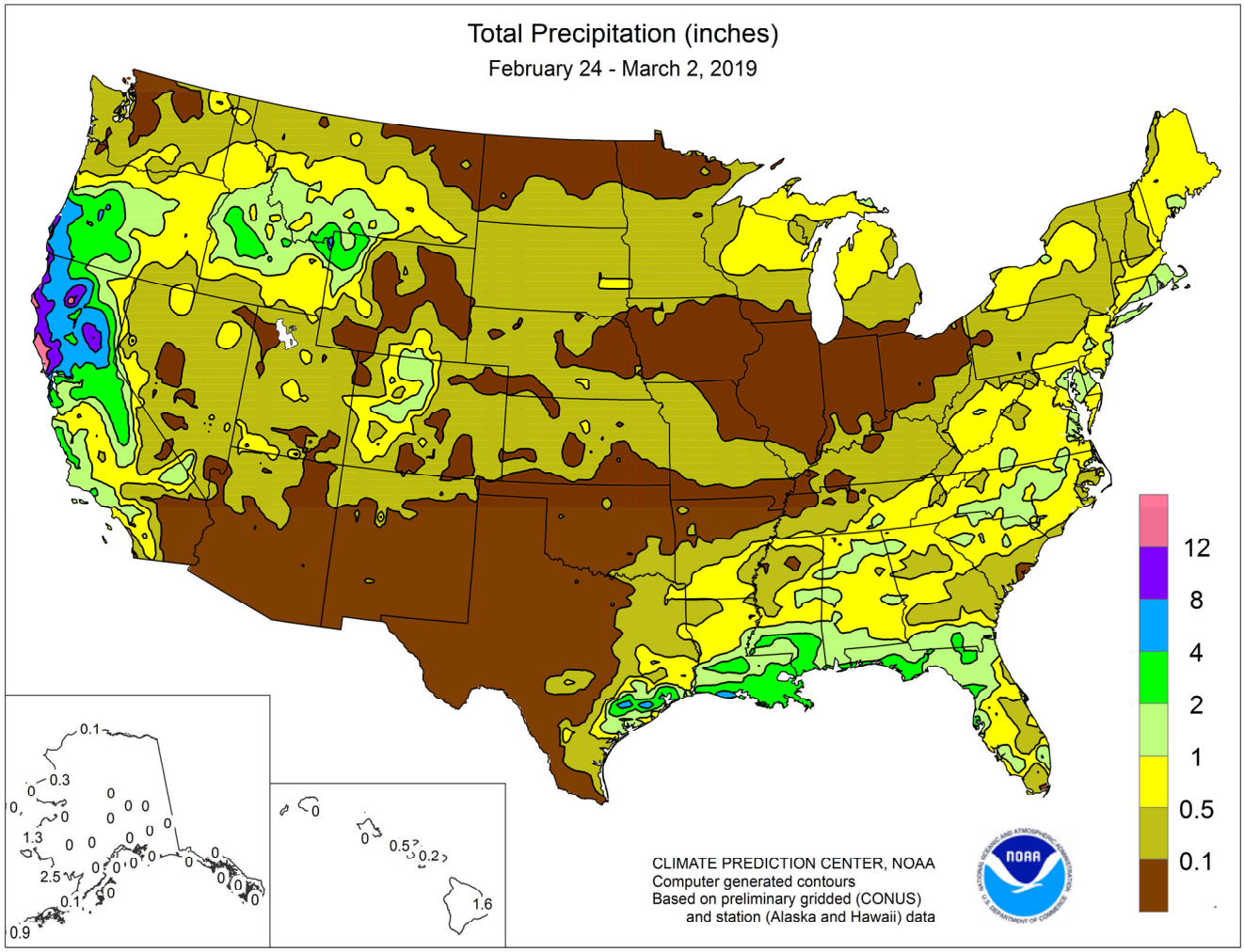
Volume 106, No. 10 http://www.usda.gov/oce/weather March 5, 2019

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



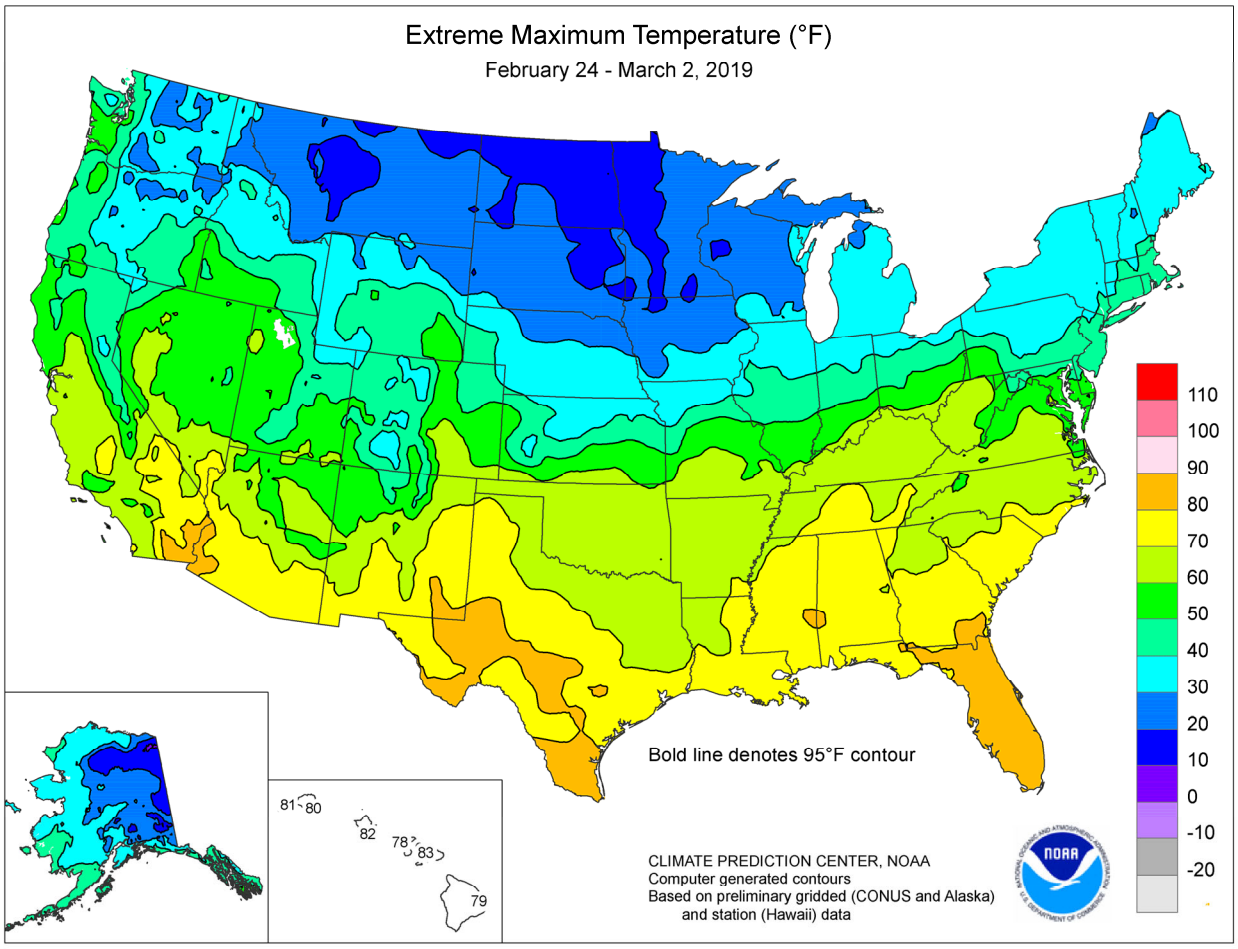
HIGHLIGHTS
February 24 – March 2, 2019

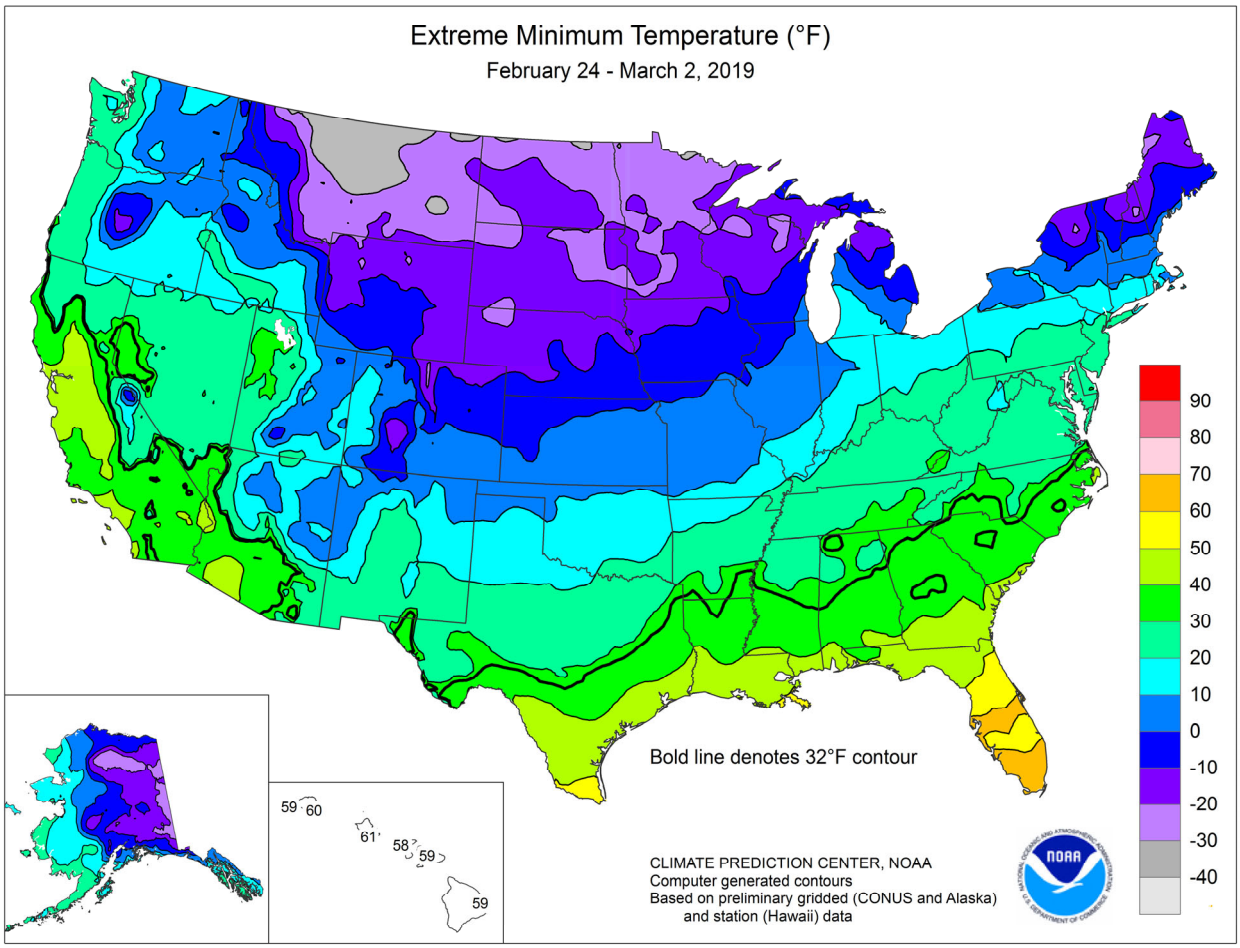
Highlights provided by USDA/WAOB

Strong **Pacific** storms battered areas from **Oregon and northern California to the northern Rockies**, delivering heavy precipitation. Some of the heaviest rain fell in **northern California**, leading to extensive flooding along the **Russian River** and in several other basins. Meanwhile, heavy snow buried the **Sierra Nevada**, **southern Cascades**, and portions of the **interior Northwest**, including desert and low-elevation sites in **Oregon**. Farther east, snow also blanketed the **northern and central Plains**, as well as portions of the **Great**

(Continued on page 3)

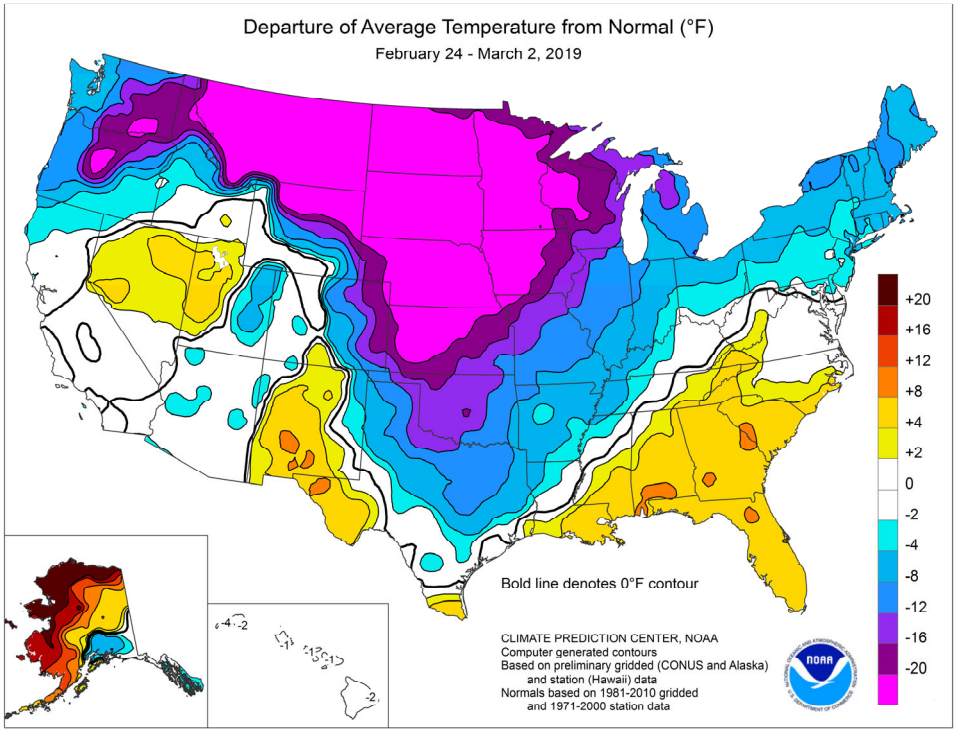
Contents


Extreme Maximum Temperature (°F)
February 24 - March 2, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
81
80
82
78
83
79
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
February 24 - March 2, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
59
60
61
58
59
59
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

(Continued from front cover)

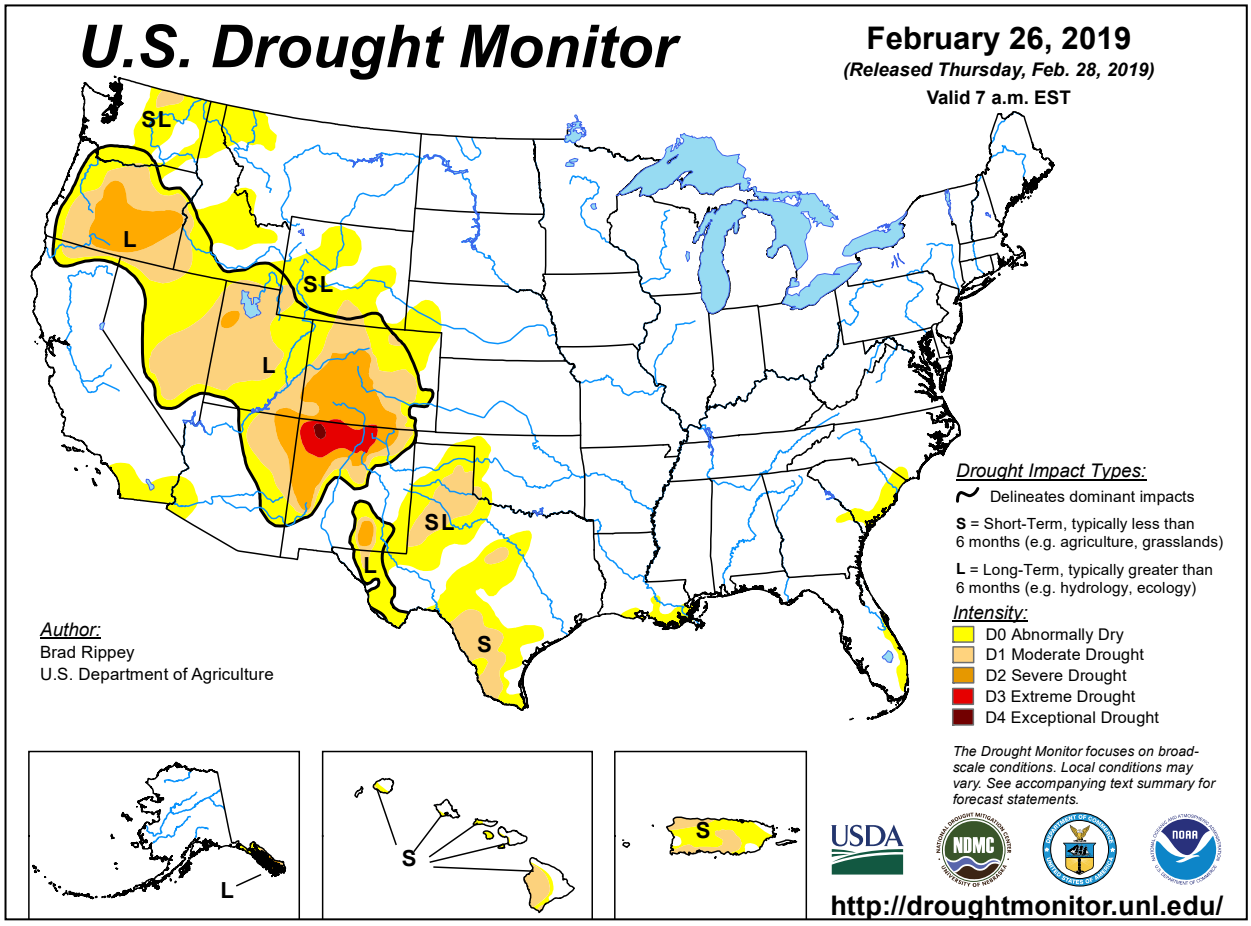
Lakes region and the **Northeast**. At the same time, heavy rain subsided across the **mid-South**, as showers mostly shifted into the **Gulf and Atlantic Coast States**. Nevertheless, lowland flooding lingered in the **lower Mississippi Valley** and environs, as water drained from creeks and streams into larger rivers. Farther north, bitterly cold conditions persisted across the **northern and central Plains** and the **upper Midwest**, holding weekly temperatures 10 to 35°F below normal and maintaining stressful conditions for livestock. Winter wheat, however, remained largely protected beneath a thick blanket of snow. Below-normal temperatures also prevailed in the **Northwest**, as well as **New England**, but warmer-than-normal weather covered much of the **Great Basin**, **Rio Grande Valley**, and **Southeast**. Weekly temperatures averaged as much as 10°F above normal in the **Southeast**. Elsewhere, drought continued to develop and expand across the **southern High Plains**, perpetuating concerns about the condition of rangeland, pastures, and winter wheat.

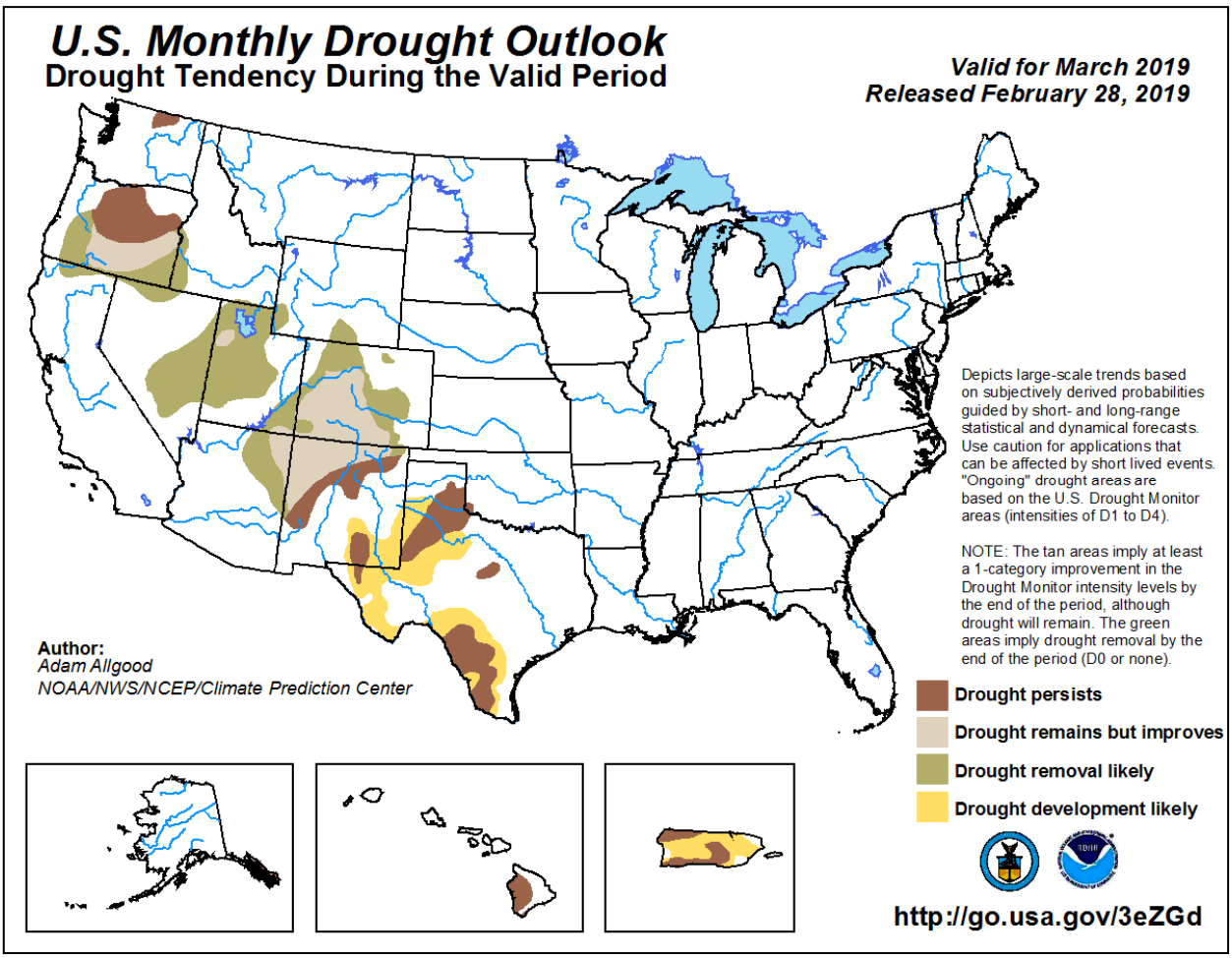


During the first 2 months of 2019, precipitation totaled less than one-tenth of an inch in **Texas** locations such as **Lubbock** (0.04 inch, or 3 percent of normal) and **Dalhart** (0.08 inch, or 9 percent). In contrast, heavy, late-February precipitation fell in **Oregon** and **northern California**. In **Oregon**, February 24 featured daily-record precipitation totals in **North Bend** (3.53 inches) and **Eugene** (1.92 inches). Impressively, **Eugene** received precipitation totaling 4.40 inches, including 18.8 inches of snow, during the last 7 days of February. The bulk of **Eugene's** snow, 18.5 inches, fell from February 24-26. **Bend, OR**, reported 12.5 inches of snow in a 24-hour period on February 24-25. Elsewhere in **Oregon**, **Prineville** netted 21.1 inches of snow from February 25-28. Farther south, record-setting rainfall totals in **California** for February 26 included 2.52 inches in downtown **Sacramento** and 1.16 inches in **Stockton**. Downtown **Sacramento** collected 4.13 inches of rain from February 25-27. Closer to the **northern California coast**, rainfall during the last 6 days of February included 8.44 inches in **Crescent City** and 7.03 inches in **Ukiah**. The **Russian River at Guerneville, CA**, crested 13.38 feet above flood stage on February 27. This marked the highest water level in **Guerneville** since January 1995, when the river crested 16.00 feet above flood stage. The record crest in **Guerneville**, 17.50 feet above flood stage, was set on February 18, 1986. Farther east, the week began in the midst of a heavy snowfall in the **upper Great Lakes region** and a high-wind event from the **Midwest into the Northeast**. On February 24, daily-record snowfall totals included 16.0 inches in **Marquette, MI**, and 11.8 inches in **Eau Claire, WI**. **Marquette** clocked a peak wind gust to 57 mph, but February 24 gusts from 60 to 75 mph were reported in dozens of other communities from the **western Corn Belt into the northern Mid-Atlantic States**. A gust to 74 mph occurred in **Niagara Falls, NY**. Several days later, another late-season snowfall occurred in the **Great Lakes and Northeastern States**. Record-setting snowfall totals for February 27 included 7.3 inches in **Syracuse, NY**, and 6.0 inches in **Houghton Lake, MI**. Farther south, scattered daily-record rainfall totals reached 2.09 inches (on February 27) in **New Orleans, LA**, and 1.43 inches (on February 26) in **Victoria, TX**. At week's end, precipitation rapidly spread eastward across the country, starting in **California**. Record-setting rainfall amounts for March 2 totaled 1.54 inches in **Santa Barbara** and 0.92 inch in **Modesto**. **Grand Junction, CO**, also reported a daily-record total (0.64 inch) for March 2, while **North Platte, NE**, measured a daily-record snowfall (6.0 inches).

In **South Dakota**, records were set in **Aberdeen** and **Sisseton** for the lowest February maximum temperature—22 and 25°F, respectively. In **Montana**, monthly average temperatures of -0.2°F in **Great Falls** and -5.9°F in **Havre** were the second-lowest February values on record, behind -5.2 and -12.8°F, respectively, in 1936. In stark contrast, spring-like temperatures continued across the **Southeast**, where **Florida** locations such as **Key West** (77.2°F) and **Gainesville** (68.1°F) completed a record-warm February. **Vero Beach, FL**, set a February record with a high of 90°F on February 24. Farther north, however, **Nebraska** locations such as **Grand Island** (-11°F) and **Omaha** (-7°F) logged daily-record lows for February 25. In the **upper Great Lakes region**, record-setting lows for February 26 dipped to -32°F in **International Falls, MN**, and -22°F in **Ashland, WI**. In the **Northwest**, sub-zero, daily-record lows included -8°F (on February 28) in **Redmond, OR**; -4°F (on March 1) in **Missoula, MT**; and -1°F (on March 1) in **Spokane, WA**. Starting on March 2, even colder air blasted across the **northern Plains**. In **Montana**, consecutive daily-record lows were set on March 2-3 in **Miles City** (-28 and -31°F) and **Turner** (-33 and 26°F).

Cold, dry weather persisted in **southeastern Alaska**, while weekly temperatures averaged 20 to 40°F above normal in many northern and western locations. On February 27-28, **Kotzebue** closed the month with consecutive daily-record highs (35 and 38°F, respectively). **Utqiagvik (Barrow)** also notched a record-setting high for February 28, reaching 34°F. In **western Alaska**, some precipitation accompanied the abnormally mild weather. **Nome** reported measurable snow each day from February 20-27, totaling 16.6 inches. In contrast, February precipitation totaled just 3.08 inches (28 percent of normal) in **Yakutat** and 1.83 inches (17 percent) in **Ketchikan**. Farther south, **Hawaii** experienced a second consecutive quiet week, following a spell of cold, stormy weather. All of the state's major airport observation sites reported near- or above-normal February rainfall, with totals ranging from 2.17 inches (109 percent of normal) in **Honolulu, Oahu**, to 11.24 inches (118 percent) at **Hilo**, on the **Big Island**.


U.S. Drought Monitor
February 26, 2019
(Released Thursday, Feb. 28, 2019)
Valid 7 a.m. EST
SL
L
SL
L
SL
L
S
Author:
Brad Rippey
U.S. Department of Agriculture
L
S
S
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 March 2019
Released February 28, 2019
Author:
Adam Allgood
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

National Weather Data for Selected Cities

Weather Data for the Week Ending March 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 MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	67	47	75	32	57	7	1.25	0.12	0.75	0.15	45	12.77	128	88	50	0	1	4	1
	HUNTSVILLE	63	44	73	34	53	6	1.26	-0.12	1.05	0.14	34	21.03	193	83	59	0	0	3	1
	MOBILE	73	56	78	41	64	8	1.27	-0.14	0.44	0.40	95	9.90	88	89	62	0	0	7	0
	MONTGOMERY	72	52	75	38	62	9	0.67	-0.79	0.30	0.29	67	7.11	65	89	55	0	0	3	0
AK	ANCHORAGE	29	7	34	4	18	-3	0.00	-0.18	0.00	0.00	0	1.70	116	88	80	0	7	0	0
	BARROW	24	7	34	-4	16	32	0.06	0.05	0.03	0.01	100	1.48	617	95	79	0	7	3	0
	FAIRBANKS	22	-9	25	-13	7	6	0.00	-0.06	0.00	0.00	0	0.65	69	79	74	0	7	0	0
	JUNEAU	42	19	47	11	30	-1	0.00	-0.96	0.00	0.00	0	9.73	107	87	76	0	7	0	0
	KODIAK	43	28	45	21	35	4	0.01	-1.24	0.01	0.00	0	8.02	56	89	82	0	6	1	0
	NOME	32	24	32	19	28	21	0.87	0.73	0.28	0.23	575	4.04	236	99	92	0	7	6	0
AZ	FLAGSTAFF	45	17	51	1	31	-2	0.40	-0.28	0.40	0.40	200	9.31	188	85	39	0	6	1	0
	PHOENIX	73	48	78	37	61	1	0.00	-0.23	0.00	0.00	0	2.54	152	70	44	0	0	0	0
	PRESCOTT	54	29	63	12	41	0	0.06	-0.44	0.06	0.06	40	4.39	122	80	33	0	3	1	0
	TUCSON	74	42	80	30	58	2	0.00	-0.22	0.00	0.00	0	3.12	162	73	36	0	1	0	0
AR	FORT SMITH	54	34	67	29	44	-3	0.02	-0.73	0.02	0.00	0	8.99	174	85	53	0	2	1	0
	LITTLE ROCK	56	37	65	31	47	-1	0.00	-0.88	0.00	0.00	0	10.20	142	87	49	0	1	0	0
CA	BAKERSFIELD	68	46	73	35	57	2	0.72	0.40	0.58	0.59	656	3.18	128	79	57	0	0	4	1
	FRESNO	66	49	69	38	58	5	0.76	0.23	0.73	0.73	487	6.23	141	81	61	0	0	2	1
	LOS ANGELES	63	51	65	45	57	-1	1.05	0.32	0.99	0.99	495	10.95	174	88	71	0	0	2	1
	REDDING	55	45	60	40	50	-1	2.60	1.30	0.72	0.68	184	16.16	131	85	72	0	0	5	3
	SACRAMENTO	57	47	63	42	52	-1	3.89	3.09	1.72	0.73	332	12.20	161	93	65	0	0	4	4
	SAN DIEGO	65	52	70	45	59	0	0.17	-0.34	0.17	0.17	113	6.42	144	81	64	0	0	1	0
	SAN FRANCISCO	57	49	59	44	53	0	2.14	1.23	0.96	0.96	369	12.78	147	84	72	0	0	3	2
	STOCKTON	61	48	67	42	54	1	1.97	1.39	0.73	0.73	429	7.64	143	84	71	0	0	4	3
CO	ALAMOSA	45	15	52	1	30	3	0.03	-0.03	0.03	0.03	150	1.57	327	87	49	0	7	1	0
	CO SPRINGS	49	19	66	14	34	0	0.25	0.12	0.23	0.25	625	1.21	181	91	33	0	7	2	0
	DENVER INTL	40	14	50	3	27	-7	0.19	0.06	0.18	0.18	450	1.66	332	89	65	0	7	2	0
	GRAND JUNCTION	48	27	54	18	38	0	0.76	0.61	0.64	0.68	1360	2.12	184	85	58	0	5	3	1
	PUEBLO	51	18	68	13	34	-3	0.17	0.08	0.13	0.13	433	0.85	137	89	68	0	7	2	0
CT	BRIDGEPORT	38	26	46	20	32	-2	1.35	0.60	0.70	0.61	277	8.20	119	73	47	0	6	4	2
	HARTFORD	36	23	45	14	29	-3	0.88	0.15	0.67	0.13	62	9.19	131	74	47	0	7	5	1
DC	WASHINGTON	49	36	63	32	43	2	1.63	0.91	0.94	0.67	305	7.55	125	71	40	0	1	4	2
DE	WILMINGTON	42	30	49	24	36	-1	1.07	0.31	0.54	0.68	296	8.12	126	81	41	0	5	3	1
FL	DAYTONA BEACH	78	60	87	55	69	7	0.13	-0.60	0.08	0.00	0	4.80	79	99	58	0	0	2	0
	JACKSONVILLE	74	55	83	43	64	6	1.61	0.84	0.78	0.77	350	6.98	99	95	64	0	0	6	2
	KEY WEST	83	74	85	71	79	7	0.06	-0.27	0.06	0.00	0	3.04	80	85	66	0	0	1	0
	MIAMI	84	70	85	67	77	7	0.18	-0.31	0.18	0.00	0	3.53	87	97	62	0	0	1	0
	ORLANDO	82	62	88	59	72	8	0.15	-0.50	0.12	0.00	0	5.27	106	91	52	0	0	2	0
	PENSACOLA	74	58	79	47	66	9	1.98	0.72	0.89	0.10	27	5.22	50	86	55	0	0	5	2
	TALLAHASSEE	73	56	79	48	65	8	2.24	0.95	1.01	1.92	505	6.56	63	86	71	0	0	5	2
	TAMPA	79	64	83	62	72	8	2.39	1.70	2.32	0.00	0	7.17	139	89	59	0	0	3	1
	WEST PALM BEACH	82	67	88	62	74	6	2.09	1.52	2.08	0.00	0	11.31	175	89	55	0	0	2	1
GA	ATHENS	67	48	69	39	57	9	0.62	-0.51	0.34	0.04	12	9.02	96	89	66	0	0	4	0
	ATLANTA	66	51	69	40	58	9	0.64	-0.56	0.32	0.00	0	10.38	103	77	60	0	0	3	0
	AUGUSTA	72	47	76	34	59	8	0.66	-0.37	0.36	0.36	120	5.91	66	95	62	0	0	3	0
	COLUMBUS	71	52	74	35	61	8	1.20	-0.01	0.45	0.37	103	7.54	78	87	49	0	0	4	0
	MACON	70	47	75	30	59	8	0.76	-0.37	0.37	0.37	116	7.93	80	96	53	0	1	3	0
	SAVANNAH	74	52	77	42	63	8	0.16	-0.51	0.12	0.12	60	3.57	50	95	55	0	0	3	0
HI	HILO	77	63	79	59	70	-2	1.62	-0.79	0.63	0.00	0	11.55	60	81	67	0	0	4	2
	HONOLULU	80	64	82	61	72	-1	0.24	-0.31	0.18	0.00	0	2.61	50	78	63	0	0	3	0
	KAHULUI	80	63	83	59	71	-1	0.17	-0.33	0.16	0.00	0	7.86	126	76	62	0	0	2	0
	LIHUE	77	63	80	60	70	-2	0.00	-0.78	0.00	0.00	0	3.55	44	69	62	0	0	0	0
ID	BOISE	47	30	51	24	39	-1	1.28	1.00	0.42	0.00	0	4.69	180	89	70	0	5	5	0
	LEWISTON	31	21	32	16	26	-15	0.80	0.58	0.30	0.00	0	4.00	186	85	72	0	7	4	0
	POCATELLO	42	31	49	23	37	4	0.82	0.55	0.32	0.00	0	3.65	164	83	65	0	3	5	0
IL	CHICAGO/O'HARE	31	15	53	6	23	-8	0.03	-0.38	0.02	0.00	0	4.90	140	78	64	0	7	2	0
	MOLINE	32	14	44	6	23	-8	0.00	-0.43	0.00	0.00	0	6.66	207	69	57	0	7	0	0
	PEORIA	35	17	46	10	26	-6	0.00	-0.49	0.00	0.00	0	5.63	170	76	53	0	7	0	0
	ROCKFORD	27	12	41	4	20	-9	0.04	-0.30	0.03	0.01	10	6.32	222	74	62	0	7	2	0
	SPRINGFIELD	38	20	52	15	29	-5	0.01	-0.54	0.01	0.00	0	5.06	141	86	54	0	7	1	0
IN	EVANSVILLE	48	30	59	24	39	0	0.09	-0.76	0.09	0.00	0	11.41	182	86	67	0	4	1	0
	FORT WAYNE	38	21	55	15	30	-1	0.29	-0.21	0.29	0.00	0	4.56	110	77	58	0	7	1	0
	INDIANAPOLIS	43	26	58	17	34	-1	0.22	-0.43	0.20	0.00	0	7.52	148	76	50	0	7	2	0
	SOUTH BEND	32	18	50	12	25	-6	0.15	-0.35	0.15	0.00	0	4.89	111	80	61	0	7	1	0
IA	BURLINGTON	32	14	42	7	23	-9	0.01	-0.47	0.01	0.00	0	4.13	138	76	52	0	7	1	0
	CEDAR RAPIDS	22	7	32	0	15	-14	0.00	-0.30	0.00	0.00	0	3.04	136	92	67	0	7	0	0
	DES MOINES	21	6	31	0	13	-18	0.02	-0.29	0.02	0.00	0	3.83	166	82	64	0	7	1	0
	DUBUQUE	22	7	34	-2	14	-13	0.03	-0.36	0.02	0.00	0	6.08	216	80	64	0	7	2	0
	SIOUX CITY	15	2	25	0	9	-20	0.03	-0.20	0.02	0.00	0	1.44	113	80	67	0	7	2	0
	WATERLOO	19	4	31	-1	11	-16	0.08	-0.21	0.07	0.00	0	4.19	212	82	66	0	7	2	0
KS	CONCORDIA	21	6	34	2	13	-23	0.00	-0.31	0.00	0.00	0	2.37	158	79	70	0	7	0	0
	DODGE CITY	33	11	52	6	22	-17	0.05	-0.19	0.05	0.05	71	1.54	114	84	57	0	7	1	0
	GOODLAND	31	8	51	3	19	-16	0.13	-0.04	0.13	0.13	217	0.85	91	92	73	0	7	1	0
	TOPEKA	32	16	42	13	24	-13	0.00	-0.39	0.00	0.00	0	3.50	156	76	58	0	7	0	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending March 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 MAR 1	PCT. NORMAL SINCE MAR 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	38	22	60	15	30	-10	0.00	-0.40	0.00	0.00	0	2.04	103	80	57	0	7	0	0
KY	JACKSON	52	33	69	28	43	2	0.31	-0.69	0.18	0.02	7	13.15	175	82	51	0	4	3	0
	LEXINGTON	50	31	66	25	41	2	0.19	-0.74	0.11	0.01	4	11.75	171	75	59	0	4	3	0
	LOUISVILLE	52	33	69	26	42	1	0.13	-0.78	0.13	0.00	0	12.46	183	74	48	0	2	1	0
	PADUCAH	50	32	63	27	41	0	0.05	-0.93	0.05	0.00	0	15.21	198	80	63	0	4	1	0
LA	BATON ROUGE	71	55	76	44	63	7	0.84	-0.29	0.43	0.01	3	6.11	53	90	56	0	0	5	0
	LAKE CHARLES	69	53	74	45	61	4	0.78	0.09	0.26	0.00	0	7.34	82	88	63	0	0	4	0
	NEW ORLEANS	72	60	77	52	66	8	3.35	2.14	2.21	0.04	12	10.59	91	84	66	0	0	5	2
	SHREVEPORT	59	42	63	34	51	-3	0.12	-0.88	0.08	0.03	11	7.49	82	95	66	0	0	3	0
ME	CARIBOU	22	-3	31	-11	10	-7	0.98	0.48	0.74	0.00	0	8.53	165	75	44	0	7	2	1
	PORTLAND	30	14	40	4	22	-6	1.14	0.37	1.05	0.03	14	9.07	122	78	42	0	7	4	1
MD	BALTIMORE	46	32	55	27	39	1	1.02	0.20	0.51	0.56	233	7.35	109	73	53	0	3	3	1
MA	BOSTON	36	24	47	13	30	-4	0.86	0.06	0.48	0.18	78	7.56	101	73	37	0	6	4	0
	WORCESTER	30	17	39	5	24	-5	0.87	0.08	0.48	0.17	74	8.73	118	84	46	0	7	4	0
MI	ALPENA	27	5	42	-8	16	-6	0.80	0.45	0.32	0.18	164	5.28	164	88	58	0	7	4	0
	GRAND RAPIDS	30	17	46	14	24	-4	0.33	-0.04	0.15	0.04	36	6.20	169	80	58	0	7	5	0
	HOUGHTON LAKE	26	2	40	-11	14	-9	0.66	0.35	0.26	0.14	156	4.45	151	85	65	0	7	4	0
	LANSING	29	14	47	9	22	-5	0.59	0.25	0.30	0.02	20	4.61	146	86	71	0	7	4	0
	MUSKEGON	29	17	46	12	23	-5	0.38	0.01	0.16	0.05	45	7.05	180	81	62	0	7	4	0
	TRAVERSE CITY	27	8	43	-2	18	-6	0.59	0.26	0.45	0.06	67	4.83	99	88	63	0	7	3	0
MN	DULUTH	16	-5	29	-14	6	-13	0.32	0.12	0.13	0.13	217	3.02	150	74	57	0	7	4	0
	INT'L FALLS	13	-16	25	-32	-1	-17	0.04	-0.10	0.02	0.00	0	2.53	166	87	49	0	7	3	0
	MINNEAPOLIS	16	-1	29	-5	8	-16	0.62	0.41	0.28	0.28	400	3.33	175	78	60	0	7	4	0
	ROCHESTER	14	-4	28	-10	5	-18	0.20	0.00	0.16	0.16	267	4.19	239	89	77	0	7	4	0
	ST. CLOUD	13	-11	27	-16	1	-20	0.36	0.21	0.21	0.21	420	2.58	184	88	57	0	7	3	0
MS	JACKSON	66	48	80	37	57	5	0.35	-0.74	0.23	0.09	28	9.60	92	86	52	0	0	4	0
	MERIDIAN	70	48	81	34	59	6	0.76	-0.65	0.56	0.08	20	12.22	105	86	53	0	0	3	1
	TUPELO	61	39	76	29	50	2	0.18	-1.13	0.11	0.05	13	21.17	207	86	53	0	1	4	0
MO	COLUMBIA	39	22	54	17	31	-6	0.03	-0.58	0.03	0.00	0	6.59	160	80	57	0	7	1	0
	KANSAS CITY	32	16	37	13	24	-13	0.01	-0.40	0.01	0.00	0	4.22	163	81	61	0	7	1	0
	SAINT LOUIS	43	25	54	19	34	-5	0.04	-0.61	0.04	0.00	0	6.52	141	74	56	0	7	1	0
	SPRINGFIELD	46	27	64	23	37	-3	0.00	-0.63	0.00	0.00	0	5.77	126	78	61	0	6	0	0
MT	BILLINGS	8	-4	23	-12	2	-31	1.18	1.03	0.29	0.08	160	3.05	213	86	73	0	7	7	0
	BUTTE	13	-4	29	-15	5	-20	0.56	0.43	0.17	0.01	25	1.22	117	81	65	0	7	6	0
	CUT BANK	4	-15	20	-28	-5	-31	0.04	-0.02	0.03	0.03	150	0.51	74	86	64	0	7	2	0
	GLASGOW	5	-14	20	-25	-5	-29	0.17	0.11	0.15	0.01	50	2.25	357	69	57	0	7	3	0
	GREAT FALLS	3	-13	18	-25	-5	-34	0.68	0.53	0.37	0.08	160	3.64	294	95	71	0	7	7	0
	HAVRE	4	-16	20	-31	-6	-32	0.27	0.17	0.10	0.09	300	1.98	230	82	73	0	7	3	0
	MISSOULA	18	5	26	-4	11	-21	0.72	0.53	0.27	0.03	50	2.70	143	78	64	0	7	6	0
NE	GRAND ISLAND	18	2	32	-11	10	-22	0.04	-0.22	0.04	0.04	50	0.98	75	77	70	0	7	1	0
	LINCOLN	19	2	31	-7	11	-21	0.00	-0.26	0.00	0.00	0	2.20	155	78	64	0	7	0	0
	NORFOLK	15	3	28	-5	9	-21	0.05	-0.20	0.03	0.02	25	1.21	86	82	70	0	7	2	0
	NORTH PLATTE	21	3	34	-1	12	-21	0.24	0.07	0.24	0.24	400	1.00	104	81	63	0	7	1	0
	OMAHA	20	3	32	-7	11	-21	0.07	-0.20	0.07	0.07	78	2.99	180	77	58	0	7	1	0
	SCOTTSBLUFF	34	8	47	0	21	-12	0.18	0.02	0.17	0.17	340	0.84	72	90	63	0	7	2	0
	VALENTINE	17	0	26	-8	9	-21	0.26	0.11	0.23	0.02	40	1.26	152	78	65	0	7	3	0
NV	ELY	45	27	51	16	36	4	0.25	0.05	0.25	0.25	417	2.68	173	73	56	0	6	1	0
	LAS VEGAS	68	47	74	35	57	3	0.04	-0.13	0.04	0.04	80	3.14	236	56	33	0	0	1	0
	RENO	54	38	58	33	46	5	0.22	-0.03	0.12	0.12	171	6.89	315	63	43	0	0	2	0
	WINNEMUCCA	***	***	***	***	***	***	***	***	***	0.23	460	***	***	***	***	***	***	***	***
NH	CONCORD	30	12	37	1	21	-5	0.49	-0.09	0.37	0.00	0	6.54	119	79	40	0	7	3	0
NJ	NEWARK	39	28	47	24	34	-2	1.38	0.62	0.80	0.56	243	8.25	115	70	45	0	6	4	1
NM	ALBUQUERQUE	61	35	65	21	48	4	0.00	-0.11	0.00	0.00	0	1.17	122	56	24	0	3	0	0
NY	ALBANY	32	18	42	8	25	-3	0.48	-0.08	0.26	0.00	0	6.98	145	72	44	0	6	3	0
	BINGHAMTON	29	17	42	10	23	-3	0.35	-0.26	0.21	0.03	18	6.27	120	85	65	0	7	4	0
	BUFFALO	30	17	50	10	23	-5	0.81	0.23	0.45	0.09	53	9.06	158	86	61	0	7	5	0
	ROCHESTER	32	18	54	10	25	-3	0.78	0.28	0.49	0.08	57	5.23	116	77	63	0	7	4	0
	SYRACUSE	30	15	51	5	23	-4	0.62	0.10	0.42	0.03	20	6.15	126	88	56	0	7	5	0
NC	ASHEVILLE	61	41	65	32	51	10	0.94	-0.04	0.45	0.45	155	12.64	155	85	51	0	2	4	0
	CHARLOTTE	64	40	71	34	52	4	1.67	0.73	1.02	1.02	364	11.55	148	86	47	0	0	4	1
	GREENSBORO	58	36	66	31	47	3	0.93	0.13	0.78	0.78	325	10.69	155	87	46	0	1	4	1
	HATTERAS	65	49	73	43	57	9	0.08	-0.89	0.07	0.08	28	10.09	100	85	51	0	0	2	0
	RALEIGH	58	37	65	30	48	3	1.01	0.12	0.65	0.65	250	8.41	109	93	71	0	1	3	1
	WILMINGTON	69	44	74	35	57	7	0.44	-0.49	0.44	0.44	163	4.17	49	90	40	0	0	1	0
ND	BISMARCK	10	-7	24	-14	1	-22	0.30	0.17	0.16	0.13	325	1.98	198	76	60	0	7	3	0
	DICKINSON	7	-7	20	-19	0	-25	0.00	-0.06	0.00	0.00	0	0.70	85	76	59	0	7	0	0
	FARGO	7	-13	17	-21	-3	-22	0.23	0.07	0.12	0.12	240	2.47	176	86	69	0	7	2	0
	GRAND FORKS	7	-16	19	-26	-4	-22	0.09	-0.05	0.05	0.04	100	1.97	152	84	63	0	7	2	0
	JAMESTOWN	6	-10	17	-18	-2	-22	0.04	-0.08	0.03	0.01	25	0.83	70	86	65	0	7	2	0
	WILLISTON	5	-13	19	-24	-4	-26	0.10	0.00	0.10	0.00	0	1.96	204	74	64	0	7	1	0
OH	AKRON-CANTON	39	21	56	15	30	-1	0.13	-0.48	0.13	0.00	0	7.43	150	71	50	0	7	1	0
	CINCINNATI	47	29	61	23	38	1	0.10	-0.64	0.08	0.02	9	11.37	193	73	49	0	6	2	0
	CLEVELAND	37	21	57	18	29	-2	0.06	-0.50	0.05	0.00	0	6.67	135	80	50	0	7	2	0
	COLUMBUS	43	25	56	21	34	-1	0.16	-0.40	0.16	0.00	0	8.57	175	74	51	0	7	1	0
	DAYTON	44	26	59	20	35	1	0.04	-0.54	0.04	0.00	0	10.34	204	77	48	0	7	1	0
	MANSFIELD	38	19	55	16	28	-2	0.07	-0.48	0.07	0.00	0	7.07	143	83	51	0	7	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending March 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 MAR 1	PCT. NORMAL SINCE MAR 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	36	20	56	16	28	-2	0.37	-0.10	0.36	0.00	0	4.38	111	73	53	0	7	2	0
	YOUNGSTOWN	37	22	55	16	30	0	0.16	-0.37	0.14	0.00	0	7.48	165	78	58	0	7	3	0
OK	OKLAHOMA CITY	42	25	63	19	33	-12	0.00	-0.54	0.00	0.00	0	2.55	85	87	64	0	7	0	0
	TULSA	46	28	63	23	37	-8	0.02	-0.61	0.02	0.00	0	5.09	136	83	63	0	6	1	0
OR	ASTORIA	47	31	54	27	39	-6	0.20	-1.63	0.11	0.00	0	12.60	70	92	75	0	4	4	0
	BURNS	39	25	47	18	32	-1	0.64	0.36	0.30	0.00	0	4.25	179	86	70	0	7	4	0
	EUGENE	41	30	46	25	35	-9	3.73	2.26	1.81	0.00	0	12.20	85	92	84	0	5	5	2
	MEDFORD	46	32	55	29	39	-6	2.22	1.74	0.91	0.00	0	8.02	171	97	71	0	5	3	3
	PENDLETON	27	17	33	10	22	-19	1.06	0.78	0.36	0.00	0	4.87	177	92	84	0	7	5	0
	PORTLAND	42	30	49	26	36	-9	0.41	-0.55	0.37	0.02	7	6.93	73	79	61	0	6	4	0
	SALEM	44	31	53	26	38	-6	1.30	0.14	0.87	0.01	3	10.04	89	88	78	0	5	6	1
PA	ALLENTOWN	40	29	47	24	34	1	0.89	0.20	0.39	0.47	235	8.38	130	65	44	0	6	4	0
	ERIE	32	20	61	12	26	-5	0.21	-0.37	0.19	0.01	6	6.51	131	80	69	0	6	3	0
	MIDDLETOWN	41	30	49	26	35	1	1.08	0.34	0.46	0.66	314	7.54	126	73	45	0	6	3	0
	PHILADELPHIA	41	31	50	25	36	-1	1.06	0.34	0.45	0.70	333	7.99	123	69	47	0	5	3	0
	PITTSBURGH	42	25	58	21	33	0	0.35	-0.26	0.26	0.02	11	7.34	140	82	48	0	7	3	0
	WILKES-BARRE	36	24	44	18	30	-2	0.50	0.00	0.19	0.23	164	6.23	133	81	49	0	6	4	0
	WILLIAMSPORT	37	25	44	20	31	-1	0.36	-0.27	0.24	0.09	50	7.37	131	70	51	0	6	4	0
RI	PROVIDENCE	35	23	47	15	29	-4	1.45	0.61	0.87	0.33	138	10.76	133	70	50	0	6	4	1
SC	CHARLESTON	73	50	77	40	62	9	0.02	-0.75	0.01	0.00	0	2.37	32	96	44	0	0	2	0
	COLUMBIA	69	46	74	32	57	7	0.93	-0.02	0.82	0.82	293	4.77	54	97	63	0	1	3	1
	FLORENCE	69	46	75	36	58	7	0.93	0.14	0.53	0.53	230	5.06	69	93	44	0	0	4	1
	GREENVILLE	64	42	70	31	53	6	0.96	-0.21	0.40	0.30	86	12.55	139	85	53	0	1	4	0
SD	ABERDEEN	8	-8	20	-19	0	-23	0.29	0.14	0.12	0.13	260	2.58	255	80	71	0	7	5	0
	HURON	10	-8	18	-17	1	-24	0.41	0.22	0.27	0.27	450	2.23	201	83	70	0	7	4	0
	RAPID CITY	13	-1	23	-12	6	-24	0.22	0.08	0.10	0.10	250	1.49	171	81	65	0	7	3	0
	SIOUX FALLS	11	-2	19	-6	5	-20	0.32	0.14	0.26	0.27	450	2.33	216	82	70	0	7	4	0
TN	BRISTOL	59	37	66	27	48	7	0.98	0.09	0.63	0.63	242	15.39	214	93	47	0	2	3	1
	CHATTANOOGA	63	44	72	34	54	8	1.16	-0.12	0.45	0.38	100	18.70	176	80	50	0	0	3	0
	KNOXVILLE	59	41	69	32	50	6	0.96	-0.12	0.45	0.45	141	18.47	208	79	46	0	1	3	0
	MEMPHIS	57	37	69	34	47	-1	0.03	-1.11	0.03	0.03	9	13.55	153	83	49	0	0	1	0
	NASHVILLE	57	37	74	31	47	3	0.01	-1.00	0.01	0.01	3	16.35	205	76	44	0	1	1	0
TX	ABILENE	60	35	75	27	48	-3	0.00	-0.30	0.00	0.00	0	1.10	50	87	65	0	3	0	0
	AMARILLO	57	21	76	10	39	-4	0.00	-0.16	0.00	0.00	0	0.34	28	78	32	0	7	0	0
	AUSTIN	63	45	79	36	54	-3	0.09	-0.46	0.04	0.01	6	3.93	97	79	66	0	0	3	0
	BEAUMONT	69	53	73	48	61	3	0.93	0.21	0.35	0.00	0	8.52	92	81	67	0	0	4	0
	BROWNSVILLE	81	66	87	57	74	9	0.03	-0.17	0.03	0.00	0	1.91	74	97	71	0	0	1	0
	CORPUS CHRISTI	72	54	80	46	63	1	0.33	-0.12	0.30	0.00	0	2.43	68	89	77	0	0	3	0
	DEL RIO	71	51	77	37	61	2	0.03	-0.20	0.03	0.00	0	0.26	16	91	74	0	0	1	0
	EL PASO	74	41	79	24	57	4	0.00	-0.08	0.00	0.00	0	0.66	77	35	10	0	2	0	0
	FORT WORTH	53	36	65	29	45	-7	0.08	-0.64	0.07	0.07	33	2.95	66	87	60	0	3	2	0
	GALVESTON	67	56	71	51	61	1	0.79	0.24	0.45	0.00	0	6.91	101	94	73	0	0	4	0
	HOUSTON	66	50	73	45	58	0	0.81	0.09	0.56	0.05	25	5.90	86	89	77	0	0	5	1
	LUBBOCK	62	27	78	18	45	-1	0.00	-0.17	0.00	0.00	0	0.06	5	83	54	0	6	0	0
	MIDLAND	71	36	83	24	53	2	0.00	-0.14	0.00	0.00	0	0.18	16	83	47	0	2	0	0
	SAN ANGELO	67	37	81	23	52	0	0.00	-0.29	0.00	0.00	0	0.61	29	86	64	0	1	0	0
	SAN ANTONIO	67	51	79	46	59	2	0.05	-0.39	0.03	0.01	8	2.14	60	89	64	0	0	3	0
	VICTORIA	67	51	77	43	59	0	1.56	1.06	1.43	0.01	7	4.81	104	91	77	0	0	4	1
	WACO	56	38	72	32	47	-7	0.04	-0.62	0.03	0.03	16	5.62	124	89	68	0	1	2	0
	WICHITA FALLS	51	28	66	22	40	-9	0.00	-0.46	0.00	0.00	0	1.89	67	92	68	0	6	0	0
UT	SALT LAKE CITY	51	37	57	27	44	6	0.35	-0.01	0.29	0.29	264	3.30	117	68	39	0	2	3	0
VT	BURLINGTON	28	11	42	-1	19	-4	0.41	0.02	0.36	0.00	0	5.69	142	73	42	0	7	3	0
VA	LYNCHBURG	55	34	66	26	44	4	0.95	0.15	0.63	0.63	263	8.30	121	79	45	0	1	3	1
	NORFOLK	53	41	66	34	47	3	0.68	-0.17	0.60	0.60	240	9.10	121	86	55	0	0	2	1
	RICHMOND	54	36	63	30	45	3	1.01	0.19	0.87	0.87	363	7.48	110	79	58	0	1	3	1
	ROANOKE	56	35	67	30	46	5	1.07	0.27	0.67	0.67	291	9.20	141	75	53	0	1	3	1
	WASH/DULLES	47	31	59	24	39	2	1.25	0.52	0.66	0.71	338	8.17	135	78	54	0	4	4	2
WA	OLYMPIA	46	26	51	21	36	-5	0.28	-1.10	0.28	0.00	0	10.03	71	91	65	0	6	1	0
	QUILLAYUTE	45	27	50	22	36	-7	0.16	-2.78	0.06	0.00	0	21.29	79	79	60	0	7	3	0
	SEATTLE-TACOMA	46	33	51	30	40	-4	0.01	-0.93	0.01	0.00	0	8.44	88	70	54	0	3	1	0
	SPOKANE	26	9	31	-1	18	-17	0.31	-0.05	0.16	0.00	0	4.17	122	82	55	0	7	2	0
	YAKIMA	30	17	33	11	24	-14	0.59	0.42	0.44	0.03	60	3.88	192	87	64	0	7	3	0
WV	BECKLEY	51	31	63	24	41	4	0.97	0.19	0.56	0.56	243	10.48	163	78	58	0	3	3	1
	CHARLESTON	51	31	67	23	41	1	1.17	0.32	0.76	0.18	72	9.34	140	92	48	0	3	4	1
	ELKINS	51	29	63	19	40	6	1.47	0.63	0.80	0.41	171	7.75	113	80	49	0	4	3	1
	HUNTINGTON	52	31	67	25	42	2	0.59	-0.24	0.33	0.03	13	9.20	141	83	46	0	5	3	0
WI	EAU CLAIRE	16	-8	30	-16	4	-19	0.19	-0.01	0.15	0.03	50	2.69	142	89	55	0	7	3	0
	GREEN BAY	22	4	35	-7	13	-11	0.56	0.30	0.20	0.19	238	4.82	210	77	53	0	7	5	0
	LA CROSSE	20	2	32	-7	11	-16	0.22	0.00	0.14	0.14	200	4.57	203	86	55	0	7	4	0
	MADISON	22	7	36	0	15	-12	0.21	-0.10	0.07	0.06	67	5.57	213	79	60	0	7	5	0
	MILWAUKEE	27	14	42	5	21	-8	0.12	-0.27	0.06	0.06	55	5.82	161	70	56	0	7	4	0
WY	CASPER	37	5	48	-3	21	-9	0.03	-0.14	0.02	0.01	20	1.00	79	79	64	0	7	2	0
	CHEYENNE	44	15	59	-4	30	-1	0.31	0.17	0.26	0.31	775	1.14	123	87	47	0	7	2	0
	LANDER	38	12	49	3	25	-4	0.06	-0.10	0.06	0.06	120	1.32	119	82	42	0	7	1	0
	SHERIDAN	15	0	30	-6	7	-23	0.20	0.06	0.10	0.10	250	1.24	90	81	63	0	7	3	0

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

International Weather and Crop Summary

February 24 - March 2, 2019

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

EUROPE: Warm, mostly dry weather promoted winter crop development in central growing areas.

MIDDLE EAST: Rain and mountain snow returned, maintaining abundant to excessive moisture supplies for winter grains.

NORTHWESTERN AFRICA: Intensifying drought in western portions of the region adversely impacted reproductive winter grains.

SOUTHEAST ASIA: Late-season showers in Indonesia maintained ample moisture for main-season rice.

AUSTRALIA: Persistent dryness favored early harvesting of drought-reduced summer crops.

SOUTH AFRICA: Unseasonable warmth and dryness limited moisture for immature corn.

ARGENTINA: Sunny weather aided development of corn, soybeans, and cotton.

BRAZIL: Widespread, locally heavy showers continued throughout most major summer crop areas.

February 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	18	4	23	1	11	0.1	19	-48
	BATNA	13	-1	21	-4	6	-0.1	16	-7
ARGENT	IGUAZU	32	20	38	16	26	0.6	143	-59
	FORMOSA	33	21	41	14	27	0.4	105	-25
	CERES	30	19	39	13	25	0.3	55	-81
	CORDOBA	29	16	37	11	22	0.1	40	-88
	RIO CUARTO	28	17	35	10	22	0.3	21	-82
	ROSARIO	29	18	37	10	23	0.3	106	-20
	BUENOS AIRES	29	17	36	7	23	0.5	39	-60
	SANTA ROSA	30	14	38	6	22	0.2	43	-35
	TRES ARROYOS	27	14	37	6	21	0.2	48	-34
AUSTRA	DARWIN	32	26	34	23	29	1.4	75	-263
	BRISBANE	29	22	30	19	25	0.6	74	-97
	PERTH	32	17	39	13	25	-0.1	0	-18
	CEDUNA	28	15	40	9	21	-0.5	0	-11
	ADELAIDE	27	17	36	12	22	0	6	-35
	MELBOURNE	26	14	39	8	20	0.2	16	-28
	WAGGA	32	17	40	8	24	0.6	16	-24
	CANBERRA	29	13	36	6	21	0.9	43	-13
AUSTRI	VIENNA	9	0	18	-7	5	3.7	17	-17
	INNSBRUCK	9	-3	21	-9	3	2.5	27	-16
BAHAMA	NASSAU	28	21	31	17	25	3.2	67	24
BARBAD	BRIDGETOWN	29	24	30	22	26	0.6	22	-20
BELARU	MINSK	2	-2	6	-14	0	4.4	16	-18
BERMUD	ST GEORGES	20	16	23	13	18	0.1	124	13
BOLIVI	LA PAZ	15	4	19	2	10	0.8	105	3
BRAZIL	FORTALEZA	30	25	31	24	28	-0.2	269	56
	RECIFE	30	26	31	24	28	-1.4	13	-89
	CAMPO GRANDE	31	22	36	18	26	0.7	179	12
	FRANCA	28	20	34	18	24	0.8	270	42
	RIO DE JANEIRO	32	25	38	21	28	0.3	134	10
	LONDRINA	32	21	38	18	26	2.2	188	3
	SANTA MARIA	30	19	37	13	25	-0.1	83	-48
	TORRES	29	21	40	17	25	-1.5	160	7
BULGAR	SOFIA	8	-1	16	-13	3	1.6	16	-18
BURKIN	OUAGADOUGOU	35	22	38	19	28	0.3	0	-1
CANADA	LETHBRIDGE	-15	-26	9	-36	-20	*****	12	******
	REGINA	-18	-29	-7	-42	-24	*****	13	******
	WINNIPEG	-14	-22	-6	-30	-18	*****	15	******
	TORONTO	0	-8	13	-19	-4	1.1	76	35
	MONTREAL	-4	-13	6	-21	-9	-0.2	92	32
	PRINCE ALBERT	-18	-31	-4	-45	-25	-10.2	17	5
	CALGARY	-13	-23	1	-29	-18	-12.4	29	20
	VANCOUVER	4	-3	9	-9	0	-4.4	75	-46
CANARY	LAS PALMAS	22	16	27	14	19	0.8	7	-13
CHILE	SANTIAGO	32	15	37	11	23	3.4	0	-5
CHINA	HARBIN	-3	-15	11	-27	-9	3.5	0	-5
	HAMI	4	-12	12	-18	-4	-0.3	0	-1
	BEIJING	5	-6	14	-10	-1	-0.4	2	-3
	TIENTSIN	5	-5	14	-10	0	0.1	3	-1
	LHASA	10	-3	15	-9	3	1.8	0	-1
	KUNMING	21	5	25	1	13	3	6	-11
	CHENGCHOW	7	-1	15	-6	3	-0.2	13	1
	YEHCHANG	7	2	16	-2	5	-2.3	14	-17
	HANKOW	7	2	15	-2	4	-2.3	73	14
	CHUNGKING	14	9	20	6	12	1.6	7	-13
	CHIHKIANG	8	4	26	0	6	-0.9	40	-10
	WU HU	7	2	19	-2	5	-0.3	144	83
	SHANGHAI	9	4	17	-1	6	0.2	156	95
	NANCHANG	8	5	16	1	6	-0.8	233	132
	TAIPEI	22	17	31	14	19	2.9	78	-126
	CANTON	22	16	27	9	19	4.3	169	101
	NANNING	18	12	29	7	15	0.8	63	20
COLOMB	BOGOTA	21	9	25	5	15	1.9	88	49
COTE D	ABIDJAN	33	27	36	22	30	1.8	33	-8
CUBA	CAMAGUEY	30	19	32	15	25	2	62	24
CYPRUS	LARNACA	18	9	20	6	14	2.1	151	108
CZECHR	PRAGUE	7	-1	16	-11	3	3.4	13	-6
DENMAR	COPENHAGEN	7	2	14	-4	5	3.9	35	11
EGYPT	CAIRO	20	12	31	10	16	0.8	7	4

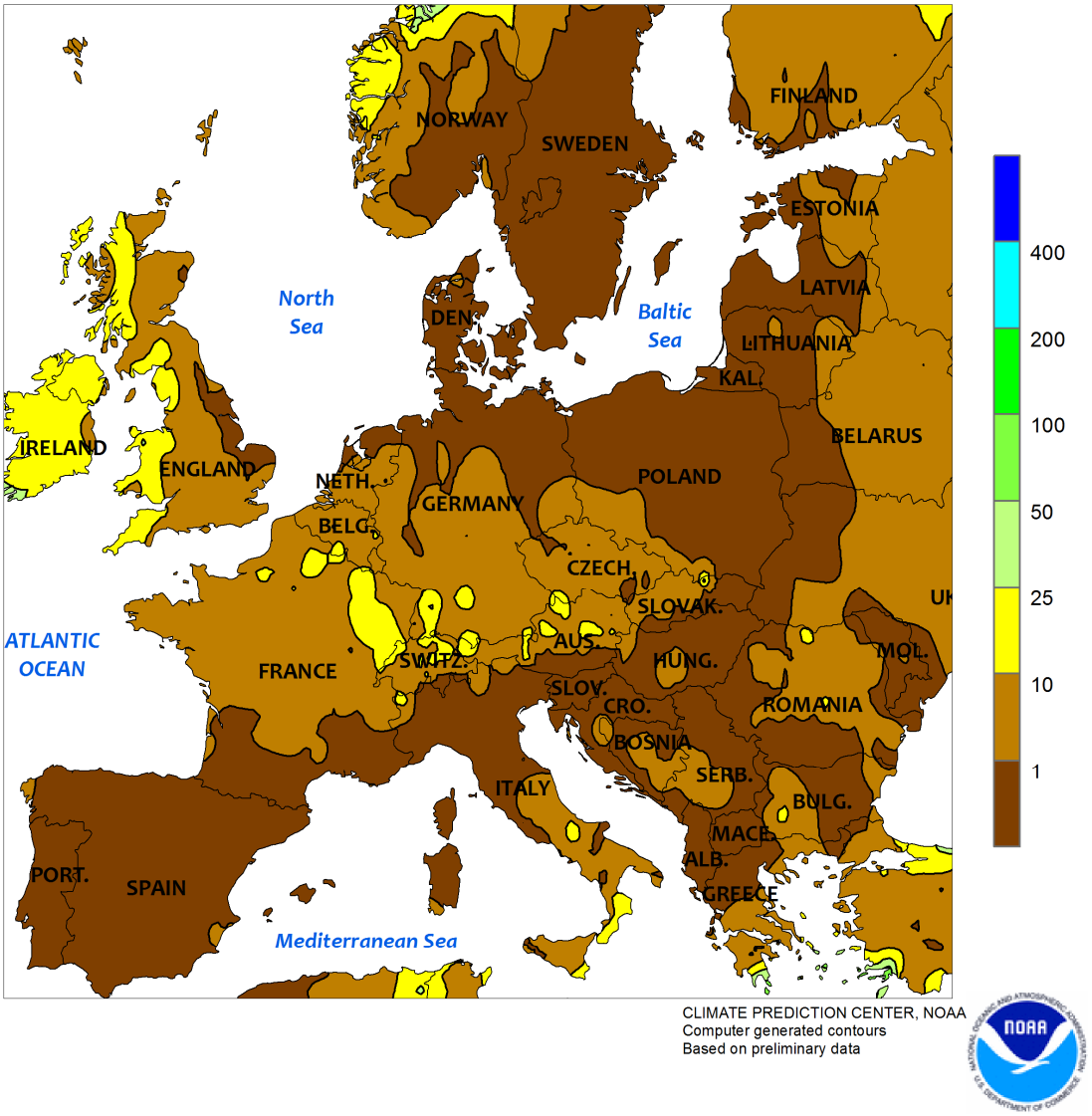
Based on Preliminary Reports

February 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
	ASWAN	***	***	8	4	***	*****	*****	******
ESTONI	TALLINN	2	-1	9	-6	0	4.7	46	11
ETHIOP	ADDIS ABABA	26	12	28	8	19	2.4	0	-37
F GUIA	CAYENNE	30	24	31	23	27	1.4	115	-204
FIJI	NAUSORI	32	24	33	21	28	1.4	269	8
FINLAN	HELSINKI	2	-3	7	-13	-1	5.3	60	27
FRANCE	PARIS/ORLY	13	3	21	-2	8	3.0	41	1
	STRASBOURG	12	0	21	-5	6	3.4	10	-22
	BOURGES	14	2	23	-4	8	3.4	13	-43
	BORDEAUX	16	5	26	-3	10	3.2	28	-47
	TOULOUSE	15	4	24	-3	10	2.6	42	-5
	MARSEILLE	15	4	22	-2	9	1.6	10	-33
GABON	LIBREVILLE	31	***	32	22	***	*****	220	-52
GERMAN	HAMBURG	9	2	17	-4	6	3.8	33	-9
	BERLIN	9	2	17	-4	6	4.1	20	-13
	DUSSELDORF	12	3	21	-3	7	4.0	50	-1
	LEIPZIG	9	1	17	-6	5	5.0	3	-28
	DRESDEN	8	1	17	-6	4	4.4	44	9
	STUTTGART	11	-1	20	-6	5	3.7	11	-25
	NURNBERG	9	-2	17	-8	3	2.5	13	-21
	AUGSBURG	9	-2	18	-10	3	2.9	18	-20
GREECE	THESSALONIKA	12	4	17	-1	8	0.9	4	-36
	LARISSA	13	2	18	-5	8	0.9	12	-27
	ATHENS	14	8	19	5	11	0.3	69	34
GUADEL	RAIZET	29	21	30	19	25	0.3	65	-2
HONGKO	HONG KONG INT	24	19	28	13	21	4.7	62	19
HUNGAR	BUDAPEST	10	0	20	-5	5	3.4	8	-17
ICELAN	REYKJAVIK	3	-1	10	-11	1	1.2	57	-29
INDIA	AMRITSAR	20	8	22	4	14	-0.4	106	72
	NEW DELHI	23	11	28	6	17	-0.3	27	6
	AHMEDABAD	30	14	36	9	22	-0.3	0	******
	INDORE	29	13	35	7	21	0.8	0	-4
	CALCUTTA	29	17	34	13	23	0.3	185	160
	VERAVAL	29	18	31	14	23	0.5	1	-1
	BOMBAY	32	17	36	11	25	-0.1	0	******
	POONA	33	13	38	5	23	1.0	0	-2
	BEGAMPET	33	20	37	15	26	1.1	2	-7
	VISHAKHAPATNAM	31	23	33	19	27	0.4	1	-12
	MADRAS	32	23	35	20	28	1.2	3	-12
	MANGALORE	34	22	37	20	28	0.6	0	-3
INDONE	SERANG	33	24	34	24	29	1.3	191	-33
IRELAN	DUBLIN	11	4	16	-4	8	1.9	31	-21
ITALY	MILAN	13	1	21	-4	7	2.4	41	-8
	VENICE	11	2	19	-2	7	2.1	35	-9
	GENOA	14	8	20	3	11	1.4	67	22
	ROME	15	5	22	0	10	0.9	32	-34
	NAPLES	14	6	18	1	10	1.0	30	-55
JAMAIC	KINGSTON	31	23	32	22	27	0.8	37	14
JAPAN	SAPPORO	0	-5	8	-13	-3	0.9	37	-59
	NAGOYA	12	4	18	-1	8	3.1	58	-8
	TOKYO	11	4	20	-1	8	1.4	51	-9
	YOKOHAMA	11	5	21	1	8	1.9	55	-14
	KYOTO	11	4	18	0	8	2.2	43	-40
	OSAKA	11	5	16	1	8	2.0	45	-15
KAZAKH	KUSTANAY	-11	-19	-1	-34	-15	-0.2	12	-1
	TSELINOGRAD	-9	-16	1	-31	-13	1.6	25	12
	KARAGANDA	-8	-16	1	-35	-12	1.1	32	13
KENYA	NAIROBI	29	16	31	12	22	1.7	0	-47
LIBYA	BENGHAZI	15	8	22	4	12	-1.3	191	146
LITHUA	KAUNAS	4	-1	10	-8	2	4.5	33	1
LUXEMB	LUXEMBOURG	10	2	20	-5	6	4.1	38	-29
MALAYS	KUALA LUMPUR	34	25	36	23	30	2.6	192	16
MALI	BAMAKO	***	***	36	16	***	*****	*****	******
MARSHA	MAJURO	29	26	30	23	28	0.6	131	-48
MARTIN	LAMENTIN	30	22	32	19	26	1.3	34	-117
MAURIT	NOUAKCHOTT	***	***	37	11	***	*****	*****	******
MEXICO	GUADALAJARA	28	11	32	7	19	2.6	3	-3
	TLAXCALA	25	8	28	5	16	2.2	2	-3
	ORIZABA	25	15	33	10	20	4.0	39	6
MOROCC	CASABLANCA	19	9	27	5	14	0.6	26	-16
	MARRAKECH	25	7	29	3	16	2	12	-20
MOZAMB	MAPUTO	33	23	39	20	28	1.8	150	35
N KORE	PYONGYANG	4	-7	13	-14	-1	1.3	8	-6
NEW CA	NOUMEA	30	24	35	22	27	1.1	62	-62
NIGER	NIAMEY	34	20	38	17	27	0.1	0	-1
NORWAY	OSLO	1	-3	8	-17	-1	4.6	48	3
NZEALA	AUCKLAND	25	17	28	12	21	*****	19	******
	WELLINGTON	22	15	27	9	19	*****	31	******
P RICO	SAN JUAN	29	22	31	21	26	0.7	56	-2
PAKIST	KARACHI	27	16	31	10	21	0.7	0	-10
PERU	LIMA	29	23	31	21	26	2.9	1	1
PHILIP	MANILA	31	24	32	22	27	-0.3	6	-7
PNEWGU	PORT MORESBY	32	25	34	23	29	1.8	60	-138
POLAND	WARSAW	7	0	14	-7	4	4.5	30	8
	LODZ	7	-1	13	-9	3	3.6	34	5
	KATOWICE	7	-1	15	-8	3	3.3	31	-5
PORTUG	LISBON	17	9	22	4	13	0.8	24	-60
ROMANI	BUCHAREST	10	-2	19	-8	4	3.3	8	-23
RUSSIA	ST.PETERSBURG	2	-3	6	-15	-1	5.2	51	21
	KAZAN	-5	-9	2	-21	-7	3.4	51	19
	MOSCOW	0	-3	5	-12	-2	5.1	37	1
	YEKATERINBURG	-8	-14	2	-32	-11	0.9	45	26
	OMSK	-13	-22	-1	-39	-17	-1.7	12	-4
	BARNAUL	-10	-21	6	-40	-16	-1.5	8	-12
	KHABAROVSK	-7	-17	4	-31	-12	3.9	2	-9
	VLADIVOSTOK	-2	-9	10	-20	-5	3.8	1	-15
	VOLGOGRAD	-2	-7	3	-14	-4	2.4	18	-5
	ASTRAKHAN	3	-4	9	-15	-1	3.8	8	0
	ORENBURG	-9	-15	0	-23	-12	0.7	21	2
S AFRI	JOHANNESBURG	25	15	30	12	20	1.3	137	29
	BETHAL	***	***	30	26	***	*****	*****	******
	DURBAN	29	21	32	18	25	1.5	50	-82
	CAPE TOWN	28	18	37	13	23	2.0	5	-9
S KORE	SEOUL	6	-3	15	-10	1	1.1	23	-4
SAMOA	PAGO PAGO	31	26	33	25	29	0.8	552	243
SENEGA	DAKAR	26	19	37	17	23	2.1	0	0
SPAIN	VALLADOLID	15	1	22	-3	8	1.9	7	-26
	MADRID	16	0	21	-3	8	1.0	7	-17
	SEVILLE	20	7	24	2	14	1.1	21	-20
SWITZE	ZURICH	9	0	18	-4	5	3.2	38	-31
	GENEVA	10	-1	20	-4	4	1.8	48	-24
SYRIA	DAMASCUS	15	4	19	-1	10	2.0	29	6
TAHITI	PAPEETE	31	25	33	24	28	1.1	306	89
TANZAN	DAR ES SALAAM	33	25	35	20	29	1.3	73	16
THAILA	PHITSANULOK	35	22	37	19	28	0.9	95	84
	BANGKOK	35	27	37	25	31	2.4	0	-18
TOGO	TABLIGBO	36	25	38	23	31	2.2	51	21
TRINID	PORT OF SPAIN	31	22	32	20	27	1.1	27	-10
TUNISI	TUNIS	17	8	22	4	12	0.3	33	-25
TURKEY	ISTANBUL	11	5	20	0	8	1.9	49	-10
	ANKARA	9	-2	14	-7	4	3.7	23	-10
TURKME	ASHKHABAD	12	4	21	-1	8	3.1	91	62
UKINGD	ABERDEEN	11	3	17	-8	7	3.0	19	-34
	LONDON	12	4	20	-3	8	2.6	37	0
UKRAIN	KIEV	3	-1	11	-8	1	4.1	36	-3
	LVOV	5	-2	13	-9	2	3.9	24	-19
	KIROVOGRAD	2	-2	10	-12	0	3.5	13	-13
	ODESSA	5	1	15	-8	3	3.3	17	-18
	KHARKOV	1	-3	3	-14	-1	3.5	9	-25
UZBEKI	TASHKENT	10	2	16	-3	6	3.7	30	-26
YUGOSL	BELGRADE	10	2	19	-5	6	2.8	35	-3
ZAMBIA	LUSAKA	27	20	33	16	***	*****	19	-170
ZIMBAB	KADOMA	***	***	33	12	***	*****	*****	******

Based on Preliminary Reports

EUROPE
Total Precipitation (mm)
FEB 24 - MAR 2, 2019

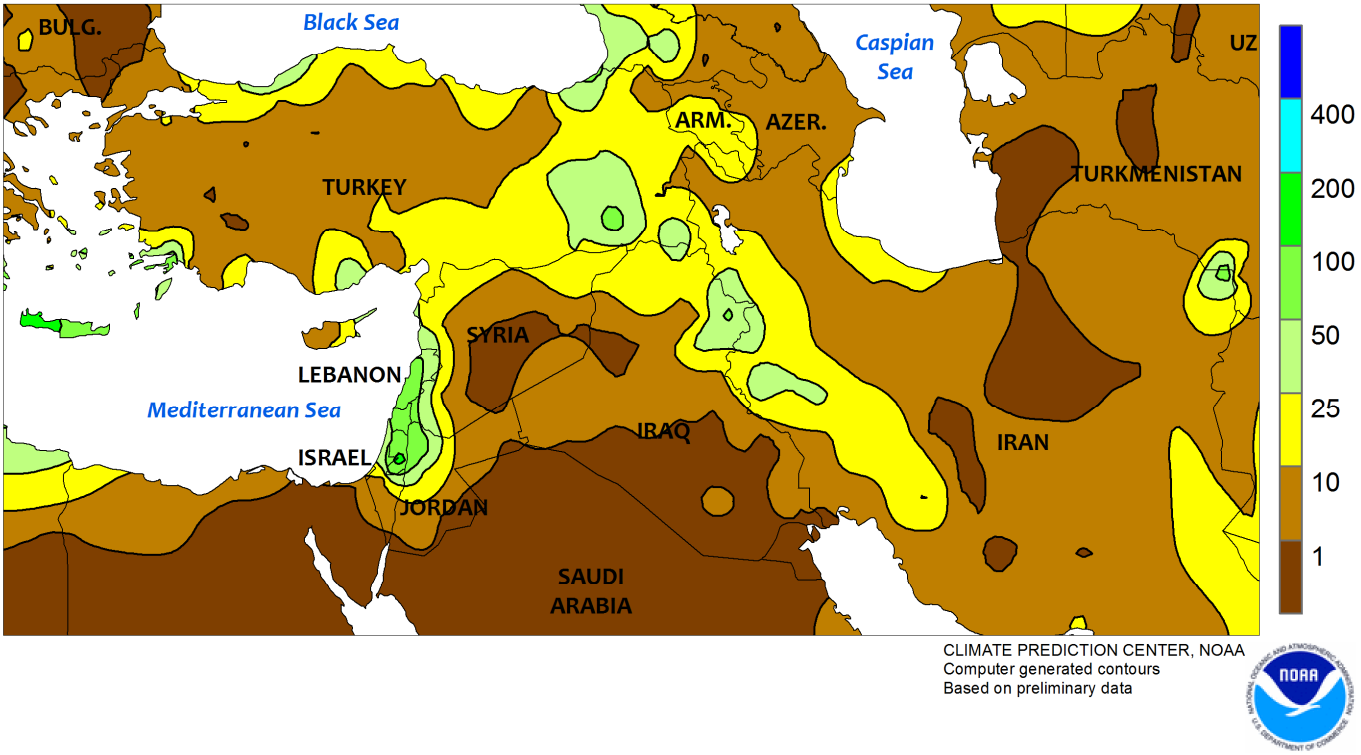


EUROPE

Warm, dry weather prevailed across most of the continent. Light to moderate showers (1-20 mm) were confined to locales from England and France into Slovakia, with most reports less than 5 mm. Otherwise, dry, warm weather (3-7°C above normal) across Europe promoted early winter crop development in England and France, while wheat and rapeseed broke dormancy from Germany into the northern Balkans. Moisture supplies are generally sufficient for spring growth over central and eastern crop areas, while short-term drought intensified in Spain. Rainfall over the past 90 days in Spain has totaled a meager 25 to 50 percent of normal, and rain will be needed relatively soon for winter grains; wheat and barley typically reach reproduction from late March into April on the Iberian Peninsula.

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

MIDDLE EAST
Total Precipitation (mm)
FEB 24 - MAR 2, 2019



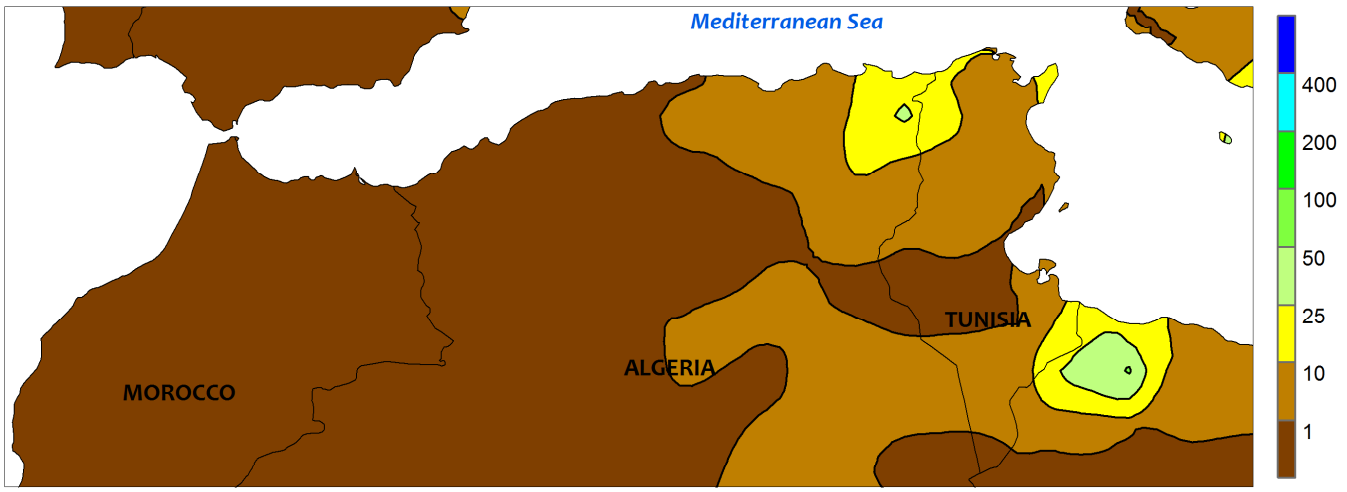
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

MIDDLE EAST

After a brief respite, unsettled weather returned. A slow-moving storm system produced widespread rain and mountain snow across the region, with the heaviest precipitation (10-80 mm) observed from the eastern Mediterranean Coast into western and southern Iran. Winter precipitation (December-February) totaled 125 to nearly 500 percent of normal; drier weather is needed in the wettest locales (Syria and southeastern Turkey into western Iran) to facilitate seasonal fieldwork and winter crop development. Winter crops remained dormant from central Turkey's Anatolian Plateau into northwestern Iran, while wheat and barley were vegetative elsewhere.

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

NORTHWESTERN AFRICA
Total Precipitation (mm)
FEB 24 - MAR 2, 2019

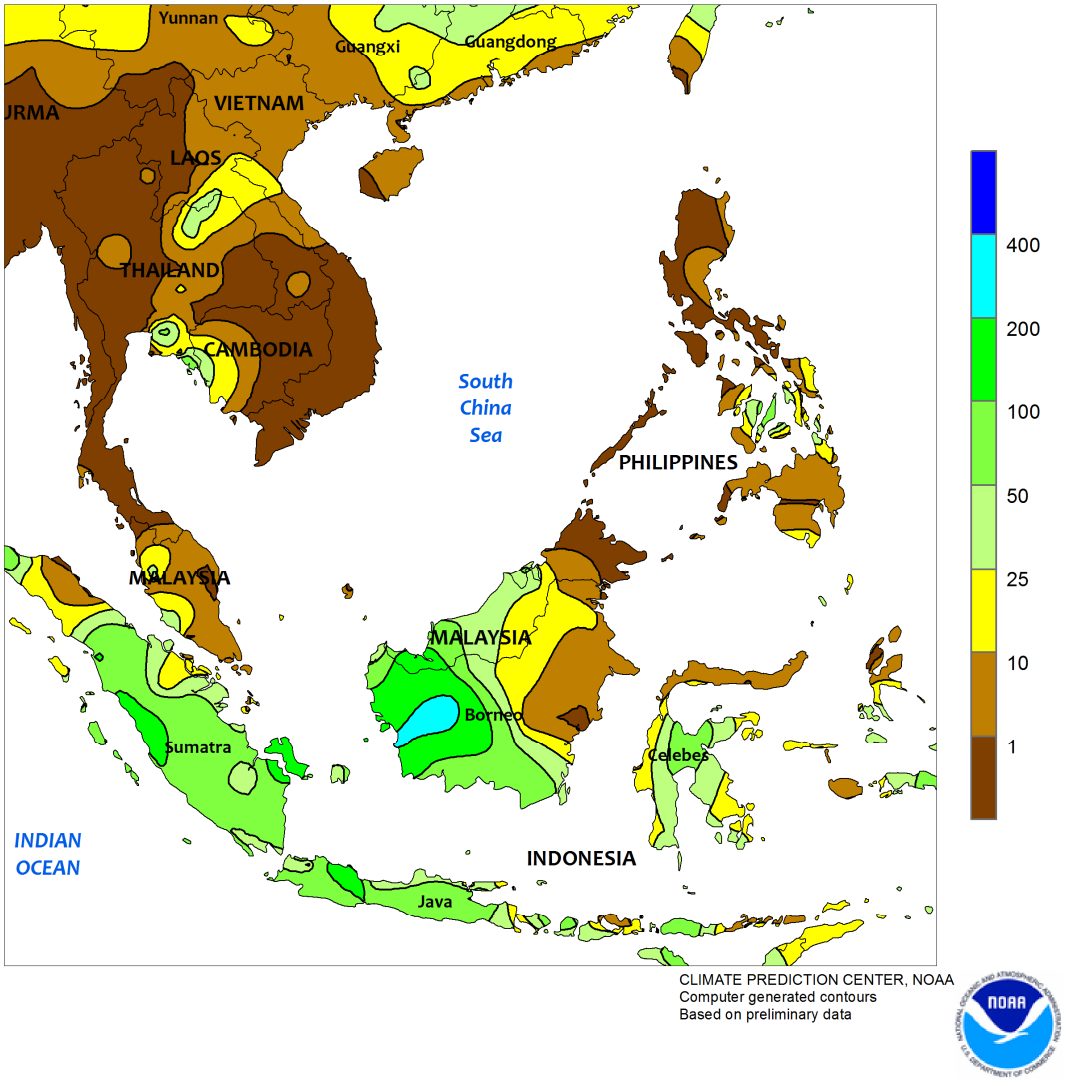


NORTHWESTERN AFRICA

Intensifying drought in the west contrasted with good to excellent growing conditions in the east. Winter precipitation (December-February) averaged near to above normal from central Algeria into northern Tunisia, where another week with light to moderate showers (2-30 mm) maintained excellent moisture supplies for vegetative winter grains. Conversely, drought gripped western growing areas, with winter precipitation totaling a meager 10 to 50 percent of normal from Morocco into western Algeria. Growing degree day data indicated wheat had reached the reproductive stages of development in Morocco, with satellite-derived vegetation health data indicating rapidly declining crop conditions in these areas. Consequently, Moroccan wheat and barley prospects are down sharply from last year's bumper yields, and rain will be needed soon to stave off further declines.

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

SOUTHEAST ASIA
Total Precipitation (mm)
FEB 24 - MAR 2, 2019



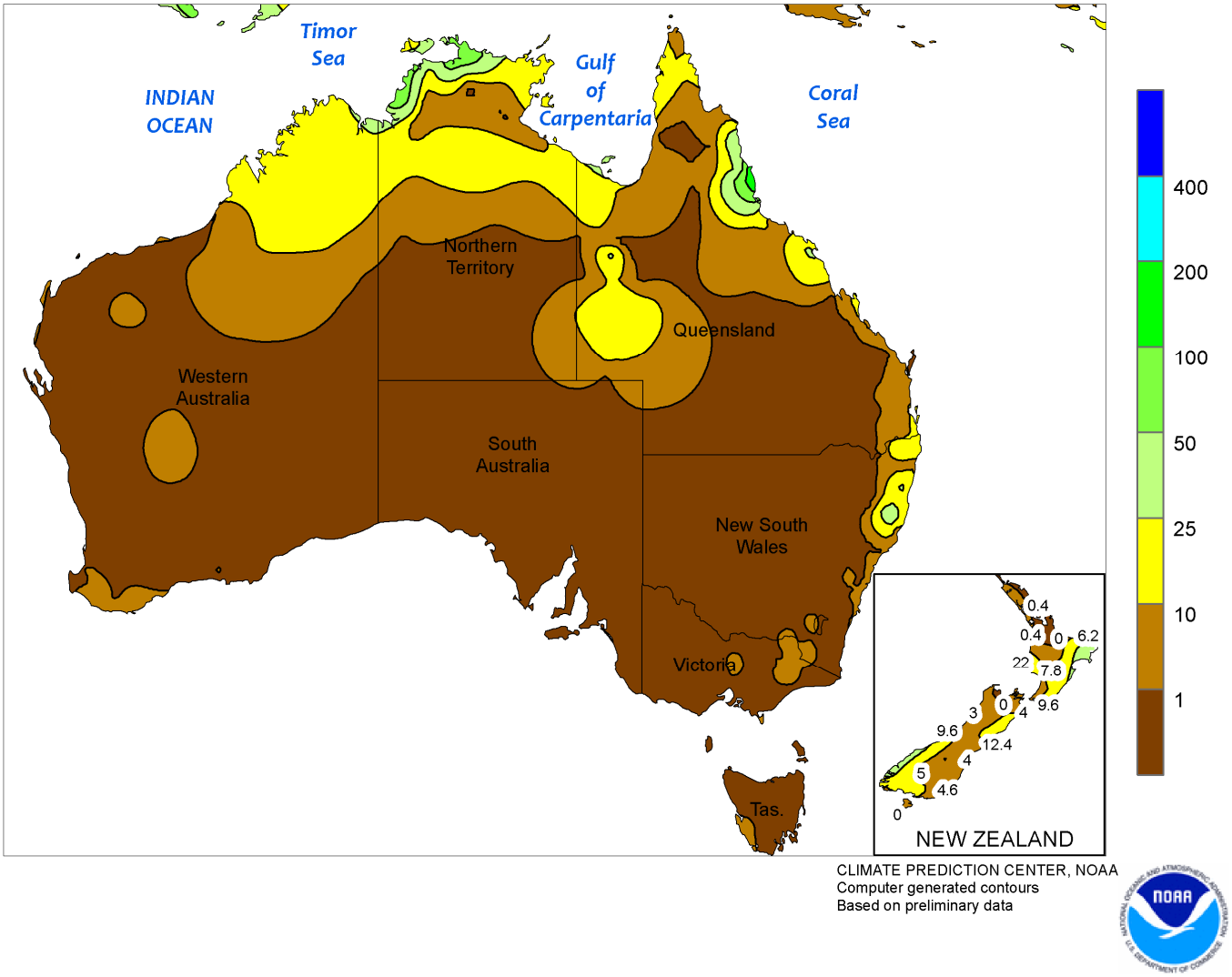
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

SOUTHEAST ASIA

Late-season showers (25-100 mm) across Indonesia maintained good soil moisture for rice and oil palm. In Java, Indonesia, the recent rainfall eased seasonal moisture deficits in the west while sustaining above-average totals in central and eastern growing areas. Additionally, seasonal rainfall for oil palm in Sumatra and much of Kalimantan was above normal. In contrast, key oil palm areas in Malaysia continued to experience poor rainfall and more moisture is needed to prevent yield declines. Meanwhile in the Philippines, dry weather aided winter rice and corn harvesting but reduced soil moisture for spring crop sowing. Across the Philippines, moisture deficits have been pervasive dating back to November 1 and have likely reduced yields for winter crops.

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

AUSTRALIA
Total Precipitation (mm)
FEB 24 - MAR 2, 2019



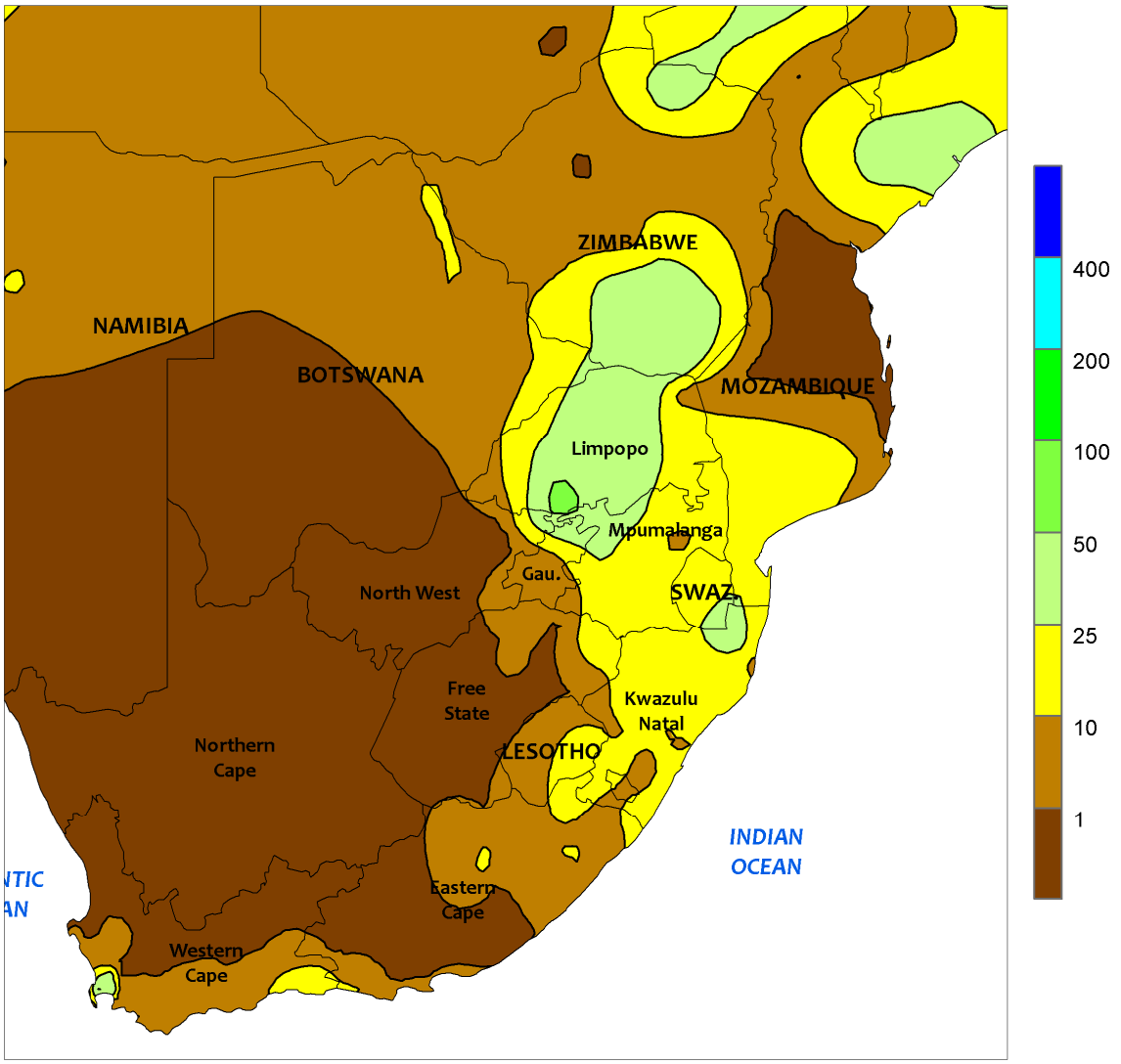
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

AUSTRALIA

Dry weather continued to plague major summer crop producing areas in southern Queensland and New South Wales. Summer crop harvesting typically begins around March 1, but the harvest began early this year as frequent heat and persistent dryness accelerated crop maturation. During this past week, the ongoing dryness favored summer crop drydown and promoted uninterrupted harvesting, but the weather offered no drought relief to any immature crops that could potentially benefit from some additional moisture. Nevertheless, given the extended period of unfavorable weather during the growing season, any rainfall at this late stage will not significantly improve yield prospects. The rainfall is desperately needed, however, to refill the soil moisture profile in advance of winter crop planting, which normally begins in mid-April. Following several weeks of warmer-than-normal weather, temperatures averaged near normal in major summer crop producing areas of eastern Australia.

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

SOUTH AFRICA
Total Precipitation (mm)
FEB 24 - MAR 2, 2019



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

SOUTH AFRICA

Warm, mostly dry weather dominated a broad section of the corn belt, reducing moisture for immature summer crops. Large portions of North West, Free State, as well as southern farming areas in Gauteng and Mpumalanga recorded little to no rain (0-5 mm); moderate rain (greater than 10 mm, with several locations receiving more than 25 mm) fell in other areas ranging from Limpopo to northern KwaZulu-Natal. Weekly temperatures averaging up to 3°C above normal exacerbated the impact of the dryness on reproductive to filling corn, particularly in drought-impacted western production areas of North West and Free State where daytime highs reached the middle and upper 30s (degrees C). Elsewhere, rainfall was patchy and light (5-25 mm) in sugarcane areas of KwaZulu-Natal and eastern Mpumalanga, which also recorded highs in the middle 30s. Aside from some isolated showers in Western and Eastern Cape, dryness and periodic warmth dominated the Cape Provinces, fostering rapid growth of corn, cotton, and other irrigated summer crops.

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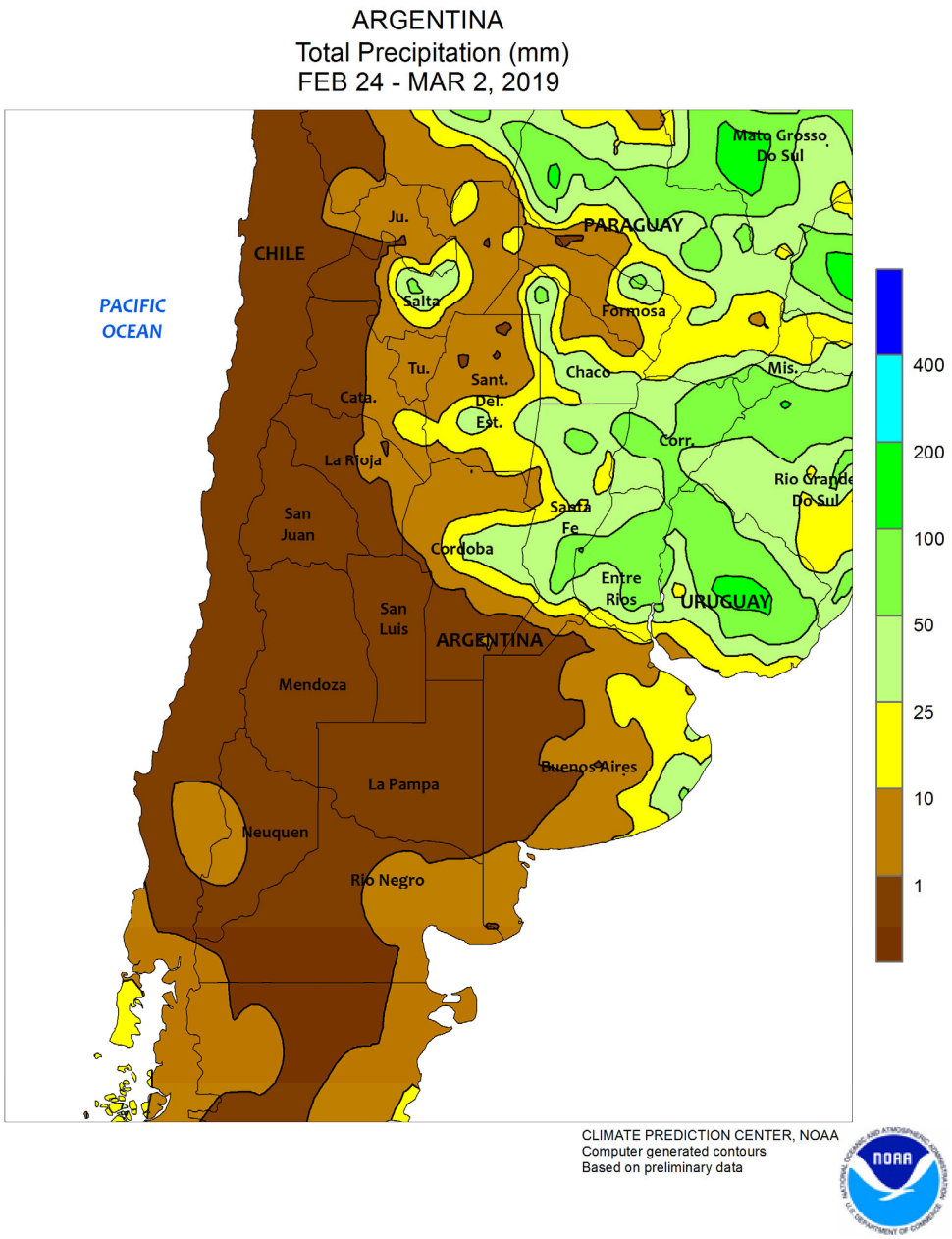

ARGENTINA

Following several days of lingering showers, dry, sunny weather fostered development of immature summer crops throughout much of the region. Rainfall totaling 10 to 50 mm or more increased moisture for late-season crop development from Entre Rios and central Cordoba northward (including eastern cotton areas of Chaco and Formosa and sections of the northwest) before the onset of generally drier weather. In contrast, dry conditions dominated La Pampa, southern Cordoba, and western and central farming areas of Buenos Aires the entire week, with isolated showers (greater than 10 mm) developing in eastern Buenos Aires at week's end. Weekly temperatures averaged near to below normal throughout the region, with the lowest temperatures relative to normal (up to 4°C below normal) in La Pampa and Buenos Aires, where nighttime lows reached or dropped below 5°C. However, temperatures rose to more seasonable levels by week's end, with highs reaching the low 30s (degrees C) in southern production areas and the upper 30s in the far north (Chaco and Formosa). According to reports from Argentina, sunflowers were 41 percent harvested as of February 27, slightly ahead of last year and the 5-year average.

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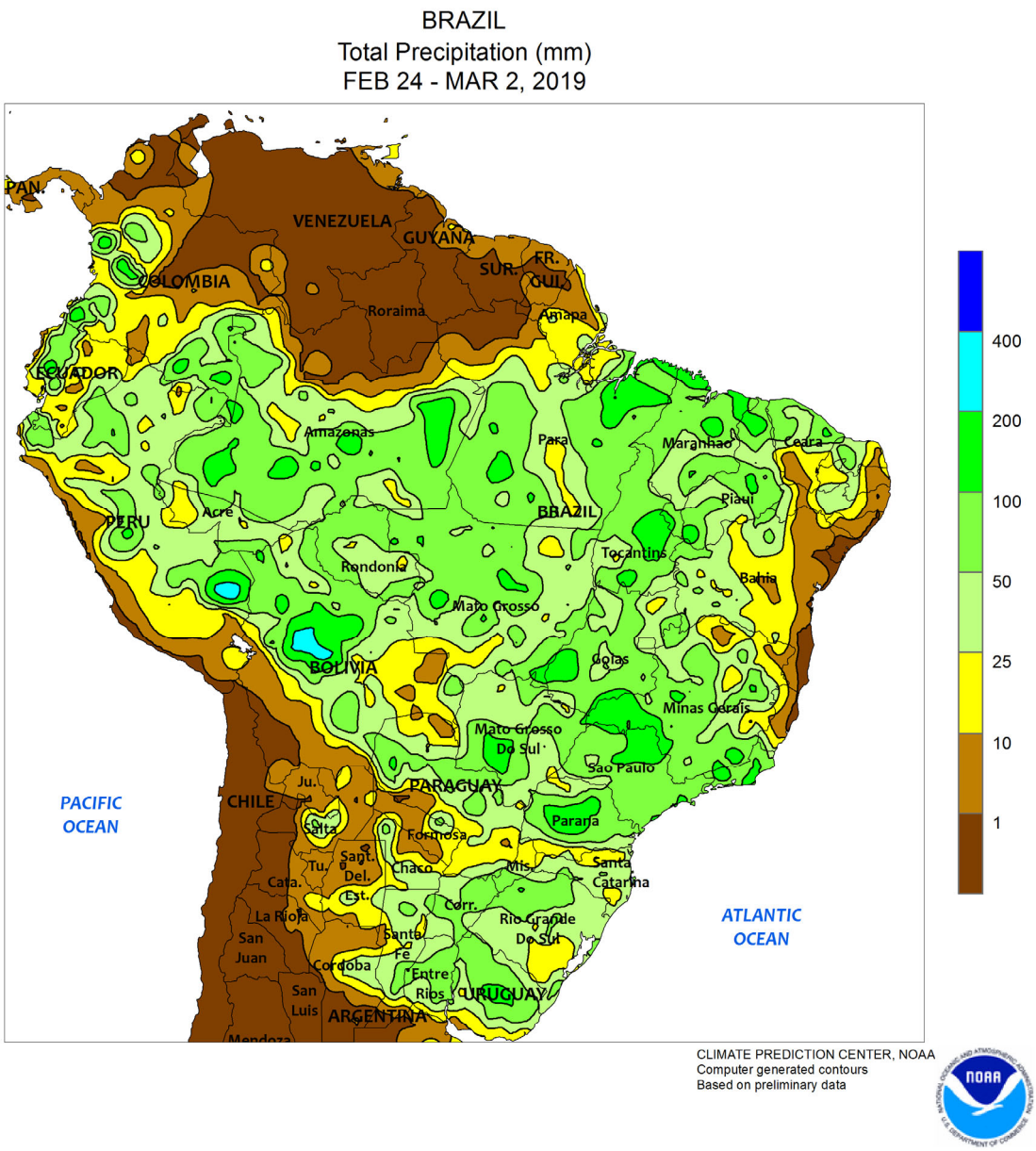

BRAZIL

Widespread, beneficial showers continued throughout most major agricultural areas. Rainfall totaled 25 to 100 mm over most farming areas from Mato Grosso southward to Rio Grande do Sul; similar amounts were recorded in much of the northeastern interior, though pockets of dryness returned to the vicinity of southern Tocantins and western Bahia. Summer warmth (daytime highs reaching the upper and middle 30s degrees C) sustained high levels of crop moisture usage but temperatures generally did not reach stressful levels given the moisture available to most crops. In addition to favoring immature crops, the moisture was timely for emerging corn. According to the government of Mato Grosso, soybeans were 87 percent harvested as of March 1, compared with 71 percent last year; similarly, corn was 96 percent planted, 12 points ahead of average due to the rapid soybean harvest. In Parana, soybeans and first-crop corn were 51 and 32 percent harvested, respectively, as of February 25; second-crop corn was 73 percent planted.

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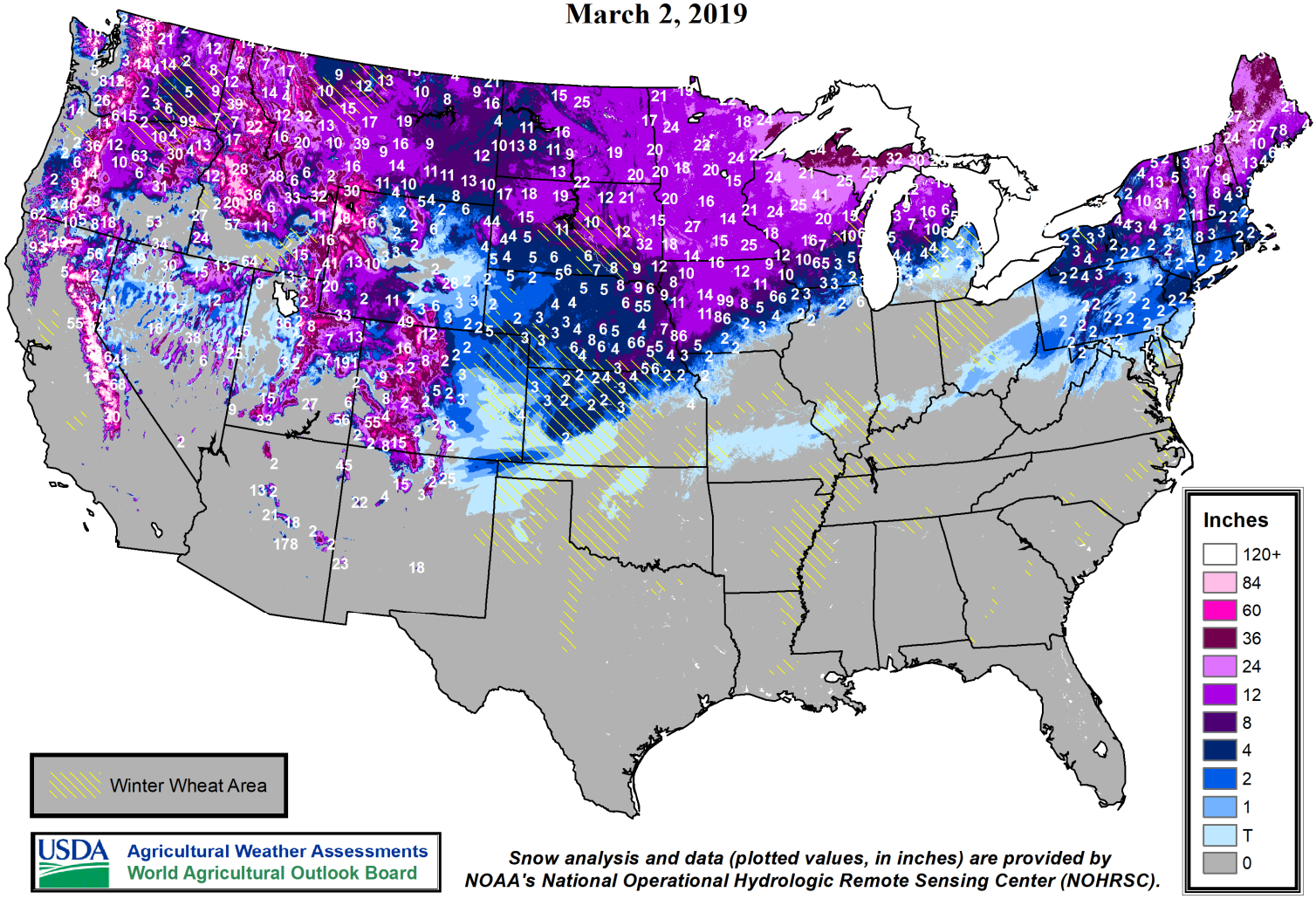
Snow Depth

March 2, 2019



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