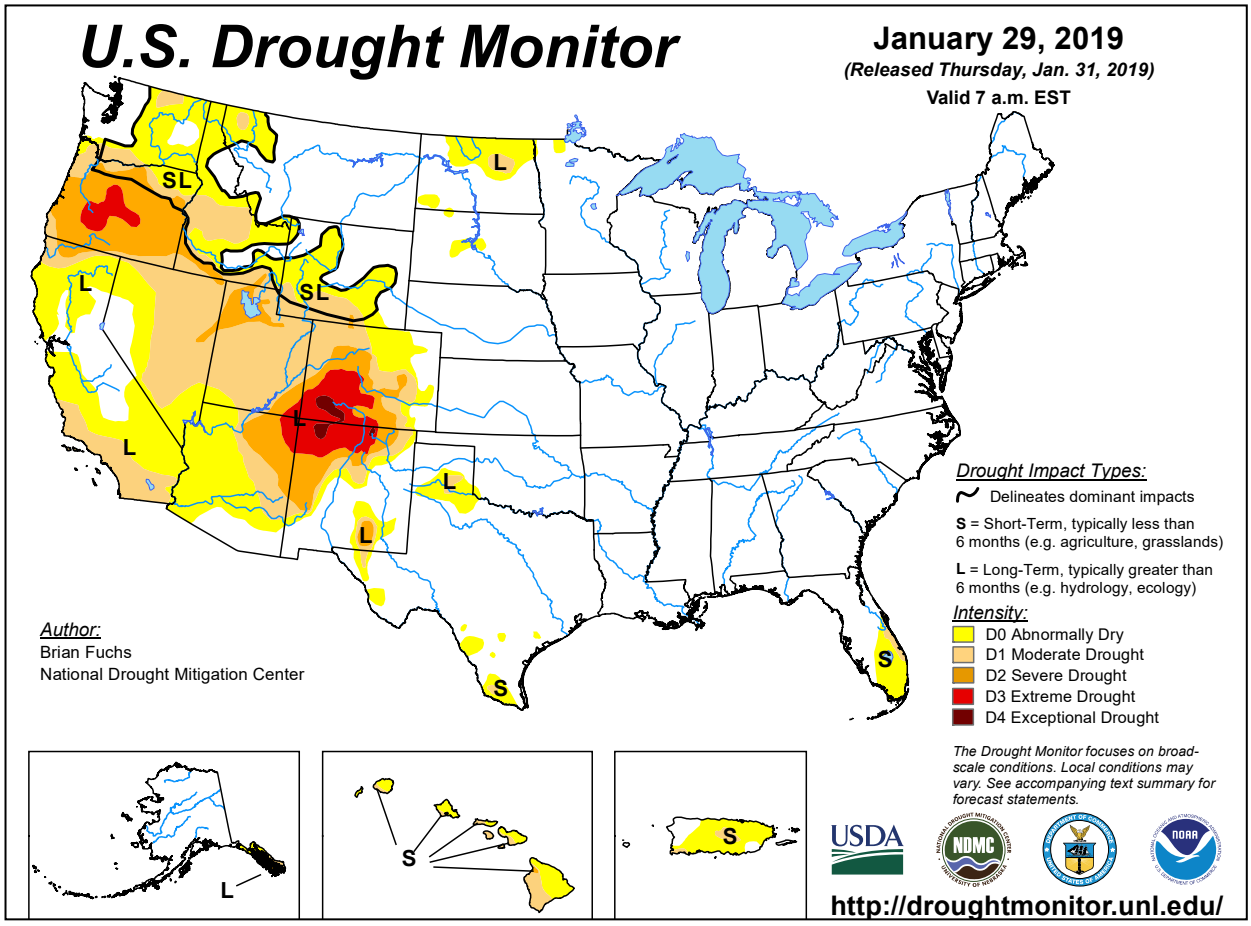
February, however, suddenly warmer weather melted most remaining **Midwestern** snow, except across the **northern Corn Belt**. Weekly temperatures averaged as much as 10 to 20°F below normal across the **upper Midwest** and the **Great Lakes region**. The frigid conditions extended into the **Northeast** (locally more than 10°F below normal), while near- or below-normal temperatures also covered the **Southeast**. In contrast, warmer-than-normal weather prevailed from the **Pacific Coast to the High Plains**, except in some snow-covered locations in the **Rockies** and **Intermountain West**. Following a period of tranquil weather, stormy conditions returned late in the week across the **West**. Precipitation was especially heavy in **California**, boosting high-elevation snowpack. However, heavy rain in **California's** lower elevations led to some flooding and debris flows, especially in recently burned areas. Elsewhere, mild, dry weather covered the **central and southern Plains**, while periods of rain affected the **Gulf Coast region**. The heaviest **Southern** rain fell across **Florida's peninsula**, helping to alleviate dryness that had developed in recent months.

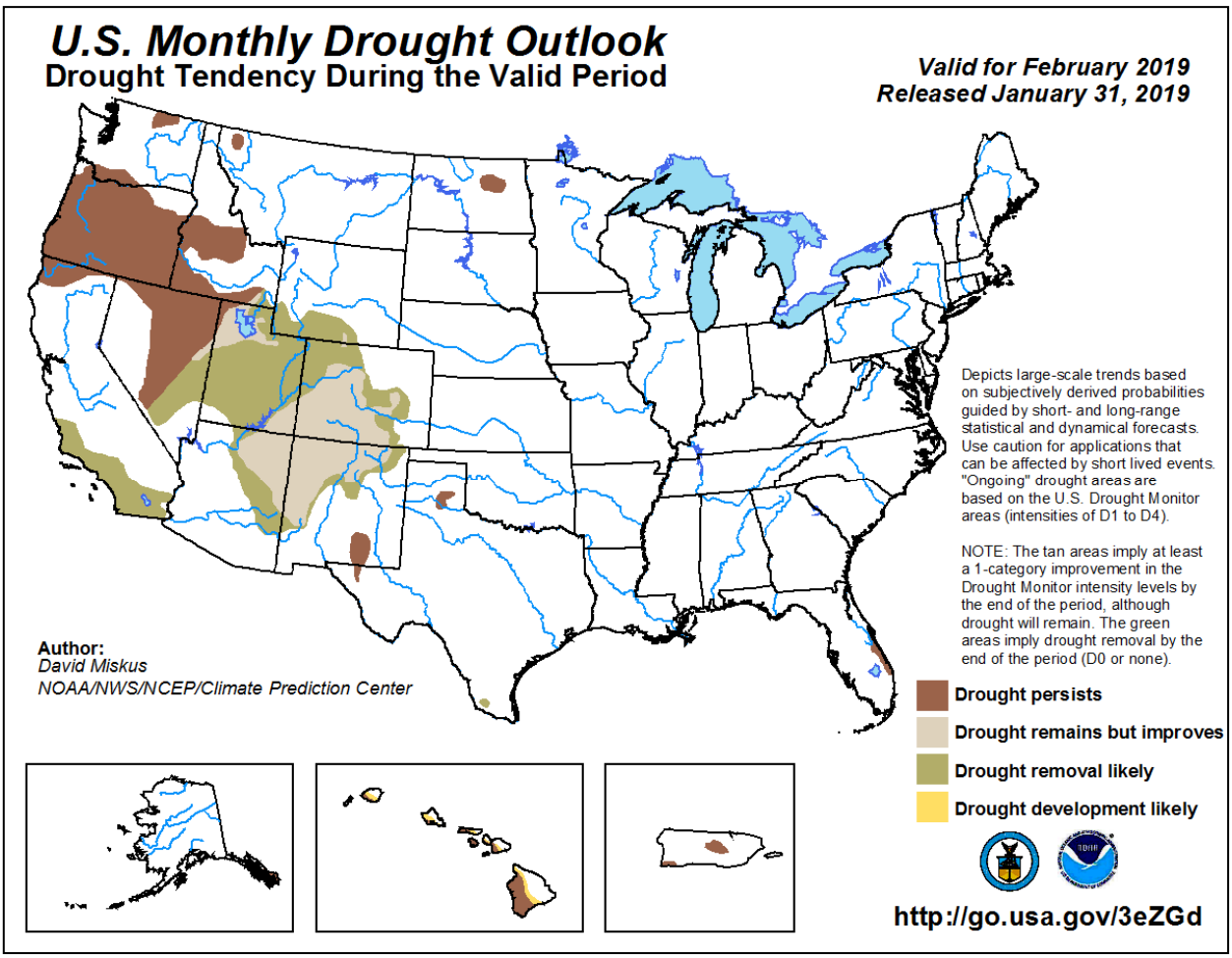


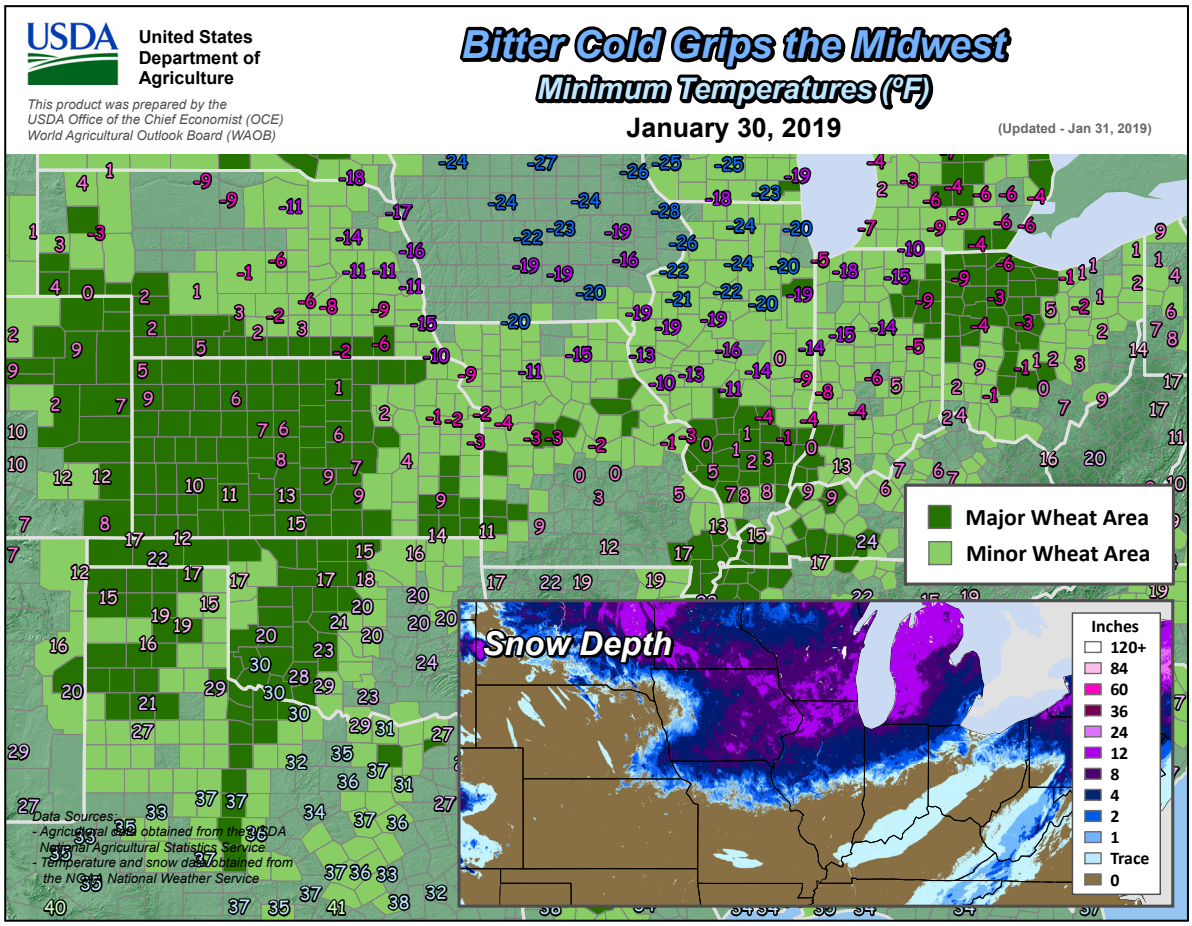
Before the core of the **Arctic** air arrived, cold air was already entrenched across the **upper Great Lakes region**. In **northern Minnesota**, lows dipped to daily-record levels on January 27 in **International Falls** (-46°F) and **Hibbing** (-40°F). It was the lowest reading in **International Falls** since January 21, 2011, when the temperature also fell to -46°F. In **Michigan**, **Marquette** opened the week with consecutive daily-record lows of -26°F on January 27-28. Meanwhile, mild weather in the **Pacific Coast States** resulted in daily-record highs for January 27 in locations such as **San Francisco, CA** (68°F), and **Redmond, OR** (67°F). Farther east, historically cold air engulfed the **Midwest** on January 30-31. In **South Dakota**, daily-record lows for January 30 plunged to -37°F in **Aberdeen** and -34°F in **Watertown**. **Moline, IL**, set all-time record lows on consecutive days, with -29 and -33°F, respectively, on January 30-31. Previously, **Moline's** lowest reading had been -28°F on February 3, 1996. Other all-time records on the 31st included -31°F in **Rockford, IL** (previously, -27°F on January 10, 1982), and -30°F in **Cedar Rapids, IA** (previously, -29°F on January 15, 2009). With lows of -20°F on January 30-31, **South Bend, IN**, experienced its coldest weather since January 19, 1994, when it was -21°F. Elsewhere on the 31st, daily-record lows plummeted to -45°F in **International Falls, MN**; -33°F in **La Crosse, WI**; -31°F in **Sisseton, SD**, and **Dubuque** and **Waterloo, IA**; and -30°F in **Marshfield, WI**. For **Dubuque**, it was the lowest temperature since January 7, 1887, when an all-time record of -32°F occurred. For **La Crosse** and **Marshfield**, it was the coldest weather since February 3, 1996. The temperature in **La Crosse** remained below 0°F for 72 consecutive hours from January 29 – February 1, the longest such streak in that location since a 143-hour stretch of sub-zero readings from January 29 – February 4, 1996. In **Chicago, IL**, where consecutive daily-record lows (-23 and -21°F, respectively) occurred on January 30-31, at least a trace of snow—totaling 15.5 inches—fell on 16 consecutive days from January 17 – February 1, with the snow depth peaking at 10 inches on the 29th. Record-setting cold lingered through February 1 in the **Northeast**, where **Pennsylvania** locations such as **Scranton** (-5°F) and **Reading** (-1°F) notched daily-record lows.

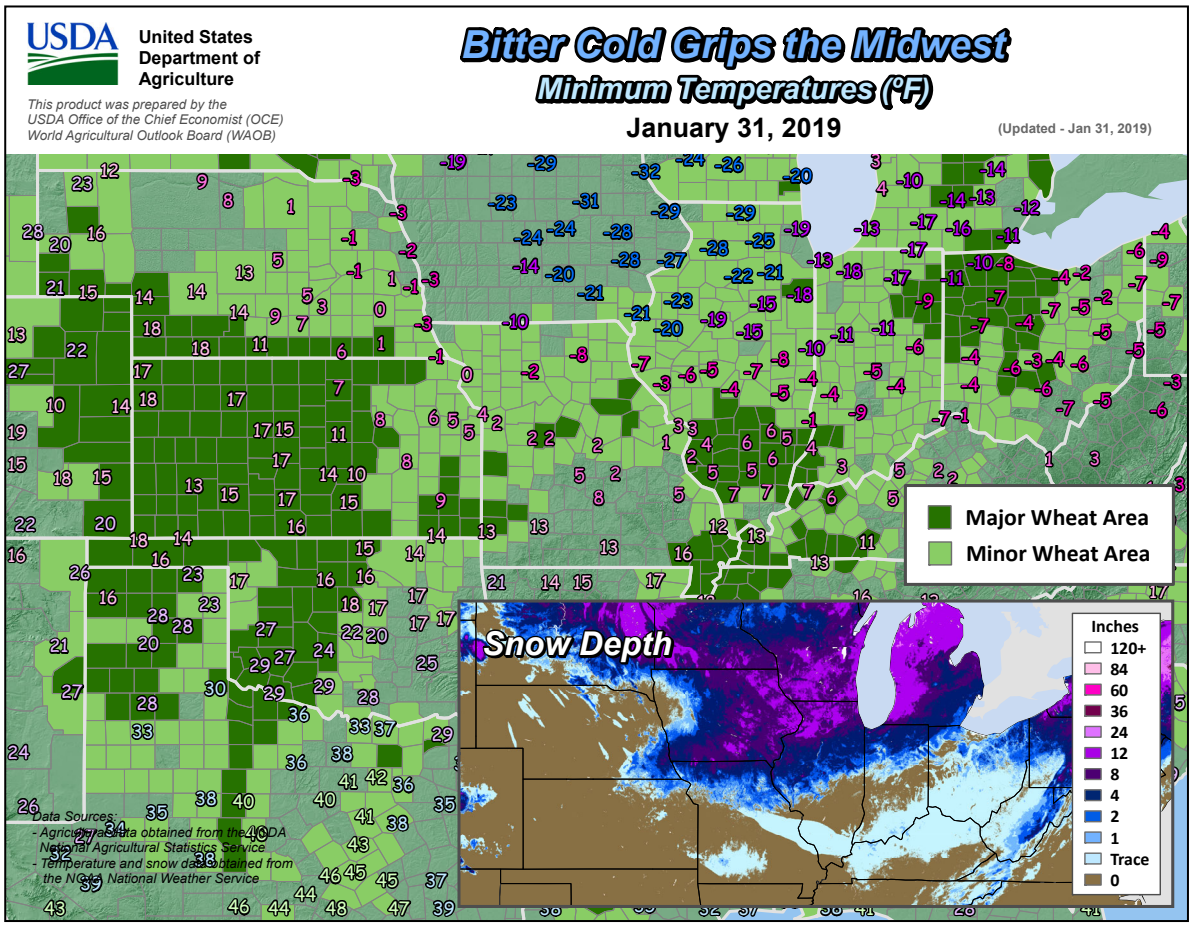
The week opened with heavy rain falling in **Florida**, where record-setting totals for January 27 reached 3.74 inches in in **Melbourne**, 3.67 inches in **Fort Myers**, and 3.29 inches in **Fort Pierce**. It was **Melbourne's** third-wettest January day behind 4.70 inches on January 12, 1979, and 4.13 inches on January 20, 1983. Meanwhile, heavy **Midwestern** snow preceded the **Arctic** outbreak. **Rochester, MN**, received 8.4 inches of snow from January 26-28, aided by a daily-record sum of 5.1 inches on the 27th. Record-setting snowfall totals for January 28 included 11.8 inches in **Alpena, MI**; 9.7 inches in **Green Bay, WI**; and 6.7 inches in **South Bend, IN**. By January 29-30, wind chill temperatures bottomed out between -60 and -65°F in numerous **upper Midwestern** locations, including **Grand Forks, ND**; **Rochester, MN**; and **Charles City, IA**. Farther south, precipitation briefly changed to snow across parts of the **South**. In **Mississippi**, record-setting snowfall totals for January 29 included 0.3 inch in **Jackson** and 0.1 inch in **Meridian**. In areas downwind of the **Great Lakes**, snow squalls developed during the cold blast. **Buffalo, NY**, measured consecutive daily-record snowfall totals (6.4 and 13.6 inches, respectively) on January 29-30. Elsewhere, a first round of precipitation reached **California** on January 31, when **Sandberg** netted a daily-record sum (1.16 inches). Two days later, record-setting precipitation totals for February 2 included 0.25 inch in **Las Vegas, NV**, and 0.22 inch in **Barstow-Daggett, CA**. In **southern California**, **Big Bear Lake** received 1.83 inches in a 24-hour period on February 1-2, while wind gusts on the 2nd were clocked to 82 mph at **Camp Nine**, near **Los Angeles**, and 76 mph on **Point Conception**, south of **Lompoc**.

Mild weather in **Alaska** boosted weekly temperatures at least 10 to 20°F above normal at many interior locations. On January 27, **McGrath** logged a daily-record high of 42°F—the highest reading in that location since October 25, 2018. Periods of precipitation accompanied **Alaska's** above-normal temperatures, with February 2 featuring a daily-record total of 0.38 inch in **Kotzebue**. In **Yakutat**, rainfall totaled 2.32 inches on January 29-30. Late in the week, colder, drier air overspread **southeastern Alaska**, where the National Weather Service office in **Juneau** reported a low of -3°F on February 2. Farther south, **Hawaii** experienced a slight increase in precipitation but remained drier than normal. On **Maui**, **Kahului** reported its wettest day (0.58 inch on January 30) since November 10, when 0.82 inch fell. In a 48-hour period from January 31 – February 2, rainfall reached 9.37 inches at the **Lyon Arboretum** on **Oahu**. However, January rainfall totaled 0.33 inch in **Honolulu, Oahu**, and 1.26 inches in **Hilo**, on the **Big Island**—just 14 percent of normal in both locations.


U.S. Drought Monitor
January 29, 2019
(Released Thursday, Jan. 31, 2019)
Valid 7 a.m. EST
Author:
Brian Fuchs
National Drought Mitigation Center
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:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
NDMC
http://droughtmonitor.unl.edu/


U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period
Valid for February 2019
Released January 31, 2019
Author:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center
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).
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/3eZGd


USDA
United States Department of Agriculture
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)
Bitter Cold Grips the Midwest
Minimum Temperatures (°F)
January 30, 2019
(Updated - Jan 31, 2019)
Major Wheat Area
Minor Wheat Area
Snow Depth
Inches
120+
84
60
36
24
12
8
4
2
1
Trace
0
Data Sources:
- Agricultural data obtained from the USDA National Agricultural Statistics Service
- Temperature and snow data obtained from the NOAA National Weather Service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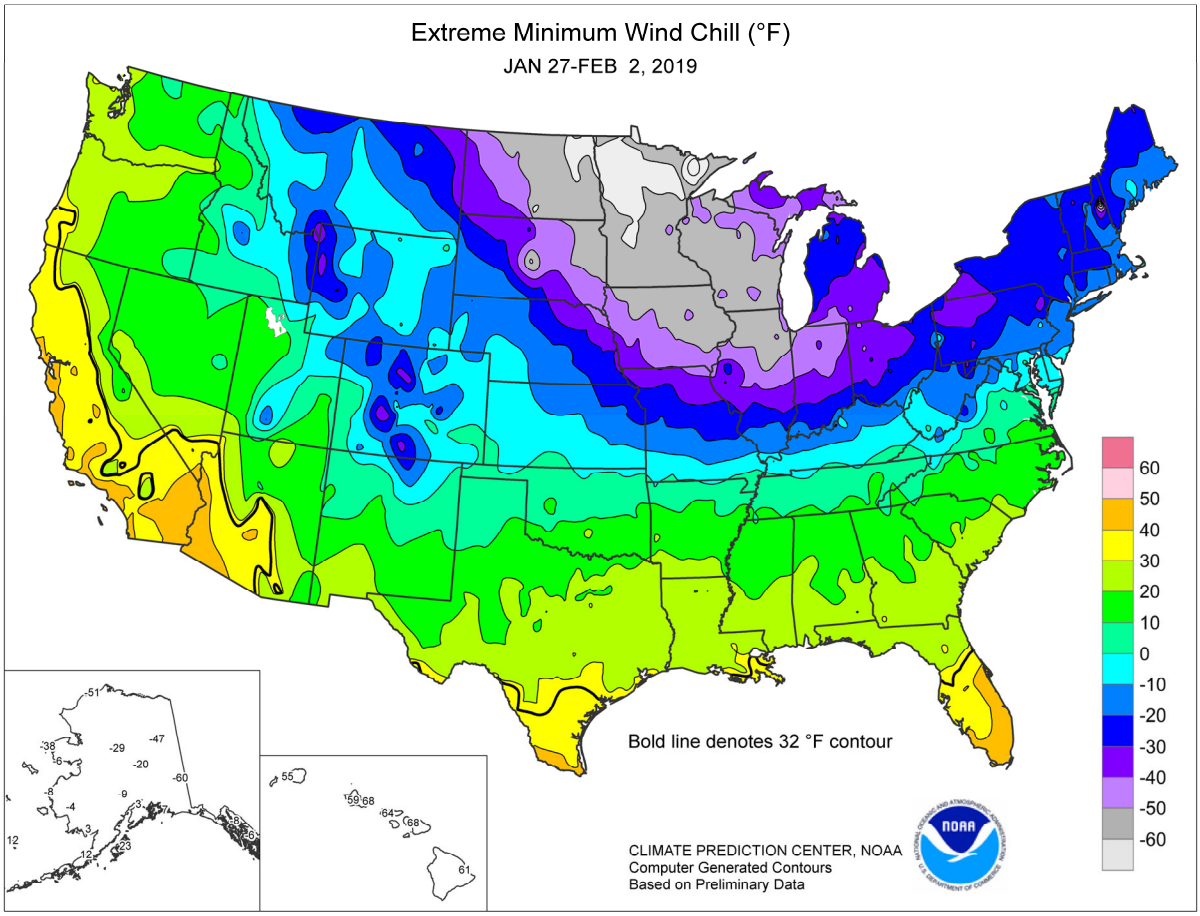
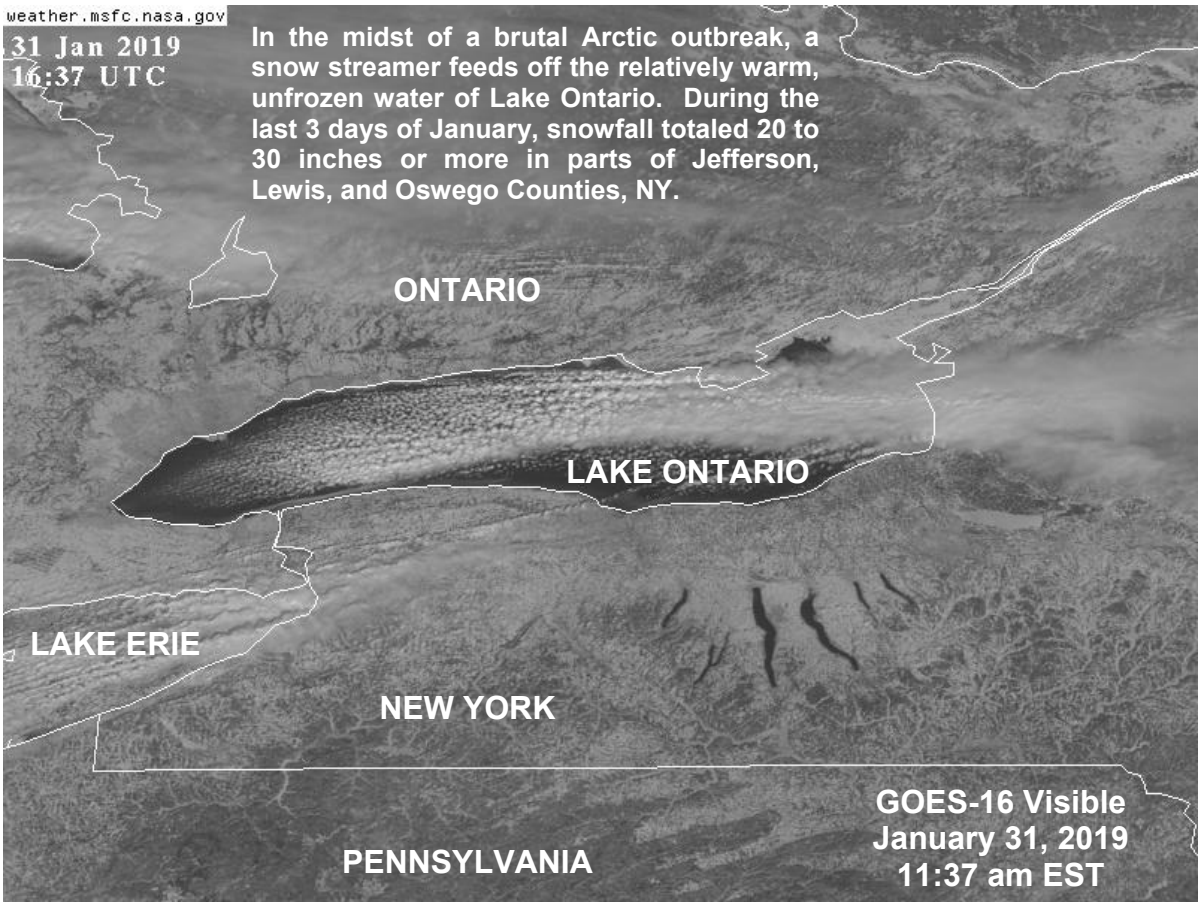

Extreme Minimum Wind Chill (°F)
JAN 27-FEB 2, 2019
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
Bold line denotes 32 °F contour
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data
NOAA


weather.msfc.nasa.gov
31 Jan 2019
16:37 UTC
In the midst of a brutal Arctic outbreak, a snow streamer feeds off the relatively warm, unfrozen water of Lake Ontario. During the last 3 days of January, snowfall totaled 20 to 30 inches or more in parts of Jefferson, Lewis, and Oswego Counties, NY.
ONTARIO
LAKE ONTARIO
LAKE ERIE
NEW YORK
PENNSYLVANIA
GOES-16 Visible
January 31, 2019
11:37 am EST

National Weather Data for Selected Cities

Weather Data for the Week Ending February 2, 2019

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	58	30	69	20	44	1	0.20	-0.96	0.20	17.37	170	6.03	105	87	35	0	4	1	0
	HUNTSVILLE	56	29	70	22	42	2	0.12	-1.05	0.12	17.15	150	7.15	122	74	44	0	5	1	0
	MOBILE	59	38	66	31	48	-2	0.24	-1.06	0.24	13.70	127	4.25	70	86	52	0	1	1	0
	MONTGOMERY	59	32	71	23	45	-2	0.28	-0.92	0.28	15.17	146	5.18	96	91	40	0	5	1	0
AK	ANCHORAGE	31	23	40	10	27	11	0.61	0.47	0.38	3.20	181	0.77	107	85	73	0	7	3	0
	BARROW	3	-10	30	-21	-4	10	0.07	0.04	0.04	0.47	188	0.10	77	89	79	0	7	3	0
	FAIRBANKS	13	-9	25	-29	2	11	0.00	-0.08	0.00	0.42	32	0.00	0	78	75	0	7	0	0
	JUNEAU	32	24	40	8	28	2	0.85	-0.15	0.39	13.50	129	7.87	155	80	77	0	5	3	0
	KODIAK	40	32	44	26	36	6	1.00	-0.72	0.70	15.88	97	7.83	91	97	81	0	4	4	1
	NOME	26	12	33	2	19	13	0.35	0.16	0.22	2.21	111	1.30	133	78	69	0	7	2	0
AZ	FLAGSTAFF	51	24	59	20	38	7	0.10	-0.43	0.10	2.73	65	1.78	76	81	37	0	7	1	0
	PHOENIX	73	51	75	45	62	7	0.00	-0.14	0.00	0.93	52	0.74	85	55	35	0	0	0	0
	PRESCOTT	60	31	64	25	46	8	0.02	-0.36	0.02	1.74	59	1.57	93	75	28	0	4	1	0
	TUCSON	72	45	73	39	58	5	0.00	-0.19	0.00	2.66	128	1.16	110	53	32	0	0	0	0
AR	FORT SMITH	50	30	66	20	40	1	0.02	-0.50	0.01	9.46	160	3.95	157	78	48	0	5	2	0
	LITTLE ROCK	51	28	65	19	40	-1	0.01	-0.79	0.01	14.07	165	3.75	98	82	45	0	5	1	0
CA	BAKERSFIELD	66	47	72	43	57	7	0.51	0.23	0.41	2.10	104	1.48	117	81	63	0	0	2	0
	FRESNO	64	48	67	42	56	8	0.63	0.13	0.48	3.28	90	2.72	118	89	77	0	0	3	0
	LOS ANGELES	65	52	73	49	59	2	2.27	1.52	1.46	8.43	169	6.98	218	83	66	0	0	2	2
	REDDING	65	44	73	38	54	7	2.40	0.90	2.01	10.59	91	6.27	90	90	71	0	0	2	1
	SACRAMENTO	62	46	65	41	54	6	0.32	-0.62	0.32	6.91	105	4.55	111	98	65	0	0	1	0
	SAN DIEGO	68	54	77	51	61	3	1.34	0.82	0.72	6.56	175	3.54	146	76	59	0	0	2	2
	SAN FRANCISCO	61	50	68	49	56	5	1.22	0.15	0.60	5.41	71	3.76	79	85	75	0	0	5	1
	STOCKTON	65	46	68	41	56	8	0.40	-0.23	0.24	4.78	101	2.44	84	91	82	0	0	3	0
CO	ALAMOSA	25	-19	31	-26	3	-14	0.00	-0.03	0.00	1.54	261	1.22	469	86	68	0	7	0	0
	CO SPRINGS	50	16	63	6	33	4	0.03	0.00	0.03	0.37	52	0.28	97	73	22	0	7	1	0
	DENVER INTL	45	19	60	7	32	3	0.07	0.07	0.07	0.78	144	0.75	326	79	35	0	6	1	0
	GRAND JUNCTION	42	22	47	16	32	4	0.00	-0.10	0.00	1.39	122	0.44	71	76	50	0	7	0	0
	PUEBLO	54	14	67	7	34	3	0.04	0.01	0.04	0.61	84	0.52	153	78	47	0	7	1	0
CT	BRIDGEPORT	34	15	46	3	25	-5	0.29	-0.49	0.29	10.52	142	4.19	106	60	40	0	7	1	0
	HARTFORD	28	5	45	-7	16	-10	0.44	-0.37	0.44	15.30	199	10.33	254	69	44	0	7	1	0
DC	WASHINGTON	37	21	49	10	29	-6	0.25	-0.40	0.20	9.18	143	3.36	99	70	37	0	7	2	0
DE	WILMINGTON	33	14	47	5	23	-8	0.35	-0.35	0.25	10.87	155	4.02	111	83	47	0	7	3	0
FL	DAYTONA BEACH	63	47	73	39	55	-3	2.27	1.59	2.03	8.70	144	3.82	115	97	60	0	0	2	1
	JACKSONVILLE	58	40	66	30	49	-4	1.27	0.42	1.02	9.39	143	4.43	113	90	49	0	2	3	1
	KEY WEST	75	63	81	54	69	-1	0.44	-0.01	0.43	3.65	81	1.75	74	85	66	0	0	2	0
	MIAMI	73	57	81	50	65	-3	0.78	0.32	0.72	3.59	86	2.01	100	95	65	0	0	3	1
	ORLANDO	65	48	77	42	57	-4	2.20	1.66	2.01	10.32	211	3.52	136	88	67	0	0	3	1
	PENSACOLA	59	40	66	34	49	-3	0.35	-0.85	0.34	19.41	201	2.87	51	79	49	0	0	2	0
	TALLAHASSEE	58	37	69	28	48	-4	0.45	-0.70	0.27	19.44	199	3.67	65	86	50	0	3	3	0
	TAMPA	66	49	78	44	58	-3	1.80	1.25	1.78	12.92	273	4.24	174	86	56	0	0	2	1
	WEST PALM BEACH	73	55	81	46	64	-2	6.95	6.09	2.80	10.17	143	8.73	219	93	74	0	0	5	4
GA	ATHENS	55	27	68	23	41	-2	0.08	-0.99	0.08	16.23	186	5.34	107	76	41	0	7	1	0
	ATLANTA	55	31	66	24	43	0	0.17	-1.02	0.17	17.98	196	6.15	115	69	47	0	3	1	0
	AUGUSTA	59	28	70	23	44	-1	0.09	-0.94	0.09	10.35	131	4.41	92	85	41	0	6	1	0
	COLUMBUS	58	33	66	24	45	-2	0.16	-0.90	0.16	13.57	143	5.64	111	84	38	0	5	1	0
	MACON	57	29	65	22	43	-3	0.19	-0.97	0.19	12.40	134	6.14	115	90	41	0	6	1	0
	SAVANNAH	58	37	67	29	48	-2	0.00	-0.86	0.00	10.70	153	2.56	61	83	42	0	2	0	0
HI	HILO	78	65	81	61	72	1	0.23	-2.02	0.08	11.38	55	1.41	14	77	70	0	0	4	0
	HONOLULU	80	68	82	65	74	1	0.46	-0.12	0.24	1.25	22	0.65	22	72	63	0	0	4	0
	KAHULUI	79	69	85	68	74	3	1.72	0.95	0.73	2.89	41	2.35	59	83	70	0	0	5	1
	LIHUE	77	68	79	65	73	1	0.54	-0.39	0.22	5.07	53	1.03	21	76	67	0	0	4	0
ID	BOISE	48	27	57	22	37	5	0.31	0.01	0.31	2.24	79	0.84	57	82	66	0	6	1	0
	LEWISTON	44	32	53	27	38	3	0.02	-0.23	0.02	1.39	62	0.59	49	85	78	0	5	1	0
	POCATELLO	40	16	46	8	28	2	0.03	-0.20	0.03	1.87	81	1.09	91	88	72	0	7	1	0
IL	CHICAGO/O'HARE	16	-5	42	-23	5	-18	0.60	0.21	0.53	5.28	123	1.96	105	85	68	0	7	3	1
	MOLINE	16	-12	46	-33	2	-20	0.41	0.11	0.18	4.96	128	2.01	120	77	64	0	7	3	0
	PEORIA	20	-2	42	-20	9	-14	0.27	-0.04	0.18	6.61	166	2.42	152	83	61	0	7	2	0
	ROCKFORD	11	-10	40	-31	0	-20	0.57	0.27	0.38	5.25	147	2.29	153	80	66	0	7	4	0
	SPRINGFIELD	26	6	51	-14	16	-10	0.06	-0.25	0.06	7.90	186	2.99	175	85	54	0	7	1	0
IN	EVANSVILLE	37	16	56	1	27	-4	0.13	-0.54	0.07	10.23	154	4.09	132	85	67	0	7	4	0
	FORT WAYNE	22	0	41	-13	11	-13	0.28	-0.16	0.16	4.95	100	2.01	92	82	62	0	7	3	0
	INDIANAPOLIS	27	5	47	-11	16	-11	0.32	-0.20	0.16	6.76	119	2.97	113	85	59	0	7	4	0
	SOUTH BEND	16	-5	41	-20	6	-18	0.61	0.14	0.46	4.68	85	1.93	80	83	69	0	7	5	0
IA	BURLINGTON	20	-4	45	-21	8	-16	0.06	-0.22	0.04	3.72	107	1.34	96	80	58	0	7	2	0
	CEDAR RAPIDS	11	-12	41	-30	0	-19	0.04	-0.18	0.02	2.97	114	0.88	79	92	74	0	7	3	0
	DES MOINES	20	-3	43	-20	9	-12	0.09	-0.15	0.08	4.48	184	1.57	143	79	71	0	7	2	0
	DUBUQUE	7	-14	40	-31	-3	-21	0.41	0.12	0.15	4.33	142	2.26	165	81	74	0	7	3	0
	SIOUX CITY	31	2	52	-18	16	-4	0.01	-0.09	0.01	1.96	154	0.07	11	78	64	0	7	1	0
	WATERLOO	11	-14	42	-31	-1	-18	0.41	0.22	0.30	4.13	205	1.53	170	82	71	0	7	4	0
KS	CONCORDIA	41	17	62	0	29	1	0.00	-0.09	0.00	3.29	214	0.66	97	80	67	0	6	0	0
	DODGE CITY	51	20	70	8	36	5	0.00	-0.09	0.00	1.93	137	0.73	114	81	38	0	6	0	0
	GOODLAND	52	19	66	9	35	6	0.00	-0.06	0.00	0.73	86	0.31	69	77	45	0	7	0	0
	TOPEKA	41	16	60	-3	28	0	0.08	-0.11	0.08	4.63	191	1.57	155	77	57	0	7	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending February 2, 2019

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	47	22	66	9	34	3	0.00	-0.11	0.00	3.13	141	1.33	153	80	63	0	6	0	0
KY	JACKSON	42	20	61	4	31	-3	0.14	-0.65	0.08	11.74	146	4.28	113	90	48	0	7	4	0
	LEXINGTON	39	18	58	2	28	-4	0.14	-0.55	0.07	10.46	138	4.40	124	77	62	0	7	3	0
	LOUISVILLE	38	18	59	3	28	-5	0.11	-0.61	0.04	9.14	127	3.24	93	79	50	0	7	4	0
	PADUCAH	44	22	62	12	33	-1	0.08	-0.77	0.05	10.40	128	4.81	129	77	49	0	7	2	0
LA	BATON ROUGE	65	40	73	33	52	2	0.12	-1.31	0.12	13.12	111	3.48	53	86	40	0	0	1	0
	LAKE CHARLES	64	44	72	36	54	3	0.12	-1.03	0.12	12.98	124	5.94	102	93	52	0	0	1	0
	NEW ORLEANS	62	45	68	40	53	0	0.23	-1.24	0.08	9.81	86	4.48	71	85	63	0	0	3	0
	SHREVEPORT	59	35	67	27	47	0	0.03	-1.02	0.03	15.86	168	4.59	94	90	45	0	2	1	0
ME	CARIBOU	17	-8	32	-12	4	-5	0.86	0.28	0.61	9.32	147	5.55	177	75	55	0	7	3	1
	PORTLAND	27	6	41	-2	17	-5	0.61	-0.25	0.47	8.78	102	5.13	118	73	39	0	7	2	0
MD	BALTIMORE	34	14	47	5	24	-8	0.32	-0.41	0.23	9.74	139	3.20	87	83	46	0	7	2	0
MA	BOSTON	35	15	47	5	25	-4	0.18	-0.69	0.12	6.48	82	3.46	83	63	37	0	7	2	0
	WORCESTER	25	6	40	-7	16	-7	0.36	-0.49	0.25	9.54	118	4.89	113	75	44	0	7	2	0
MI	ALPENA	14	-10	30	-23	2	-15	0.51	0.16	0.45	4.13	112	1.46	79	85	60	0	7	3	0
	GRAND RAPIDS	16	0	41	-10	8	-14	0.86	0.43	0.57	4.14	85	2.15	100	78	66	0	7	4	1
	HOUGHTON LAKE	12	-11	34	-20	0	-17	0.49	0.16	0.48	3.82	111	1.66	98	83	69	0	7	2	0
	LANSING	16	-4	41	-14	6	-15	0.88	0.52	0.53	4.36	112	2.03	119	84	70	0	7	3	1
	MUSKEGON	17	3	39	-4	10	-13	0.39	-0.06	0.34	5.10	102	2.21	94	75	67	0	7	3	0
	TRAVERSE CITY	14	2	32	-3	8	-12	0.15	-0.48	0.14	3.65	63	0.86	27	84	64	0	7	2	0
MN	DULUTH	4	-17	24	-31	-6	-15	0.23	-0.03	0.21	2.89	136	0.92	77	72	60	0	7	2	0
	INT'L FALLS	-2	-26	21	-46	-14	-18	0.05	-0.14	0.04	1.51	94	0.68	76	76	62	0	7	2	0
	MINNEAPOLIS	8	-11	39	-28	-1	-15	0.39	0.18	0.24	2.21	105	0.48	44	81	64	0	7	2	0
	ROCHESTER	6	-13	38	-30	-4	-17	0.46	0.26	0.29	3.36	166	1.27	127	89	78	0	7	3	0
	ST. CLOUD	5	-17	34	-34	-6	-16	0.31	0.14	0.22	1.74	116	0.41	51	83	57	0	7	2	0
MS	JACKSON	60	32	68	25	46	1	0.35	-0.89	0.26	13.79	121	5.76	96	87	39	0	3	2	0
	MERIDIAN	61	31	71	26	46	-1	0.20	-1.13	0.20	15.52	134	5.26	83	88	45	0	4	1	0
	TUPELO	57	29	69	22	43	2	0.08	-0.96	0.08	13.19	114	5.64	104	78	46	0	5	1	0
MO	COLUMBIA	37	14	61	-7	26	-3	0.25	-0.17	0.20	7.96	184	3.66	197	82	55	0	7	2	0
	KANSAS CITY	37	13	55	-6	25	-3	0.06	-0.16	0.04	4.82	169	1.78	147	83	58	0	6	2	0
	SAINT LOUIS	36	13	60	-6	25	-6	0.11	-0.36	0.08	6.97	136	2.99	132	79	56	0	7	2	0
	SPRINGFIELD	44	23	62	6	33	1	0.11	-0.39	0.08	6.70	124	2.47	110	73	56	0	5	3	0
MT	BILLINGS	41	23	52	10	32	7	0.00	-0.15	0.00	1.65	109	0.96	113	67	48	0	6	0	0
	BUTTE	36	10	46	-6	23	4	0.00	-0.08	0.00	0.47	44	0.15	27	79	45	0	6	0	0
	CUT BANK	37	11	49	-3	24	4	0.07	0.01	0.07	0.60	81	0.37	90	86	57	0	7	1	0
	GLASGOW	30	10	41	-2	20	8	0.07	0.01	0.07	1.00	135	0.30	81	79	67	0	7	1	0
	GREAT FALLS	40	16	55	0	28	5	0.14	0.03	0.12	1.22	88	0.89	125	83	50	0	6	2	0
	HAVRE	35	15	45	2	25	9	0.04	-0.03	0.04	0.72	72	0.54	110	82	64	0	7	1	0
	MISSOULA	34	15	48	-1	25	0	0.02	-0.17	0.02	1.87	82	1.02	91	88	76	0	7	1	0
NE	GRAND ISLAND	41	13	60	-6	27	3	0.03	-0.07	0.03	3.59	294	0.15	27	76	63	0	7	1	0
	LINCOLN	31	9	47	-9	20	-3	0.05	-0.05	0.05	3.90	252	0.58	84	79	68	0	6	1	0
	NORFOLK	34	6	58	-14	20	-2	0.04	-0.07	0.03	3.05	244	0.16	27	84	70	0	6	2	0
	NORTH PLATTE	48	14	64	1	31	6	0.00	-0.06	0.00	1.53	189	0.13	32	81	32	0	7	0	0
	OMAHA	27	5	42	-14	16	-7	0.01	-0.14	0.01	3.83	221	0.88	109	74	62	0	7	1	0
	SCOTTSBLUFF	50	15	67	1	33	7	0.00	-0.11	0.00	0.59	52	0.28	49	79	46	0	6	0	0
	VALENTINE	45	13	70	-9	29	7	0.02	-0.04	0.01	1.12	172	0.23	72	79	55	0	7	2	0
NV	ELY	48	23	53	17	35	9	0.19	0.04	0.19	1.34	105	0.95	122	88	63	0	6	1	0
	LAS VEGAS	64	47	69	43	56	7	0.25	0.11	0.25	1.47	143	1.30	206	49	36	0	0	1	0
	RENO	56	32	61	28	44	9	0.46	0.21	0.46	4.47	222	3.38	299	79	60	0	3	1	0
	WINNEMUCCA	55	27	58	21	41	9	0.26	0.10	0.26	3.42	204	1.40	161	89	66	0	6	1	0
NH	CONCORD	26	1	40	-10	14	-6	0.52	-0.11	0.39	7.24	118	3.98	126	78	40	0	7	2	0
NJ	NEWARK	34	14	51	2	24	-7	0.19	-0.64	0.19	10.64	137	3.55	84	59	42	0	7	1	0
NM	ALBUQUERQUE	53	26	59	21	40	3	0.00	-0.08	0.00	1.31	131	0.52	102	65	31	0	7	0	0
NY	ALBANY	26	1	40	-8	14	-8	0.32	-0.22	0.31	7.66	145	4.23	161	73	44	0	7	2	0
	BINGHAMTON	20	1	33	-10	11	-10	0.21	-0.38	0.19	6.56	113	3.85	140	75	56	0	7	2	0
	BUFFALO	23	2	38	-4	13	-11	1.38	0.73	0.74	9.05	127	5.69	170	82	63	0	7	4	1
	ROCHESTER	25	5	39	-1	15	-8	0.02	-0.48	0.01	3.59	69	0.99	40	75	55	0	7	2	0
	SYRACUSE	23	5	33	-2	14	-8	0.10	-0.46	0.07	6.54	111	3.26	118	78	51	0	7	3	0
NC	ASHEVILLE	49	22	62	17	35	-1	0.07	-0.87	0.07	16.16	209	5.29	122	75	49	0	7	1	0
	CHARLOTTE	54	26	66	21	40	-2	0.08	-0.80	0.08	11.66	157	4.68	110	74	31	0	7	1	0
	GREENSBORO	49	24	60	16	37	-1	0.19	-0.59	0.19	11.00	161	4.02	107	79	40	0	6	1	0
	HATTERAS	52	33	58	26	42	-4	0.02	-1.18	0.02	14.27	133	3.35	54	84	51	0	4	1	0
	RALEIGH	51	27	60	18	39	-1	0.16	-0.74	0.16	9.73	133	3.50	82	75	43	0	6	1	0
	WILMINGTON	53	29	60	26	41	-5	0.00	-0.99	0.00	9.81	114	2.73	57	90	37	0	7	0	0
ND	BISMARCK	17	-7	42	-33	5	-7	0.24	0.15	0.17	1.52	165	0.85	177	83	71	0	7	3	0
	DICKINSON	26	5	43	-17	15	-1	0.05	-0.05	0.05	0.68	92	0.05	13	83	59	0	7	1	0
	FARGO	3	-16	21	-33	-6	-14	0.17	0.03	0.14	1.75	128	0.62	78	83	70	0	7	3	0
	GRAND FORKS	1	-20	16	-35	-10	-17	0.24	0.10	0.22	1.53	120	0.70	97	81	66	0	7	2	0
	JAMESTOWN	6	-16	24	-34	-5	-15	0.08	-0.05	0.08	0.56	51	0.21	32	85	71	0	7	1	0
	WILLISTON	23	2	41	-13	13	3	0.18	0.09	0.12	1.30	115	0.55	98	76	67	0	7	3	0
OH	AKRON-CANTON	26	4	41	-5	15	-10	0.28	-0.24	0.17	6.11	109	2.73	103	72	57	0	7	4	0
	CINCINNATI	32	12	50	-7	22	-8	0.10	-0.53	0.05	9.45	148	3.89	125	79	64	0	7	4	0
	CLEVELAND	26	5	43	-3	16	-10	0.21	-0.34	0.14	6.18	107	3.13	119	76	51	0	7	4	0
	COLUMBUS	28	8	46	-4	18	-10	0.48	-0.07	0.26	7.09	126	3.22	120	80	64	0	7	6	0
	DAYTON	26	7	47	-8	17	-10	0.35	-0.20	0.16	7.95	136	3.32	120	83	61	0	7	5	0
	MANSFIELD	25	0	40	-10	12	-12	0.37	-0.18	0.14	6.78	112	3.02	108	87	59	0	7	5	0

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***** Not Available**

Weather Data for the Week Ending February 2, 2019

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	21	-2	42	-10	10	-14	0.19	-0.23	0.16	4.49	96	1.67	81	71	59	0	7	2	0
	YOUNGSTOWN	27	2	41	-7	14	-11	0.16	-0.34	0.06	6.62	122	2.89	117	77	59	0	7	5	0
OK	OKLAHOMA CITY	52	29	63	16	40	2	0.00	-0.22	0.00	5.97	185	1.81	135	84	53	0	5	0	0
	TULSA	50	26	64	16	38	1	0.00	-0.33	0.00	7.46	181	3.88	230	73	56	0	6	0	0
OR	ASTORIA	53	37	58	30	45	2	0.84	-1.30	0.80	15.64	76	5.81	57	95	79	0	2	2	1
	BURNS	43	23	49	18	33	7	0.62	0.37	0.52	3.08	121	2.05	164	92	77	0	6	2	1
	EUGENE	51	34	62	27	43	2	0.21	-1.51	0.11	9.14	56	3.45	42	95	88	0	3	2	0
	MEDFORD	53	33	58	27	43	2	0.14	-0.41	0.08	6.64	120	3.43	130	96	74	0	4	2	0
	PENDLETON	39	30	53	29	35	0	0.03	-0.28	0.03	3.76	125	2.10	136	94	87	0	6	1	0
	PORTLAND	49	35	53	31	42	1	0.09	-1.03	0.08	7.96	72	2.89	54	85	68	0	2	2	0
	SALEM	53	34	57	28	43	2	0.17	-1.16	0.15	9.14	72	3.10	50	91	77	0	3	2	0
PA	ALLENTOWN	29	8	47	-4	19	-8	0.63	-0.12	0.28	11.83	167	5.59	151	71	47	0	7	4	0
	ERIE	26	4	42	-4	15	-11	0.33	-0.19	0.19	6.45	101	3.52	131	73	56	0	7	3	0
	MIDDLETOWN	29	12	43	3	20	-9	0.27	-0.39	0.17	9.32	149	3.62	119	78	47	0	7	2	0
	PHILADELPHIA	33	15	48	5	24	-8	0.22	-0.51	0.16	10.30	147	3.92	105	65	43	0	7	2	0
	PITTSBURGH	28	5	43	-5	16	-12	0.18	-0.41	0.15	8.20	143	2.66	93	88	53	0	7	3	0
	WILKES-BARRE	26	6	39	-5	16	-10	0.26	-0.29	0.25	7.30	141	4.11	157	80	45	0	7	2	0
	WILLIAMSPORT	25	6	38	-6	15	-11	0.11	-0.55	0.09	10.24	171	4.06	134	75	53	0	7	3	0
RI	PROVIDENCE	34	12	45	2	23	-6	0.31	-0.64	0.18	11.62	132	6.35	137	64	40	0	7	2	0
SC	CHARLESTON	57	34	67	27	46	-2	0.04	-0.82	0.04	11.46	152	1.70	39	91	36	0	4	1	0
	COLUMBIA	57	28	69	22	43	-2	0.04	-1.00	0.04	10.28	123	3.03	61	91	42	0	5	1	0
	FLORENCE	56	31	67	25	44	-1	0.08	-0.73	0.08	9.80	126	2.89	67	88	34	0	4	1	0
	GREENVILLE	54	27	66	21	41	0	0.05	-0.91	0.05	17.00	199	5.54	118	74	31	0	7	1	0
SD	ABERDEEN	9	-14	22	-37	-2	-14	0.50	0.42	0.36	2.32	264	1.01	202	80	72	0	7	3	0
	HURON	17	-8	36	-30	5	-10	0.17	0.09	0.12	1.96	220	0.80	160	81	69	0	7	3	0
	RAPID CITY	42	16	63	1	29	6	0.00	-0.06	0.00	1.53	194	0.29	74	80	43	0	7	0	0
	SIOUX FALLS	25	-4	50	-25	11	-4	0.15	0.06	0.13	1.76	168	0.54	102	78	66	0	6	2	0
TN	BRISTOL	43	21	60	15	32	-3	0.25	-0.55	0.23	9.37	131	3.52	94	96	47	0	7	2	0
	CHATTANOOGA	54	26	68	20	40	0	0.04	-1.17	0.04	16.15	153	7.15	125	77	40	0	7	1	0
	KNOXVILLE	47	26	63	18	37	-1	0.29	-0.69	0.29	12.48	134	4.98	103	84	45	0	6	1	0
	MEMPHIS	52	31	70	20	42	1	0.00	-0.95	0.00	13.58	133	4.74	105	73	35	0	3	0	0
	NASHVILLE	49	28	67	16	39	2	0.03	-0.81	0.03	10.36	118	4.55	108	66	31	0	4	1	0
TX	ABILENE	61	40	71	24	51	7	0.02	-0.17	0.02	4.50	196	0.86	83	75	50	0	1	1	0
	AMARILLO	57	22	71	14	40	3	0.00	-0.11	0.00	0.65	51	0.07	11	78	24	0	6	0	0
	AUSTIN	63	44	72	36	54	3	0.14	-0.25	0.11	9.68	218	3.31	166	79	59	0	0	2	0
	BEAUMONT	65	45	72	37	55	2	0.14	-1.01	0.09	15.83	141	6.87	115	83	52	0	0	3	0
	BROWNSVILLE	70	53	77	49	61	1	0.40	0.05	0.33	2.26	88	1.61	110	95	75	0	0	3	0
	CORPUS CHRISTI	67	51	75	42	59	2	0.34	-0.03	0.32	2.56	74	1.75	101	87	67	0	0	3	0
	DEL RIO	66	44	74	32	55	3	0.03	-0.12	0.02	1.44	105	0.18	29	86	61	0	1	2	0
	EL PASO	63	37	69	28	50	3	0.00	-0.08	0.00	0.53	43	0.10	21	54	26	0	1	0	0
	FORT WORTH	58	39	66	28	48	3	0.03	-0.34	0.03	6.17	135	1.62	81	82	48	0	2	1	0
	GALVESTON	61	51	67	41	56	0	0.69	-0.18	0.52	9.86	126	5.15	119	95	67	0	0	3	1
	HOUSTON	63	45	72	37	54	2	0.34	-0.46	0.16	11.78	155	4.17	107	90	66	0	0	5	0
	LUBBOCK	58	29	70	18	43	4	0.00	-0.12	0.00	1.44	119	0.00	0	69	38	0	6	0	0
	MIDLAND	61	35	72	25	48	4	0.03	-0.08	0.03	1.15	95	0.13	23	75	51	0	2	1	0
	SAN ANGELO	62	38	71	20	50	4	0.00	-0.20	0.00	2.79	154	0.32	37	78	50	0	1	0	0
	SAN ANTONIO	62	46	71	37	54	3	0.33	-0.03	0.33	3.98	107	1.65	93	84	55	0	0	1	0
	VICTORIA	65	48	73	38	56	2	1.05	0.53	0.48	7.76	153	2.82	109	91	66	0	0	4	0
	WACO	61	41	69	25	51	4	0.00	-0.42	0.00	8.56	179	3.83	189	83	65	0	1	0	0
	WICHITA FALLS	59	34	68	22	47	6	0.00	-0.23	0.00	5.45	190	1.50	126	84	55	0	4	0	0
UT	SALT LAKE CITY	46	28	54	24	37	7	0.00	-0.30	0.00	3.08	114	1.80	123	83	49	0	6	0	0
VT	BURLINGTON	22	-1	33	-5	11	-6	0.53	0.05	0.16	6.32	138	3.39	144	77	46	0	7	4	0
VA	LYNCHBURG	42	18	51	12	30	-5	0.05	-0.72	0.05	9.98	143	2.83	75	76	50	0	7	1	0
	NORFOLK	47	26	59	21	36	-4	0.11	-0.76	0.11	7.91	110	3.81	91	85	46	0	7	1	0
	RICHMOND	43	21	54	13	32	-4	0.28	-0.45	0.24	6.11	89	2.67	71	75	46	0	7	2	0
	ROANOKE	44	21	61	9	33	-3	0.02	-0.72	0.02	8.57	136	2.33	68	69	51	0	7	1	0
	WASH/DULLES	34	12	47	-2	23	-9	0.23	-0.43	0.18	9.58	152	3.82	118	78	52	0	7	2	0
WA	OLYMPIA	50	31	54	24	41	2	0.37	-1.34	0.36	12.75	80	5.25	65	95	84	0	4	2	0
	QUILLAYUTE	51	33	57	28	42	1	2.09	-1.04	1.94	39.80	137	16.88	116	94	83	0	5	3	1
	SEATTLE-TACOMA	50	38	54	33	44	2	0.72	-0.43	0.68	10.63	96	4.55	83	84	70	0	0	3	1
	SPOKANE	34	24	41	15	29	0	0.15	-0.24	0.14	4.53	108	1.91	99	93	85	0	6	2	0
	YAKIMA	39	26	45	20	32	1	0.00	-0.22	0.00	2.22	85	1.54	125	92	83	0	7	0	0
WV	BECKLEY	36	15	52	-2	25	-6	0.19	-0.52	0.12	8.54	131	3.30	96	83	64	0	7	3	0
	CHARLESTON	39	18	54	2	28	-6	0.22	-0.52	0.13	9.48	140	3.55	103	85	54	0	7	3	0
	ELKINS	34	6	48	-13	20	-9	0.34	-0.42	0.28	7.48	106	3.46	95	82	64	0	7	4	0
	HUNTINGTON	39	17	55	1	28	-5	0.11	-0.58	0.06	9.30	137	3.20	94	79	48	0	7	3	0
WI	EAU CLAIRE	7	-15	37	-30	-4	-17	0.05	-0.17	0.04	2.19	103	0.14	13	84	54	0	7	2	0
	GREEN BAY	9	-10	32	-26	-1	-17	0.26	0.00	0.24	3.74	139	1.72	134	71	55	0	7	2	0
	LA CROSSE	10	-11	40	-33	-1	-18	0.61	0.33	0.34	4.23	169	1.32	104	79	54	0	7	2	0
	MADISON	10	-11	39	-26	0	-18	0.50	0.21	0.42	4.95	165	2.56	191	80	67	0	7	3	0
	MILWAUKEE	14	-5	41	-23	4	-17	0.49	0.08	0.48	4.65	111	2.24	114	74	59	0	7	2	0
WY	CASPER	37	20	48	6	28	5	0.00	-0.11	0.00	0.69	56	0.28	46	64	52	0	7	0	0
	CHEYENNE	44	18	56	5	31	5	0.04	-0.04	0.03	0.51	55	0.13	28	63	40	0	7	2	0
	LANDER	31	7	48	-3	19	-2	0.29	0.19	0.29	1.58	137	0.80	148	86	55	0	7	1	0
	SHERIDAN	42	18	58	1	30	7	0.06	-0.09	0.05	1.43	96	0.70	86	84	60	0	7	2	0

Based on 1971-2000 normals ***** Not Available**

International Weather and Crop Summary

January 27 - February 2, 2019

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

EUROPE: Heavy rain eased short-term dryness in southwestern Europe, while winter crops remained dormant elsewhere.

MIDDLE EAST: Moderate to heavy rain continued across much of the region, maintaining adequate to abundant moisture supplies for winter grains.

NORTHWESTERN AFRICA: Widespread heavy rain eased dryness concerns in the west and maintained favorable early-season winter grain prospects elsewhere.

SOUTHEAST ASIA: Showers in Indonesia continued to benefit oil palm and reproductive rice.

AUSTRALIA: Unfavorably hot, dry weather reduced the overall yield potential of summer crops.

SOUTH AFRICA: Beneficial rain fell in western sections of the corn belt, though long-term moisture deficits remained a concern.

ARGENTINA: Conditions remained overall favorable for reproductive to filling summer crops.

BRAZIL: Below-normal rainfall persisted in some southern and eastern farming areas, where moisture remained limited for first-crop corn and soybeans.

January 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	16	5	21	0	11	-0.3	119	50
	BATNA	11	-1	16	-5	5	-0.5	33	6
ARGENT	IGUAZU	34	22	38	19	28	2.3	88	-82
	FORMOSA	34	24	39	18	29	1.3	198	41
	CERES	30	22	38	15	26	0.5	265	131
	CORDOBA	28	17	38	10	23	-0.5	240	102
	RIO CUARTO	28	18	37	10	23	-0.4	203	70
	ROSARIO	29	20	37	12	25	0.1	239	131
	BUENOS AIRES	29	19	36	9	24	0.6	74	-30
	SANTA ROSA	31	17	35	8	24	0.1	105	15
	TRES ARROYOS	***	***	35	7	***	*****	*****	******
AUSTRA	DARWIN	32	26	34	22	29	0.5	167	-320
	BRISBANE	29	23	31	21	26	1.2	31	-129
	PERTH	31	16	43	7	24	-0.8	6	-2
	CEDUNA	30	17	47	8	24	1.8	0	-12
	ADELAIDE	31	18	45	13	25	3	0	-37
	MELBOURNE	29	16	45	10	22	2.9	30	-18
	WAGGA	38	22	45	12	30	6.7	38	-9
	CANBERRA	35	18	42	13	26	5.7	61	-5
AUSTRI	VIENNA	3	-2	10	-11	1	0.7	43	15
	INNSBRUCK	2	-5	6	-12	-1	-0.5	139	94
BAHAMA	NASSAU	27	20	31	16	24	2.1	106	60
BARBAD	BRIDGETOWN	29	24	29	21	26	0.4	47	-16
BELARU	MINSK	-3	-7	3	-22	-5	-0.1	47	5
BERMUD	ST GEORGES	20	17	24	12	18	-0.2	157	38
BOLIVI	LA PAZ	16	4	19	2	10	1.2	110	-51
BRAZIL	FORTALEZA	30	25	32	22	28	-0.5	167	58
	RECIFE	29	25	30	23	27	-1.7	94	33
	CAMPO GRANDE	32	22	37	20	27	1	45	-174
	FRANCA	29	20	32	17	25	2	129	-155
	RIO DE JANEIRO	35	25	38	22	30	3.1	23	-112
	LONDRINA	33	23	37	20	28	4.2	62	-145
	SANTA MARIA	31	22	38	18	27	1	267	116
	TORRES	30	23	37	21	26	0.5	114	-45
BULGAR	SOFIA	2	-3	9	-11	-1	-0.1	38	13
BURKIN	OUAGADOUGOU	34	18	37	16	26	1	0	0
CANADA	LETHBRIDGE	4	-9	15	-24	-3	*****	9	******
	REGINA	-8	-20	3	-33	-14	*****	5	******
	WINNIPEG	-13	-20	5	-35	-16	*****	15	******
	TORONTO	-2	-11	8	-23	-7	-0.5	68	16
	MONTREAL	-6	-15	3	-23	-10	-0.3	111	38
	PRINCE ALBERT	-11	-25	5	-40	-18	0.6	38	22
	CALGARY	3	-9	14	-18	-3	5.2	9	-2
	VANCOUVER	8	2	11	-3	5	1.7	141	-11
CANARY	LAS PALMAS	20	15	23	13	18	0.1	13	-6
CHILE	SANTIAGO	31	14	39	10	23	2	0	-3
CHINA	HARBIN	-7	-18	-1	-26	-13	5.2	2	-1
	HAMI	-3	-16	2	-22	-9	0.7	0	-1
	BEIJING	4	-7	12	-12	-1	2.1	0	-2
	TIENTSIN	5	-6	11	-10	-1	1.9	0	-3
	LHASA	6	-9	10	-12	-1	-0.5	0	-1
	KUNMING	18	4	21	0	11	2.2	35	19
	CHENGCHOW	7	-3	15	-8	2	1.3	14	1
	YEHCHANG	7	2	16	-2	4	-0.4	15	-8
	HANKOW	7	1	17	-7	4	-0.2	63	19
	CHUNGKING	11	7	14	5	9	1.2	20	3
	CHIHKIANG	7	3	15	-2	5	0.3	72	26
	WU HU	7	2	15	-4	5	1.2	63	14
	SHANGHAI	9	3	14	-3	6	1.6	66	18
	NANCHANG	9	4	16	0	7	1.5	116	43
	TAIPEI	***	***	26	15	***	*****	44	-27
	CANTON	21	12	27	6	16	2.4	3	-39
	NANNING	15	11	25	4	13	-0.2	43	8
COLOMB	BOGOTA	21	8	24	2	14	1.3	31	-2
COTE D	ABIDJAN	32	27	34	23	29	2.4	41	23
CUBA	CAMAGUEY	29	19	32	16	24	1.1	48	-10
CYPRUS	LARNACA	17	8	20	3	13	1.1	126	68
CZECHR	PRAGUE	2	-3	7	-11	-1	0.9	23	0
DENMAR	COPENHAGEN	4	0	8	-4	2	1.4	47	5
EGYPT	CAIRO	18	10	25	7	14	0.2	3	-2

Based on Preliminary Reports

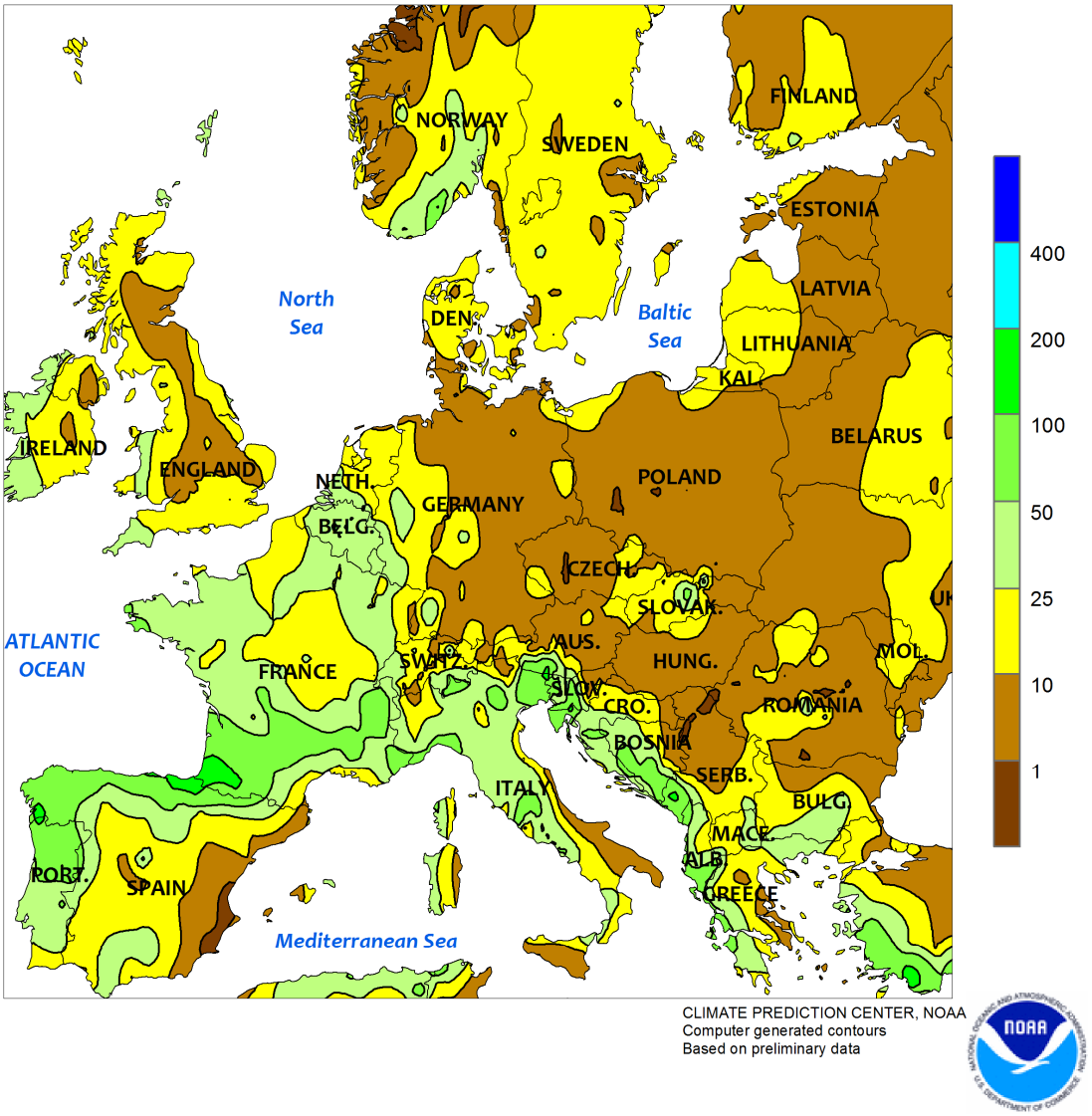
January 2019

COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	PRECIP. (MM) TOT	DEP NRM
ESTONI	TALLINN	-2	-6	5	-19	-4	-0.6	82	25
ETHIOP	ADDIS ABABA	25	9	28	6	17	1.1	0	-25
F GUIA	CAYENNE	30	24	31	22	27	1.2	162	-274
FIJI	NAUSORI	30	24	33	22	27	0.9	650	300
FINLAN	HELSINKI	-4	-9	3	-26	-6	-1.2	69	24
FRANCE	PARIS/ORLY	6	2	12	-4	4	0.1	40	-10
	STRASBOURG	5	0	10	-8	2	0.6	37	5
	BOURGES	6	1	10	-6	4	-0.2	47	-8
	BORDEAUX	9	3	13	-3	6	0.2	70	-17
	TOULOUSE	8	2	12	-5	5	-0.5	42	-7
	MARSEILLE	10	2	15	-4	6	-0.5	4	-50
GABON	LIBREVILLE	31	28	35	25	29	2.5	89	-198
GERMAN	HAMBURG	4	0	9	-8	2	1.0	66	1
	BERLIN	4	0	8	-7	2	1.2	48	2
	DUSSELDORF	5	1	9	-9	3	-0.3	65	-3
	LEIPZIG	3	-1	8	-10	1	1.1	44	11
	DRESDEN	2	-1	7	-9	1	0.5	67	31
	STUTTGART	3	-2	8	-9	1	0.0	66	30
	NURNBERG	3	-1	8	-8	1	0.6	48	5
	AUGSBURG	2	-2	8	-10	0	0.2	60	22
GREECE	THESSALONIKA	8	2	14	-6	5	-0.8	60	28
	LARISSA	9	-1	15	-9	4	-1.3	56	-3
	ATHENS	13	7	17	-1	10	-0.5	120	80
GUADEL	RAIZET	28	20	29	17	24	-0.2	66	-18
HONGKO	HONG KONG INT	21	16	25	10	18	1.7	1	-27
HUNGAR	BUDAPEST	3	-2	11	-8	0	0.5	27	-4
ICELAN	REYKJAVIK	2	-1	10	-8	1	1.1	87	9
INDIA	AMRITSAR	18	5	21	1	11	-0.3	24	-2
	NEW DELHI	21	7	29	4	14	-0.2	59	38
	AHMEDABAD	28	11	33	8	20	-0.5	0	-2
	INDORE	25	10	32	6	18	-0.6	0	-5
	CALCUTTA	26	14	29	11	20	0.5	0	-14
	VERAVAL	29	16	31	12	22	0.7	0	-3
	BOMBAY	31	16	36	13	24	-0.3	0	-2
	POONA	30	10	33	8	20	-0.1	0	-1
	BEGAMPET	29	15	31	9	22	-0.4	11	4
	VISHAKHAPATNAM	28	20	29	16	24	-0.1	0	-8
	MADRAS	30	20	31	18	25	0.3	0	-26
	MANGALORE	33	20	34	18	27	-0.3	0	-3
INDONE	SERANG	32	24	34	22	28	1.6	276	4
IRELAN	DUBLIN	8	3	11	-6	6	0.2	26	-42
ITALY	MILAN	8	-2	17	-6	3	0.7	10	-50
	VENICE	7	-1	11	-5	3	0.0	8	-44
	GENOA	12	6	17	2	9	-0.2	17	-70
	ROME	12	3	15	-4	7	-1.3	89	19
	NAPLES	11	2	15	-3	7	-2.0	110	13
JAMAIC	KINGSTON	31	23	31	21	27	0.7	3	-21
JAPAN	SAPPORO	-1	-5	4	-11	-3	1.0	91	-20
	NAGOYA	10	2	14	-2	6	1.2	15	-29
	TOKYO	10	2	14	-1	6	0.1	10	-39
	YOKOHAMA	11	3	16	1	7	1.0	10	-48
	KYOTO	9	2	12	-1	6	0.4	27	-31
	OSAKA	10	4	13	1	7	0.9	23	-23
KAZAKH	KUSTANAY	-12	-19	-2	-32	-15	0.6	8	-11
	TSELINOGRAD	-9	-16	0	-28	-13	1.2	10	-8
	KARAGANDA	-8	-17	1	-30	-12	1.0	10	-12
KENYA	NAIROBI	26	16	29	13	21	1.6	4	-33
LIBYA	BENGHAZI	14	***	17	9	***	*****	33	-27
LITHUA	KAUNAS	-2	-7	5	-18	-5	-1.0	61	21
LUXEMB	LUXEMBOURG	2	-1	8	-8	1	0.1	52	-21
MALAYS	KUALA LUMPUR	34	25	35	23	29	2.7	245	76
MALI	BAMAKO	33	16	38	10	25	-0.8	0	0
MARSHA	MAJURO	30	27	30	24	28	1.0	183	-11
MARTIN	LAMENTIN	29	22	30	18	25	0.7	66	-47
MEXICO	GUADALAJARA	24	9	27	3	16	0.8	54	42
	TLAXCALA	22	5	26	1	14	0.7	0	-5
	ORIZABA	20	12	28	7	16	1.1	12	-31
MOROCC	CASABLANCA	17	8	19	2	12	-0.2	21	-49
	MARRAKECH	20	4	23	0	12	0.3	0	-30
MOZAMB	MAPUTO	33	23	39	19	28	1.4	74	-92

COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	PRECIP. (MM) TOT	DEP NRM
N KORE	PYONGYANG	2	-9	7	-14	-4	2.3	0	-11
NEW CA	NOUMEA	29	23	31	22	26	-0.1	22	-92
NIGER	NIAMEY	33	17	37	13	25	0.8	0	0
NORWAY	OSLO	-3	-8	5	-15	-5	0.4	20	-38
NZEALA	AUCKLAND	24	18	28	14	21	*****	32	******
	WELLINGTON	23	16	27	12	20	*****	25	******
P RICO	SAN JUAN	29	22	31	21	25	0.6	49	-28
PAKIST	KARACHI	26	13	31	9	20	1.6	30	19
PERU	LIMA	28	22	31	20	25	1.9	1	1
PHILIP	MANILA	30	24	33	22	27	0.6	3	-23
PNEWGU	PORT MORESBY	31	25	34	24	28	0.7	569	399
POLAND	WARSAW	0	-4	7	-12	-2	0.2	34	12
	LODZ	0	-4	6	-14	-2	-0.5	44	15
	KATOWICE	0	-4	6	-14	-2	-0.4	62	25
PORTUG	LISBON	15	8	19	4	11	0.5	35	-59
ROMANI	BUCHAREST	2	-4	9	-16	-1	-0.5	62	34
RUSSIA	ST.PETERSBURG	-4	-8	2	-23	-6	-0.4	81	40
	KAZAN	-9	-12	2	-21	-11	1.0	47	13
	MOSCOW	-5	-9	3	-20	-7	0.5	74	30
	YEKATERINBURG	-9	-14	-2	-23	-11	2.1	17	-7
	OMSK	-12	-18	-1	-29	-15	1.3	12	-12
	BARNAUL	-11	-18	-2	-29	-15	0.5	11	-13
	KHABAROVSK	-12	-20	-6	-27	-16	4.5	5	-6
	VLADIVOSTOK	-5	-11	3	-16	-8	4.4	0	-11
	VOLGOGRAD	-3	-9	2	-18	-6	0.4	41	11
	ASTRAKHAN	0	-4	4	-11	-2	2.9	3	-12
	ORENBURG	-10	-16	0	-28	-13	0.0	26	-2
S AFRI	JOHANNESBURG	27	16	31	10	21	1.6	221	86
	DURBAN	27	20	32	17	24	-0.5	72	-64
	CAPE TOWN	26	17	34	12	22	0.8	12	0
S KORE	SEOUL	4	-4	9	-10	0	2.0	0	-23
SAMOA	PAGO PAGO	31	26	33	24	29	1.1	267	-89
SENEGA	DAKAR	26	19	36	16	22	1.7	0	-1
SPAIN	VALLADOLID	9	0	16	-5	4	0.4	19	-23
	MADRID	13	-1	16	-5	6	0.4	10	-18
	SEVILLE	17	5	21	1	11	0.0	8	-55
SWITZE	ZURICH	2	-2	7	-6	0	0.0	62	2
	GENEVA	5	-1	8	-7	2	0.4	36	-39
SYRIA	DAMASCUS	13	2	20	-3	8	1.6	25	-2
TAHITI	PAPEETE	31	25	33	23	28	1.2	464	191
TANZAN	DAR ES SALAAM	33	25	34	23	29	1.4	38	-47
THAILA	PHITSANULOK	32	21	34	18	27	1.4	20	15
	BANGKOK	33	25	37	22	29	1.9	1	-9
TOGO	TABLIGBO	36	24	39	19	30	2.9	16	5
TRINID	PORT OF SPAIN	31	22	32	19	26	0.8	26	-41
TUNISI	TUNIS	15	8	19	4	12	0.1	69	-1
TURKEY	ISTANBUL	10	5	18	-2	8	1.9	84	23
	ANKARA	4	-3	11	-18	1	1.7	38	2
TURKME	ASHKHABAD	12	4	25	-1	8	5.3	37	14
UKINGD	ABERDEEN	6	0	12	-7	3	-0.3	45	-59
	LONDON	7	2	12	-5	5	-0.6	28	-27
UKRAIN	KIEV	-3	-7	4	-14	-5	-0.6	46	9
	LVOV	-2	-6	6	-16	-4	-0.6	66	34
	KIROVOGRAD	-3	-7	3	-22	-5	-1.2	59	35
	ODESSA	2	-3	10	-11	0	0.3	51	19
	KHARKOV	-3	-8	1	-18	-5	0.1	58	23
UZBEKI	TASHKENT	10	3	16	-2	6	4.8	78	22
YUGOSL	BELGRADE	3	-1	14	-8	1	-0.7	83	40
ZAMBIA	LUSAKA	26	20	30	17	23	0.0	199	-31
ZIMBAB	KADOMA	***	***	31	14	***	*****	*****	******

Based on Preliminary Reports

EUROPE
Total Precipitation (mm)
JAN 27 - FEB 2, 2019

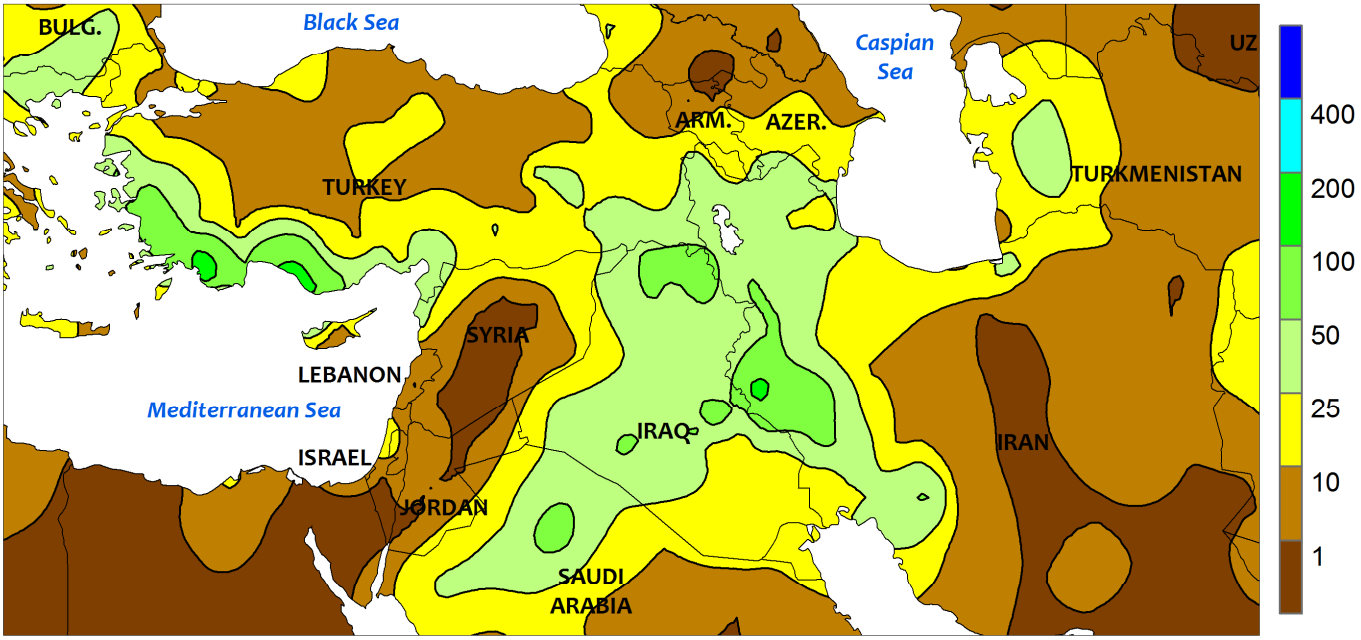


EUROPE

A pair of slow-moving storms brought soaking rainfall to western and southern Europe, while winter crops over central and northern growing areas remained dormant. Over the past 30 to 60 days, precipitation has tallied locally less than 50 percent of normal in parts of France and the Iberian Peninsula. Consequently, this week's moderate to heavy rain (25-100 mm, locally more) in these locales was welcomed for vegetative winter grains, particularly in southern portions of the Iberian Peninsula. Conversely, 60-day precipitation over much of central and eastern Europe has totaled 100 to 200 percent of normal, indicating adequate to abundant moisture reserves for dormant winter wheat and rapeseed. Despite the wet weather pattern, localized dryness has been noted from northern Italy into Hungary, though the impacts on winter crops would likely be minimal to date. Furthermore, autumn drought limited winter crop emergence and establishment from eastern France and the Low Countries into Germany and northwestern Poland as well as portions of the western and central Balkans; producers will likely need to replant in the spring in the worst drought areas. Temperatures during the 7-day period averaged 1 to 5°C above normal over most of Europe, though cold conditions (up to 6°C below normal) were reported in the far north. The winter has been devoid of winterkill threats; temperatures in vulnerable snow-free crop areas have remained above the threshold for widespread crop damage during the coldest outbreak in early- to mid-January.

For additional information contact: mbrusberg@oce.usda.gov

MIDDLE EAST
Total Precipitation (mm)
JAN 27 - FEB 2, 2019



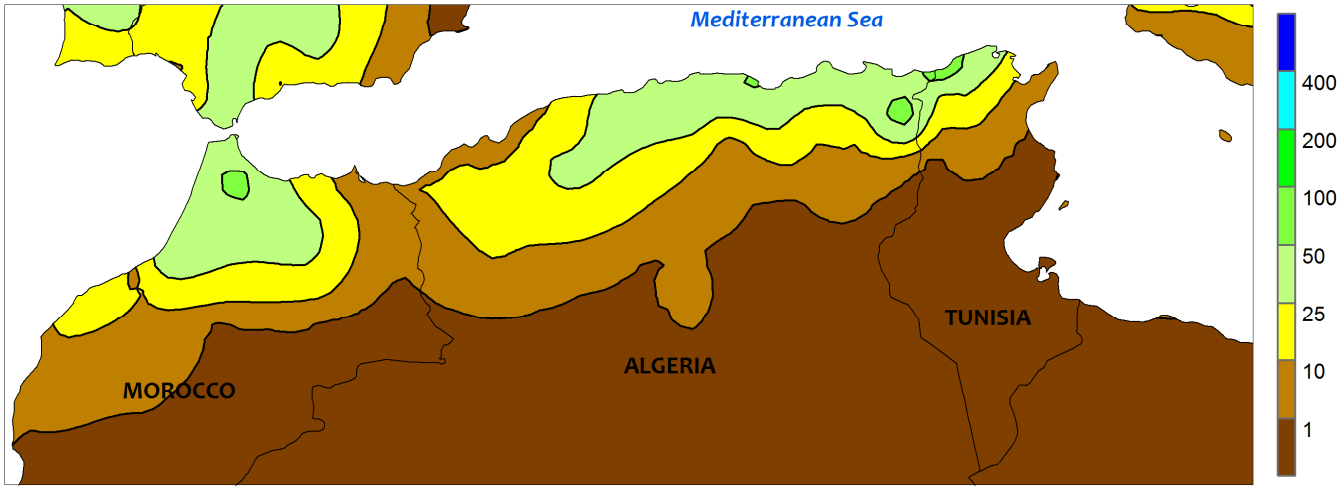
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

MIDDLE EAST

The season-long wet weather pattern continued over much of the region. Over the preceding 60 days, precipitation has totaled 100 to 500 percent of normal over most of the region, save for southern portions of Iran where drier-than-normal conditions have been reported. The wetness impeded late cotton harvesting efforts in Turkey and caused losses to yield and quality. Conversely, moisture reserves remained adequate to abundant across most major growing areas for dormant (north) to vegetative (south) winter grains. The wet weather continued into February, with another slow-moving storm system producing 25 to 130 mm of rain over the past week from western and southern Turkey into Iraq and western Iran. Unusually heavy rain (15-75 mm) was also reported in Saudi Arabia, providing ample supplemental moisture for the country's small pockets of irrigated winter barley. Temperatures during the past week averaged up to 10°C above normal, reducing winter grain cold hardiness in the typically colder growing areas and accelerating wheat and barley development elsewhere.

For additional information contact: mbrusberg@oce.usda.gov

NORTHWESTERN AFRICA
Total Precipitation (mm)
JAN 27 - FEB 2, 2019

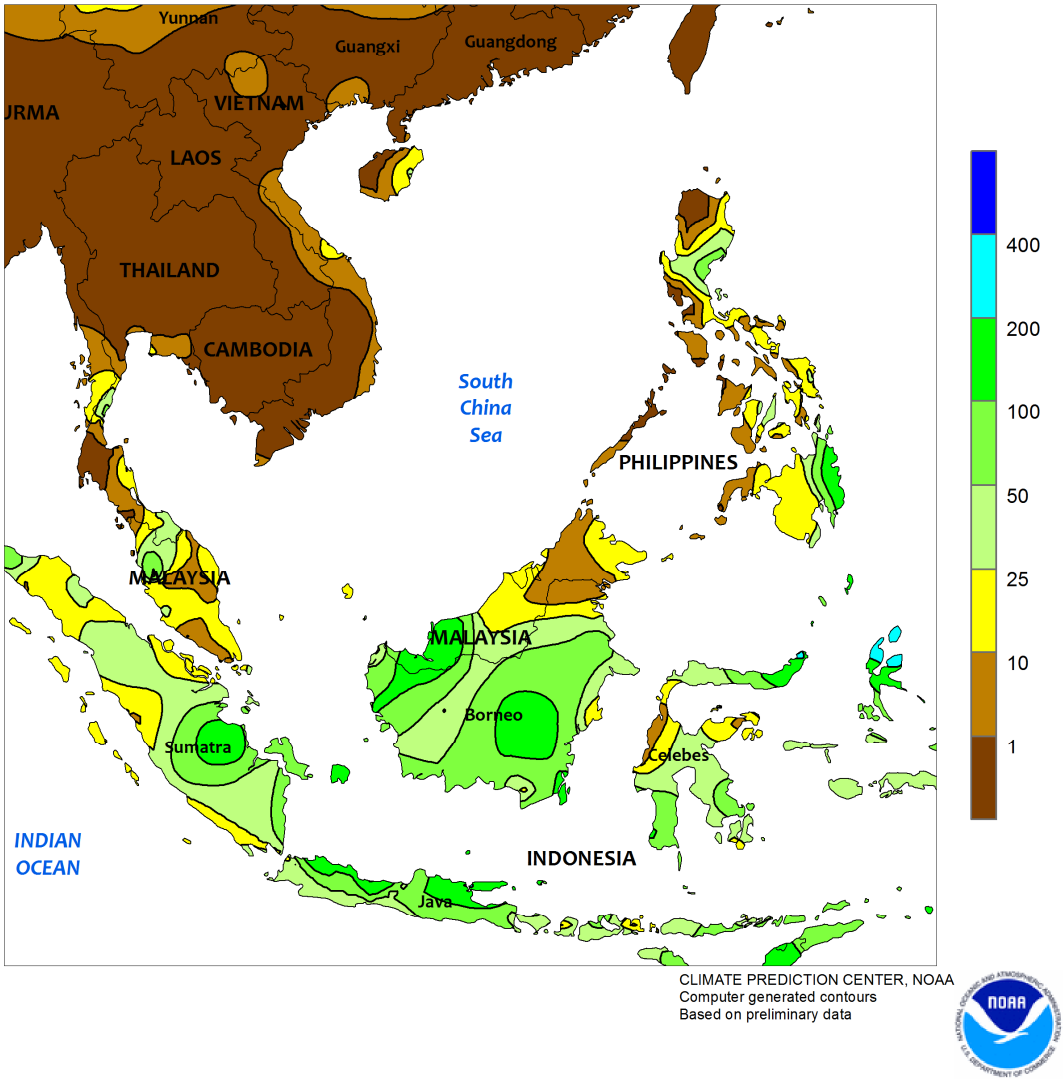


NORTHWESTERN AFRICA

Widespread rain eased short-term dryness concerns in the west and maintained favorable moisture supplies elsewhere. The region's winter grain growing season (November-May) has gotten off to a good start from central Algeria into Tunisia, where 60-day rainfall has totaled 100 to 200 percent of normal. In contrast, pockets of dryness (60-day rainfall locally less than 50 percent of normal) have developed from western Algeria into western and southern Morocco. During the past week, 10 to 60 mm of rain eased dryness concerns from northern Morocco into western Algeria, though rain largely bypassed southwestern Morocco and coastal portions of northwestern Algeria. From central Algeria into northwestern Tunisia, moderate to heavy rainfall (25-70 mm) maintained excellent early-season prospects for vegetative wheat and barley.

For additional information contact: mbrusberg@oce.usda.gov

SOUTHEAST ASIA
Total Precipitation (mm)
JAN 27 - FEB 2, 2019



SOUTHEAST ASIA

Showers since December 1 have trended slightly below normal (80 percent of normal) in western portions of Java, Indonesia, but near to above normal in the remainder of Java. Over the past week, 25 to over 100 mm of rain benefited rice progressing through the reproductive stages of development. Additionally, rainfall has been near to above normal over the last 60 days in oil palm areas of Indonesia (Sumatra and Kalimantan), with 25 to 100 mm (or more) in the previous seven days. In contrast, drier-than-normal conditions have prevailed for oil palm in Malaysia. Meanwhile in the Philippines, following a prolonged period of below-average rainfall in the northeast for rice and corn, showers increased toward the end of December and again at the end of January, improving seasonal totals from less than 20 percent of normal in mid-December to almost 70 percent of normal by the end of January.

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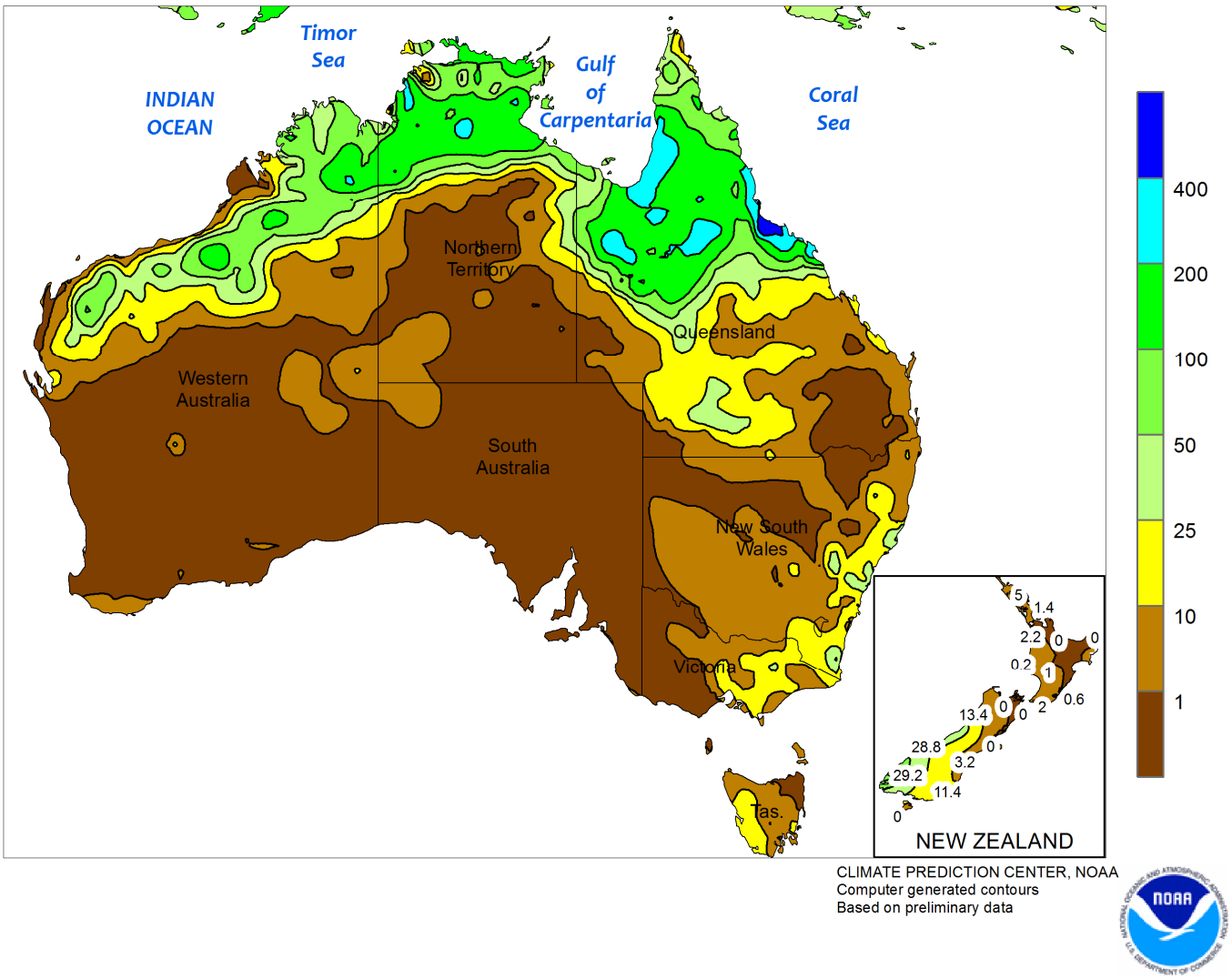
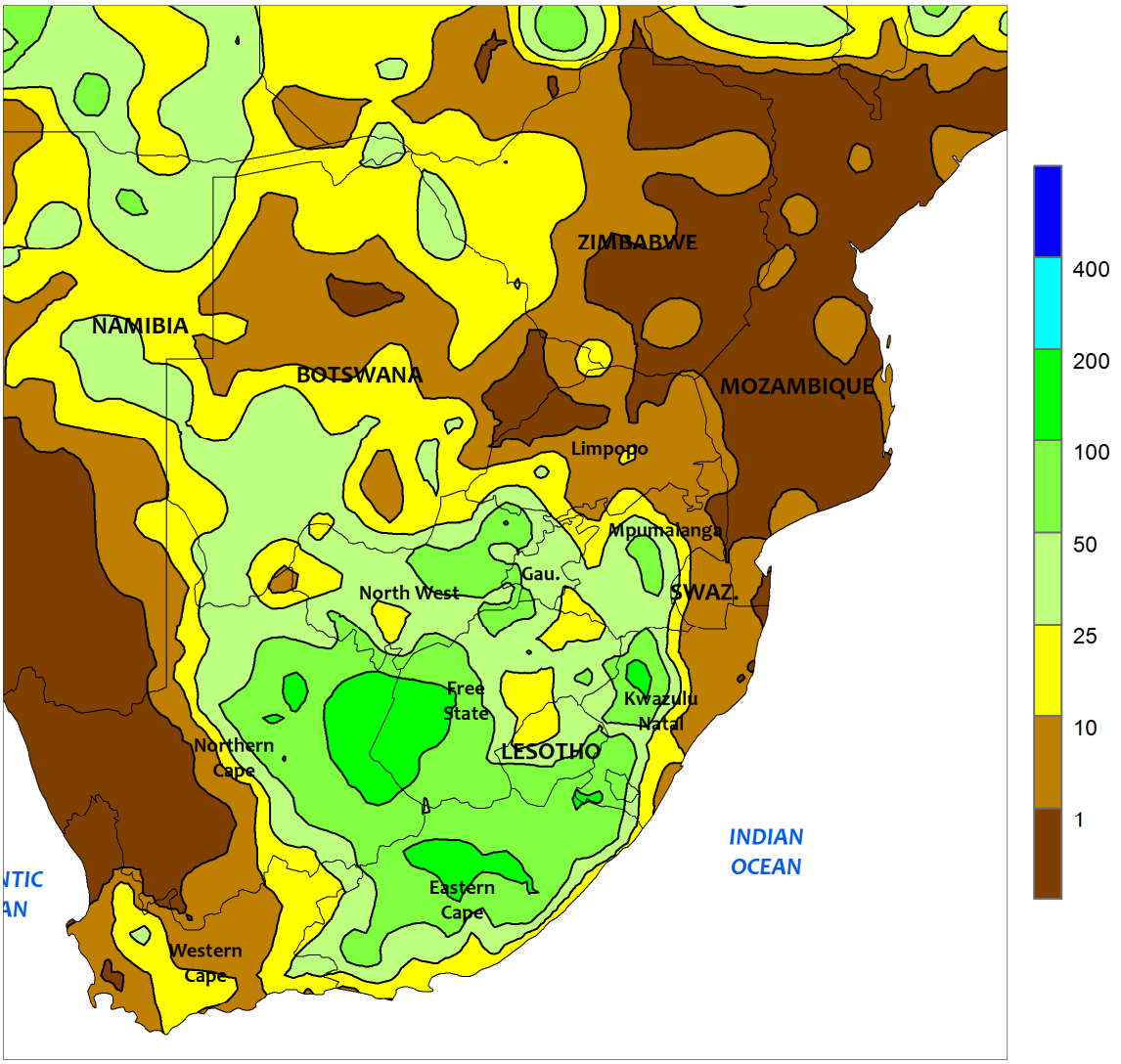


AUSTRALIA

Since mid-December, unfavorably hot, dry weather repeatedly overspread major summer crop producing areas in eastern Australia, reducing the overall yield potential of cotton, sorghum, and other summer crops. The lack of rainfall was most evident in southern Queensland, where generally dry weather dominated the landscape during the past 6 weeks. Although more rain fell across northern New South Wales, rainfall averaged less than 30 percent of normal across a broad part of the region. Multiple days of extreme heat compounded the effects of the dryness in southern Queensland and northern New South Wales, with temperatures approaching or exceeding 40 degrees C on several days (e.g., December 20-21, January 13, January 15-17, January 19-20, January 24-27). The combined heat and dryness stressed dryland crops, reducing yield prospects, while the extreme heat may have negatively impacted some irrigated crops as well. Although the heat was unfavorable for irrigated crops in southern Queensland and northern New South Wales, the effects of the heat may have been even greater farther south. In southern New South Wales, maximum temperatures exceeded 40 degrees C on numerous days, with maximum temperatures approaching or exceeding 45 degrees C on multiple occasions (e.g., December 28, January 4, January 14-18, January 24-26, January 30). Although moisture supplies were generally adequate for irrigated crops during this time period, the repeated heat may have nevertheless trimmed yield prospects in the south.

For additional information contact: mbrusberg@oce.usda.gov

SOUTH AFRICA
Total Precipitation (mm)
JAN 27 - FEB 2, 2019



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

SOUTH AFRICA

Beneficial rain fell in western sections of the corn belt, helping to stabilize crops impacted by earlier periods of dryness. Many locations in North West and Free State recorded some of the heaviest rainfall of the season (25-50 mm, locally higher) during the week ending February 2; however, following a brief period of beneficial rain in late December, a general trend of drier- and warmer-than-normal weather dominated much of the region through January. The unseasonable warmth and dryness in the western corn belt coincided with the latter stages of summer crop planting, and the relatively poor conditions raised concern that some area may have remained unplanted. Rainfall has generally been more consistent in eastern sections of the corn belt (southwestern Mpumalanga and environs), though some locations may have also experienced problems planting during the optimal November-December planting window. Elsewhere, rainfall has also been sporadic in sugarcane areas of KwaZulu-Natal and eastern Mpumalanga, where drier-than-normal conditions have dominated since the late-December to early-January time frame. Meanwhile, recent showers (weekly amounts totaling 5-50 mm for the week ending February 2) boosted irrigation reserves for corn, cotton, and other crops grown along the Orange River and elsewhere in the Cape Provinces. These locations had been dominated by warm, mostly dry weather, spurring rapid development of irrigated crops, including ripening tree and vine crops in Western Cape.

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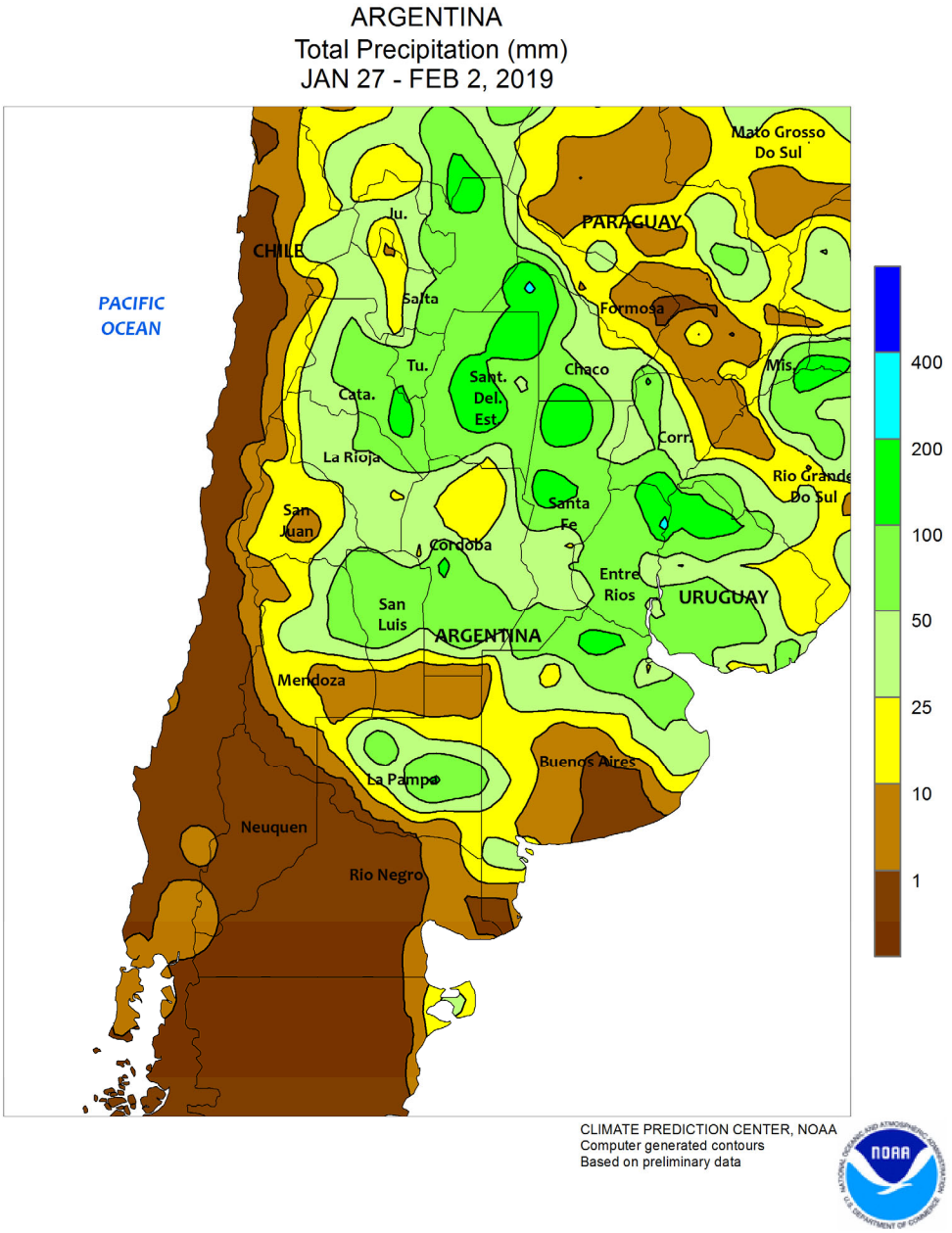

ARGENTINA

Following an extended period of widespread, locally heavy rain, warmer- and drier-than-normal weather dominated a large section of central Argentina. During the week ending February 2, rainfall totaled less than 25 mm throughout La Pampa, Buenos Aires, and in neighboring locations in Cordoba and Santa Fe. Prior to the recent drying trend, abundant rain had been recorded in the region since the early part of December, sustaining abundant levels of moisture for corn, soybeans, and other summer crops approaching or advancing through reproductive phases of development; however, the moisture was untimely for latter stages of the winter grain harvest. Summer heat (daytime highs reaching the middle and upper 30s degrees C) was recorded during the wet spell, though the occurrence of stressful heat was generally lower than other years. In contrast with the recent southern dryness, locally heavy rain (amounts of 25-100 mm or more during the week ending February 2) covered a large area spanning Argentina's northern farming areas (Salta and Tucuman eastward through Entre Rios), boosting moisture for immature summer crops, including corn, soybeans, and cotton. Prior to the brief period of dryness in late January, northern farming areas had enjoyed near normal rainfall and variable temperatures, mitigating potential stress on immature summer crops.

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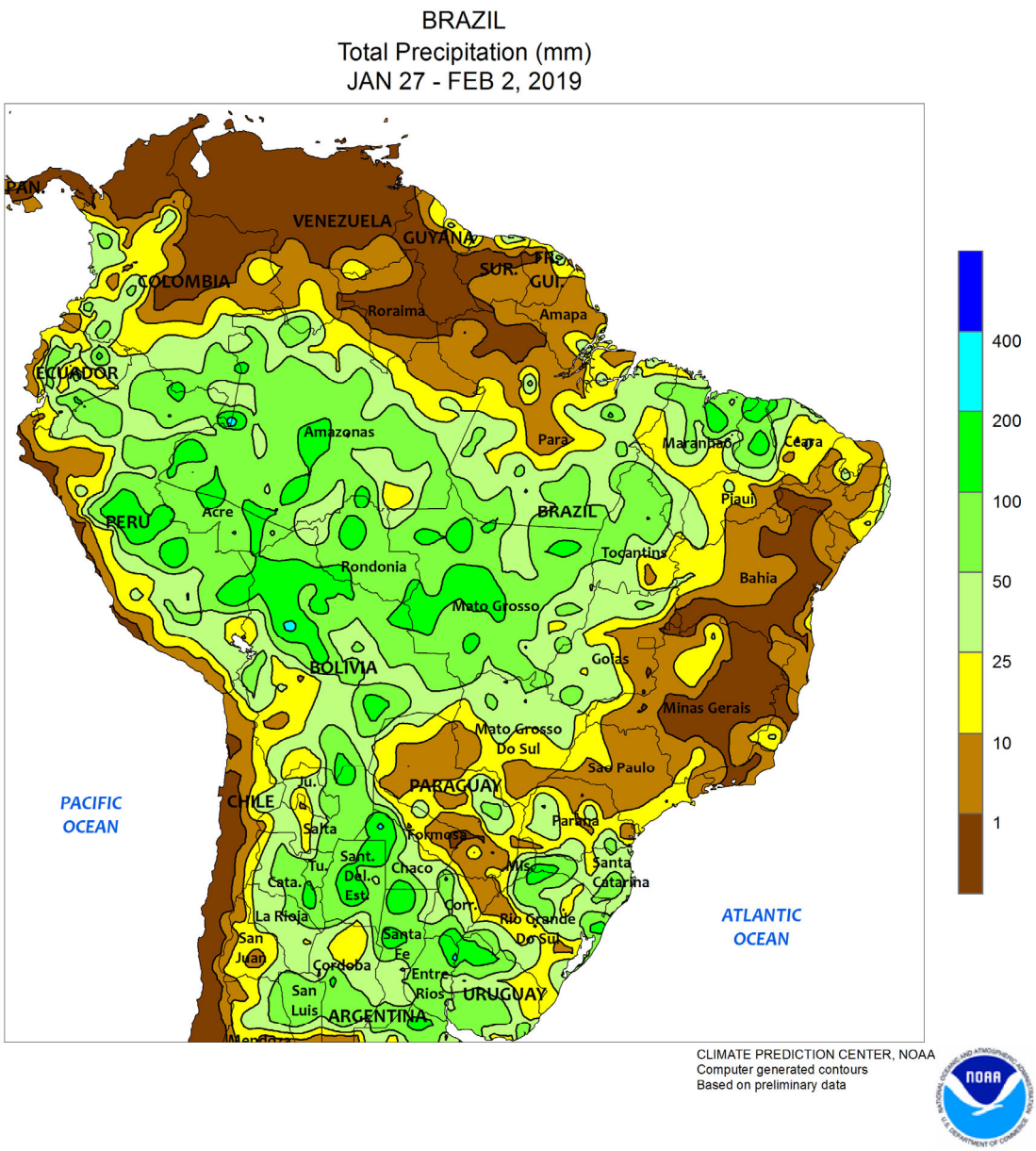


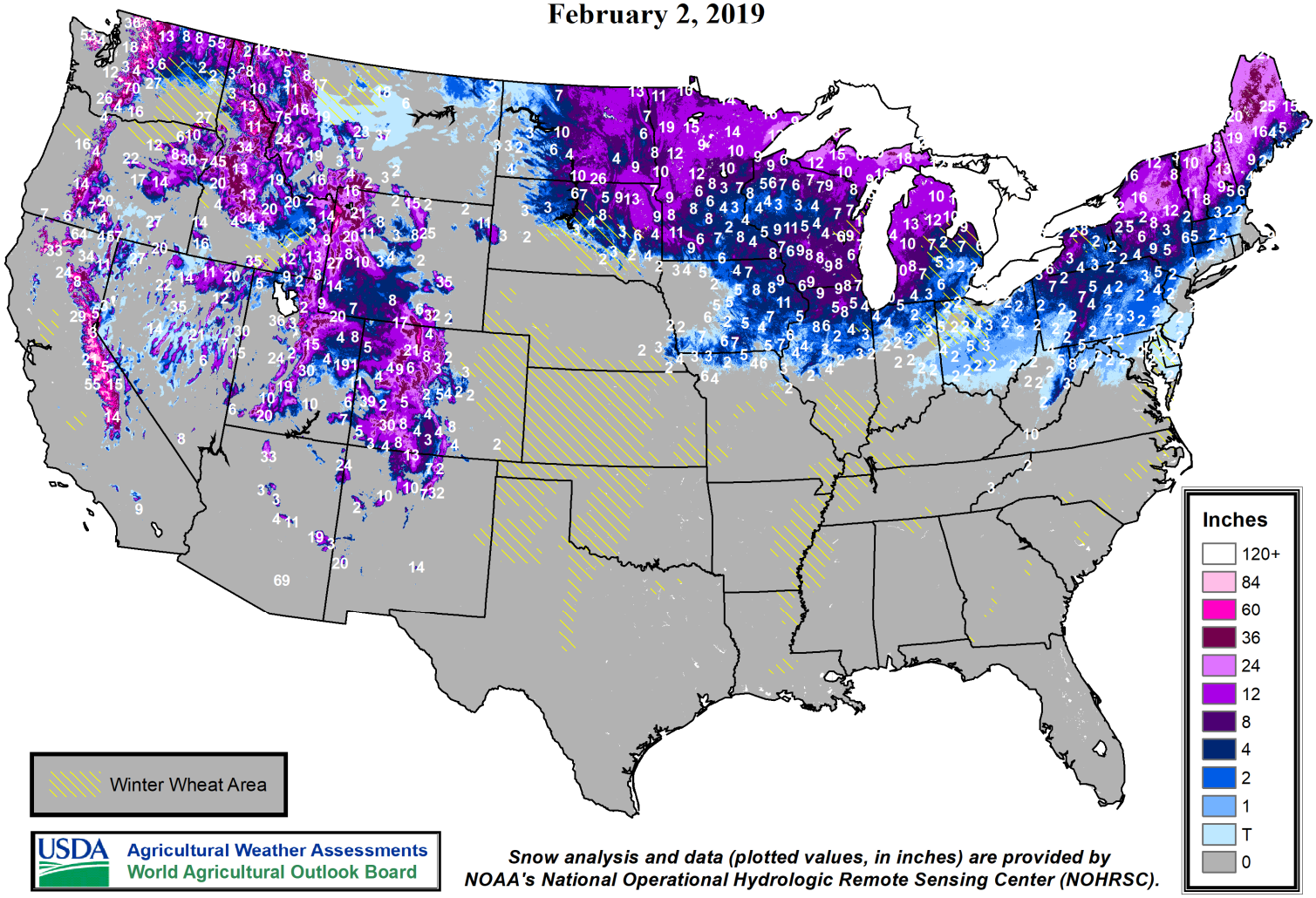
BRAZIL

Warmer- and drier-than-normal weather continued to dominate large sections of southern and eastern Brazil, further reducing moisture available for normal summer crop development. During the week ending February 2, rainfall totaling less than 25 mm spanned a large area from Rio Grande do Sul northeastward to Bahia; above-normal temperatures (daytime highs reaching the middle 30s degrees C) accompanied the dryness, sustaining high losses of moisture through evapotranspiration. After a brief period of heavy rain in late December and early January, the aforementioned area experienced patchy rain and pockets of dryness, although rainfall was generally more consistent in Rio Grande do Sul. According to the government of Parana, portions of the soybean and first corn crop advanced through reproduction during the December dryness; as of January 28, over 80 percent of both crops had reached filling stages of development. Additionally, January rainfall helped to stabilize immature crops but pockets of dryness lingered in the vicinity of northern Parana. Elsewhere, showers (amounts totaling 25-100 mm in the week ending February 2) maintained overall favorable conditions for soybeans and cotton in the Center-West and northeastern interior (Mato Grosso northeastward to Maranhao and Piaui). Since December, frequent, albeit below-normal, rainfall benefited crops in these more northerly locations, with periods of dryness favoring seasonal fieldwork, including soybean harvesting and planting of second-crop corn. According to the government of Mato Grosso, soybeans were 37 percent harvested as of February 1, compared with the 5-year average of 20 percent; similarly, corn was 30 percent planted versus 15 percent on average.

For additional information contact: mbrusberg@oce.usda.gov

Snow Depth

February 2, 2019



Snow analysis and data (plotted values, in inches) are provided by NOAA's National Operational Hydrologic Remote Sensing Center (NOHRSC).

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