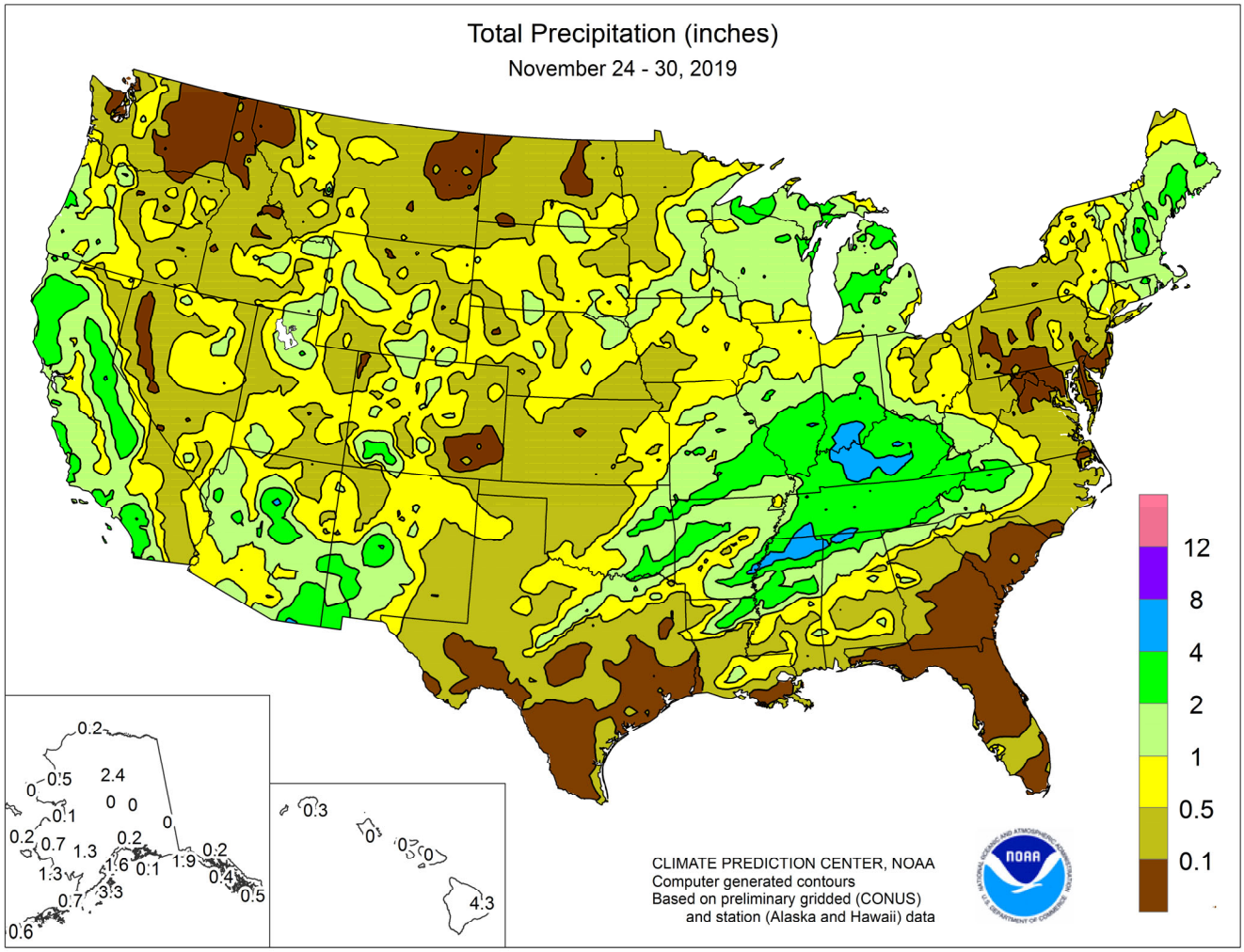
Volume 106, No. 49 http://www.usda.gov/oce/weather December 3, 2019

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



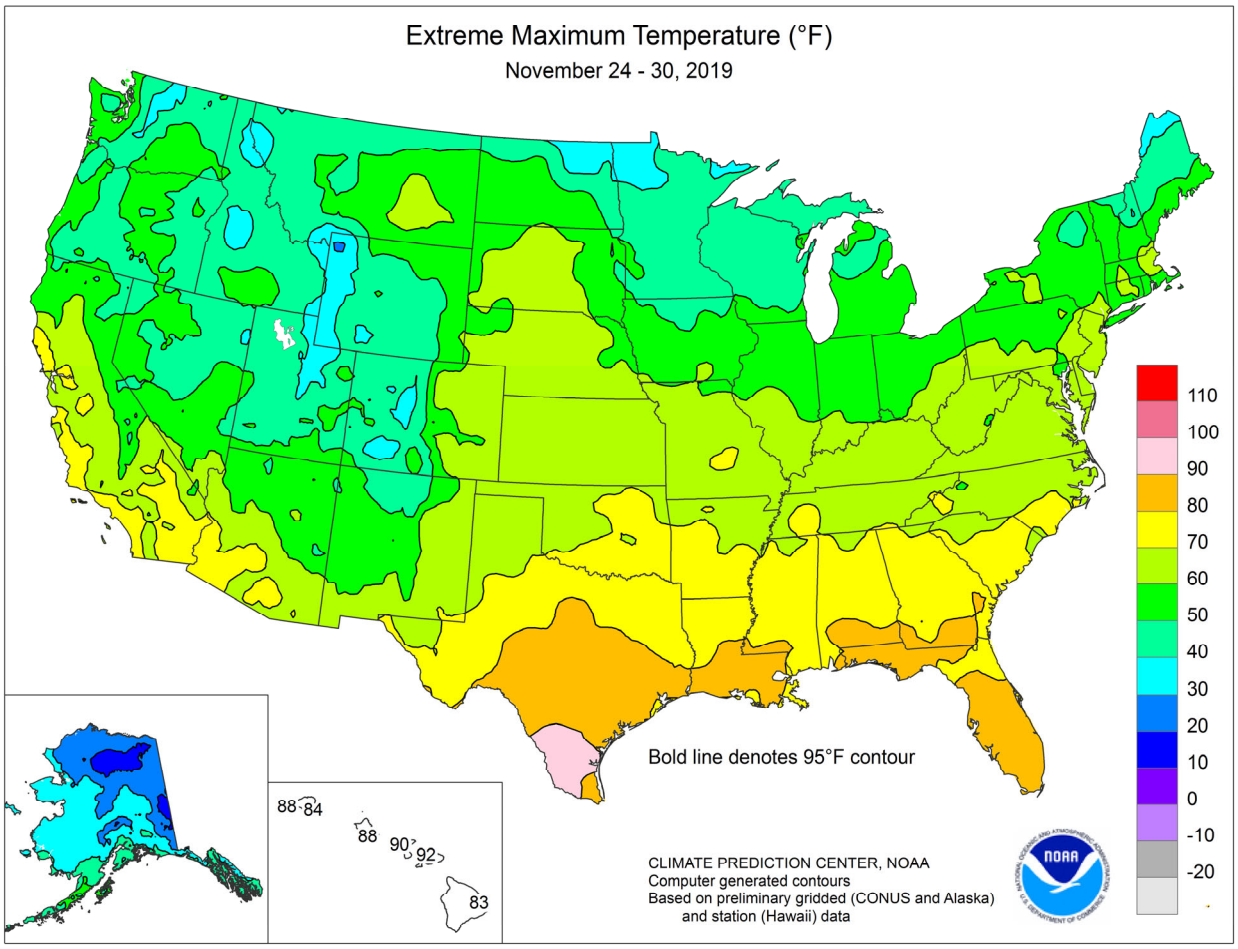
HIGHLIGHTS
November 24 – 30, 2019

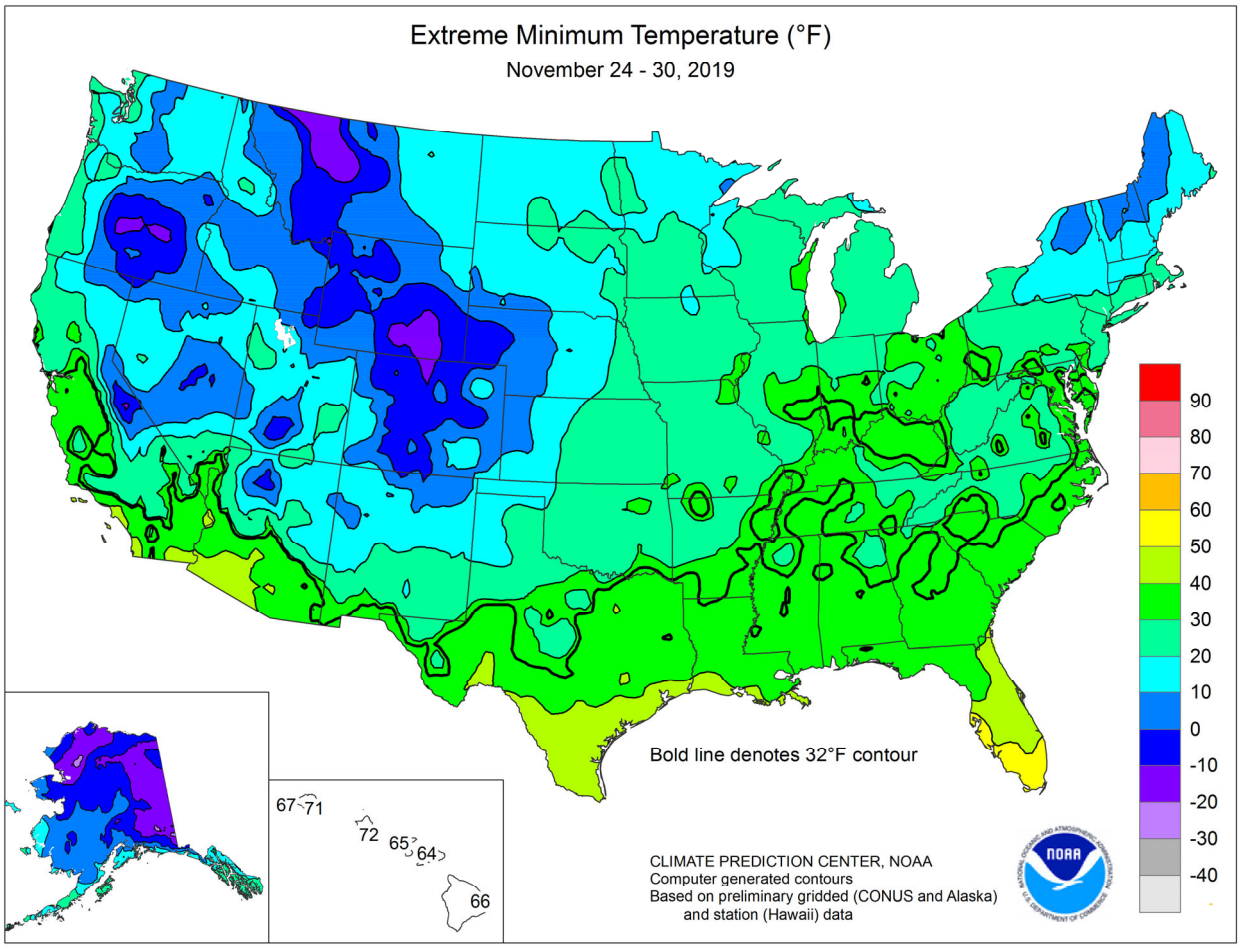
Highlights provided by USDA/WAOB

A pair of Thanksgiving Week storms snarled holiday travel and resulted in a variety of weather hazards, including snow, rain, and high winds. Snow blanketed higher elevations of **California**, the **Great Basin**, the **Intermountain West**, and the **Southwest**, while heavy showers sparked local flooding in valley locations. However, significant precipitation bypassed much of the **Northwest**. Both storm systems also produced wind-driven snow across portions of the **northern Plains** and **upper Midwest**, insulating winter grains but curtailing

(Continued on page 3)

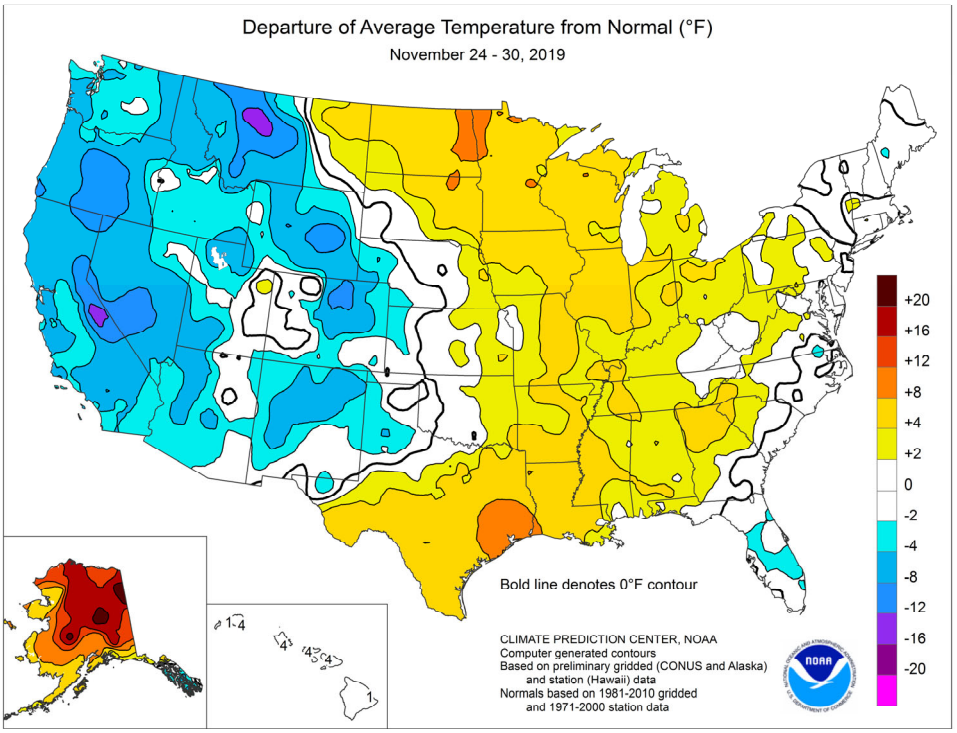
Contents


Extreme Maximum Temperature (°F)
November 24 - 30, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
88
84
88
90
92
83
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
November 24 - 30, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
67
71
72
65
64
66
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

(Continued from front cover)

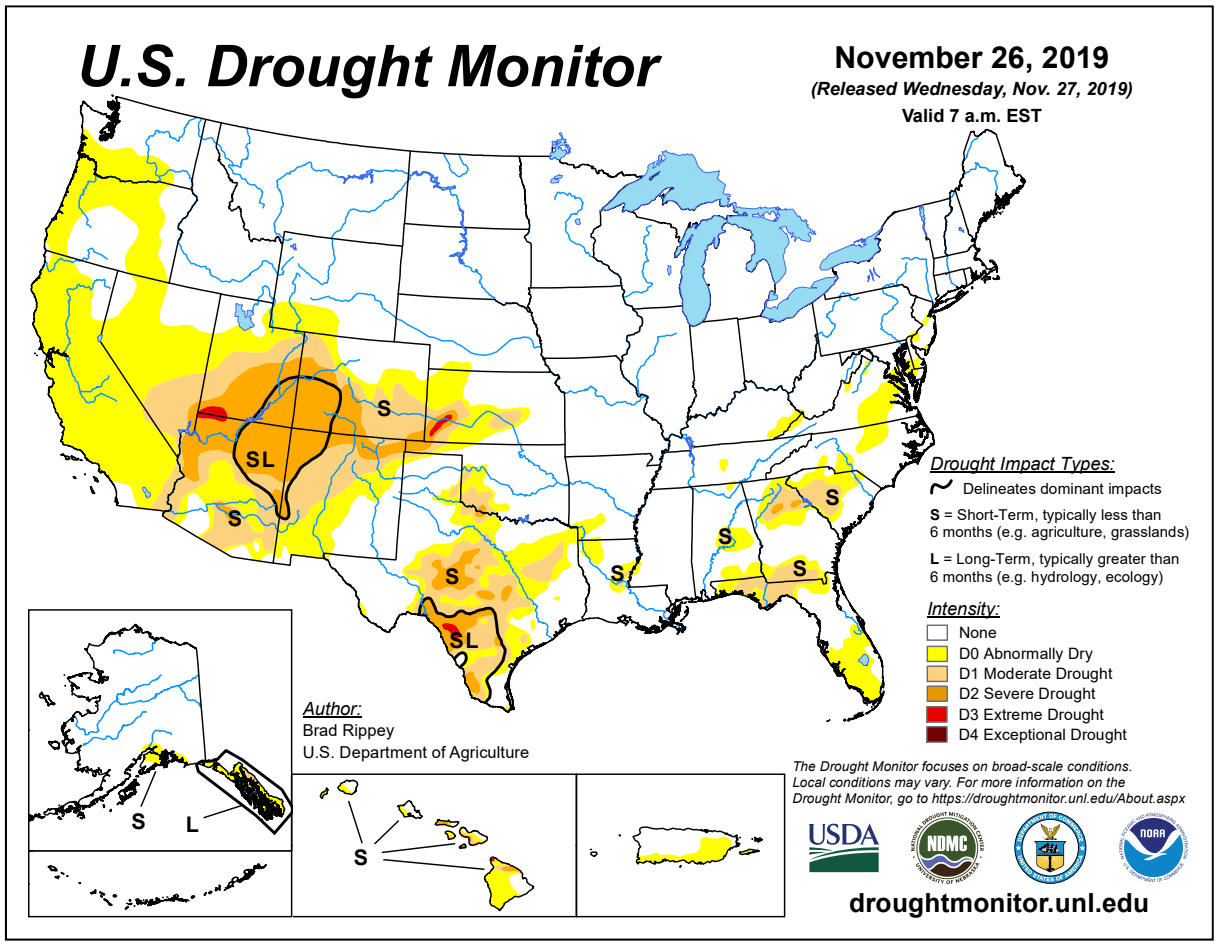
fieldwork, stressing livestock, and adding moisture to already soggy fields. Meanwhile, weekly rainfall totals reached 2 to 4 inches or more across the **lower Ohio Valley** and parts of the **interior Southeast**. Little rain fell, however, across the **Deep South**, leading to further intensification of short-term dryness from **southern Texas to peninsular Florida**. In the storms' wake, cold air settled across the **western half of the country**, holding weekly temperatures at least 5 to 10°F below normal in many locations. In contrast, general warmth covered the **western Gulf Coast region**, the **Mississippi Valley**, and the **upper Great Lakes States**. Temperatures averaged at least 5°F above normal in the **upper Midwest** and 5 to 10°F above normal in the **western Gulf Coast region**.

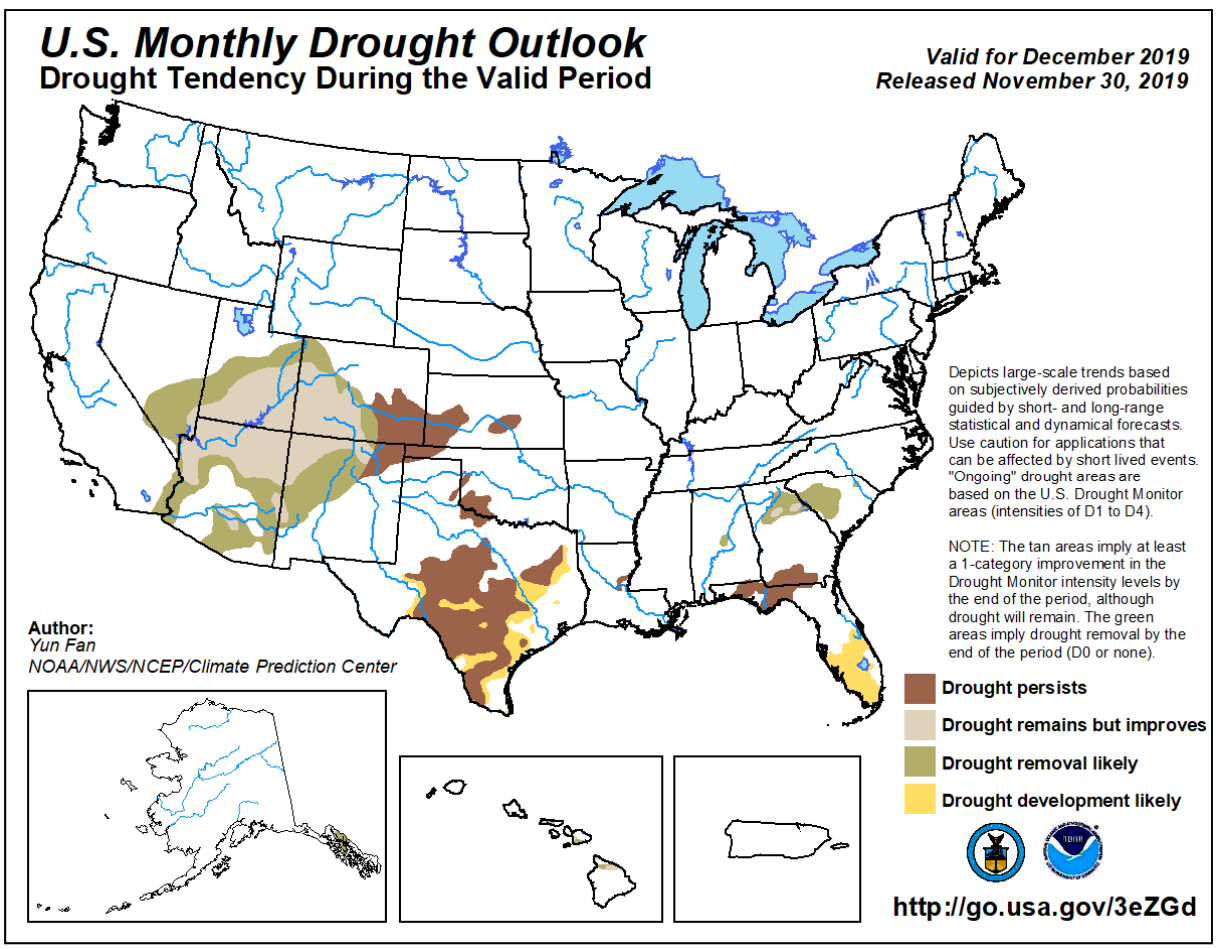


Early in the week, a storm system departed the **Northeast**. However, lingering precipitation on November 24 resulted in daily-record totals in **Hartford, CT** (1.27 inches), and **Augusta, ME** (1.06 inches). Two days later, a storm developed across the **nation's mid-section**. In **Nebraska**, record-setting snowfall totals for November 26 included 8.2 inches in **Grand Island**, 7.1 inches in **Hastings**, and 6.5 inches in **Norfolk**. Peak wind gusts on the 26th in those locations reached 46, 48, and 47 mph, respectively. **Rochester, MN**, received 6.8 inches of snow on November 26-27, accompanied by a northerly wind gust to 50 mph on the latter date. In **Michigan**, **Marquette** reported its wettest November day on the 27th, with a 3.02-inch total (previously, 2.18 inches on November 6, 1988). **Marquette** also received 16.4 inches of snow on the 27th. Elsewhere in the **Great Lakes region**, November 27 featured daily-record precipitation totals in **Alpena, MI** (1.79 inches), and **Rhinelander, WI** (1.15 inches). Farther south, peak wind gusts on the 27th were clocked to 63 mph in **St. Louis, MO**, and 56 mph in **Dayton, OH**. Meanwhile, a new storm arrived in the **West**. Along the **Oregon coast**, a wind gust to 106 mph was recorded on the 26th on **Cape Blanco**. Elsewhere on November 26, gusts reached 66 mph in **Montague, CA**, and 64 mph in **Amarillo, TX**. In **northern California**, **Mt. Shasta City** collected a daily-record total of 1.63 inches on November 26. In **southern California**, **Camarillo** received 1.91 inches on November 27-28. Record-setting totals topped an inch in **southern California** locations such as **Long Beach** (2.18 inches on November 28), **Riverside** (1.44 inches on November 28), and **Santa Barbara** (1.08 inches on November 27). Elsewhere in **California**, the wettest November on record occurred in **Needles** (2.69 inches; previously, 2.20 inches in 1905), while the snowiest November was reported in **Bishop** (6.8 inches; previously, 3.9 inches in 1964). All of **Bishop's** snow fell on November 27-28. It was also the wettest November on record in **Douglas, AZ** (4.62 inches; previously, 3.35 inches in 1994), aided by a 2.19-inch deluge on the 27th. The only wetter November day on record in **Douglas** occurred on November 11, 1994, when 2.35 inches fell. Meanwhile, **Flagstaff, AZ**, reported precipitation totaling 2.95 inches (and 16.8 inches of snow) from November 28-30. High winds again swept eastward, with **Trinidad, CO**, reporting a gust to 75 mph on November 29. Elsewhere, late-November snow blanketed the **North**, while heavy showers swept across the **South** and **lower Midwest**. Record-setting rainfall totals for November 30 reached 3.98 inches in **Muscle Shoals, AL**; 3.01 inches in **Louisville, KY**; and 2.91 inches in **Evansville, IN**. In South Dakota, record-setting snowfall totals for November 30 included 14.5 inches in **East Rapid City** and 14.3 inches in **Aberdeen**. **East Rapid City** also clocked a peak wind gust to 59 mph. In **Duluth, MN**, precipitation on November 30 – December 1 totaled 1.40 inches, in the form of 21.7 inches of snow.

Warmth in advance of the storminess resulted in several daily-record highs. In **Texas**, record-setting highs for November 25 soared to 88°F in **Austin (Camp Mabry)** and 85°F in **Waco**. On November 27, daily-record highs in **Florida** reached 84°F in **Pensacola** and 80°F in **Apalachicola**. Elsewhere in **Florida**, **Sarasota-Bradenton** posted a daily record-tying high of 86°F on November 29. A surge of **Southern** warmth on November 30 produced daily-record highs in **Texas** locations such as **Laredo** (95°F), **McAllen** (92°F), and **Corpus Christi** (91°F). Elsewhere on the 30th, daily-record highs climbed to 83°F in **Lafayette, LA**, and 80°F in **Montgomery, AL**. In contrast, chilly air settled across the **West**, where record-setting lows for November 29 included 24°F in **Astoria, OR**, and 25°F in **Santa Rosa, CA**. The **Western** chill deepened on November 30, when lows plunged to daily-record levels in **Klamath Falls, OR** (0°F), and **Bishop, CA** (8°F).

Mild, wet weather covered most of the **Alaskan mainland**, while colder- and drier-than-normal conditions prevailed in the southeastern part of the state. Weekly temperatures averaged at least 10 to 20°F above normal in much of **northern, eastern, and central Alaska**. Daily-record highs were set in several locations, including **King Salmon** (50°F on November 27) and **Kodiak** (52°F on November 28). From November 26-28, an impressive storm struck portions of **interior Alaska**, where **Bettles** reported precipitation totaling 2.28 inches and a 28.4-inch snowfall. Heavy, late-November precipitation also fell in parts of **southern Alaska**, helping to boost monthly totals to 3.17 inches (198 percent of normal) in **Bethel** and 2.88 inches (207 percent) in **King Salmon**. Daily-record precipitation totals for November 27 included 0.58 inch in **King Salmon** and 1.00 inch in **Bethel**. Farther south, unusual warmth persisted in **Hawaii**, accompanied by occasional showers in windward locations. On **Maui**, **Kahului**, experienced 9 days in November with a high temperature of 90°F or greater—second only to 12 days in 1968. **Kahului** also posted daily-record highs of 91, 92, and 90°F, respectively, on November 25, 26, and 28. Meanwhile on the **Big Island**, **Hilo** completed its warmest November on record, with a monthly average temperature of 77.5°F (previously, 76.8°F in 2015). **Hilo** received 2.89 inches of rain during the last 7 days of November—but ended the month with a below-average total of 10.28 inches (66 percent of normal). At the state's other major airport observation sites, November rainfall ranged from 0.21 inch (10 percent of normal) in **Kahului** to 4.98 inches (112 percent) in **Lihue, Kauai**.


U.S. Drought Monitor
November 26, 2019
(Released Wednesday, Nov. 27, 2019)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brad Rippey
U.S. Department of Agriculture
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
droughtmonitor.unl.edu


U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period
Valid for December 2019
Released November 30, 2019
Author:
Yun Fan
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 November 30, 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 SEP 1	PCT. NORMAL SINCE SEP 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	43	74	34	55	5	0.11	-1.00	0.10	10.95	92	47.46	96	83	37	0	0	2	0
	HUNTSVILLE	62	40	69	33	51	3	2.74	1.42	1.95	10.82	83	56.04	108	81	56	0	0	3	2
	MOBILE	73	48	79	37	61	5	0.04	-1.28	0.03	13.98	95	58.84	95	87	47	0	0	2	0
	MONTGOMERY	72	43	80	34	57	3	0.00	-1.23	0.00	7.80	69	41.76	84	84	40	0	0	0	0
AK	ANCHORAGE	37	25	46	11	31	11	0.35	0.13	0.16	7.67	127	13.60	91	78	73	0	4	4	0
	BARROW	20	5	27	-8	13	18	0.16	0.13	0.12	3.12	252	11.50	285	86	71	0	7	4	0
	FAIRBANKS	25	12	35	-10	19	21	0.00	-0.14	0.00	2.79	103	14.25	149	85	81	0	7	0	0
	JUNEAU	35	27	42	19	31	0	0.29	-0.87	0.23	24.66	116	52.84	100	96	89	0	6	3	0
	KODIAK	44	35	53	26	40	8	3.32	1.81	1.62	27.61	121	62.99	93	79	68	0	3	4	3
	NOME	25	10	34	1	17	3	0.28	0.01	0.13	9.10	169	26.31	169	90	81	0	7	5	0
AZ	FLAGSTAFF	40	20	56	11	30	-4	4.08	3.67	2.59	7.69	130	23.99	114	94	48	0	7	4	3
	PHOENIX	66	48	73	43	57	-1	0.71	0.54	0.70	1.81	80	5.24	71	70	48	0	0	2	1
	PRESCOTT	48	28	60	19	38	-3	1.17	0.89	1.00	4.61	100	14.83	83	84	44	0	6	2	1
	TUCSON	65	45	75	40	55	-1	0.92	0.78	0.81	4.85	146	12.52	112	75	58	0	0	3	1
AR	FORT SMITH	61	40	73	29	51	4	1.23	0.13	0.75	16.09	130	66.16	163	96	67	0	1	4	1
	LITTLE ROCK	62	41	69	31	51	3	0.27	-1.09	0.12	12.59	92	59.84	129	90	53	0	2	4	0
CA	BAKERSFIELD	58	41	67	37	50	-1	0.70	0.56	0.54	1.09	105	7.59	133	81	61	0	0	3	1
	FRESNO	56	40	68	35	48	-1	0.55	0.30	0.44	0.56	28	10.07	102	79	61	0	0	3	0
	LOS ANGELES	64	49	78	43	57	-3	1.06	0.76	0.79	1.43	82	14.29	126	73	51	0	0	4	1
	REDDING	53	34	69	30	43	-5	1.98	1.03	0.74	2.37	35	34.46	119	81	60	0	3	4	1
	SACRAMENTO	56	38	68	31	47	-3	0.53	0.01	0.27	0.65	19	20.01	129	89	42	0	1	4	0
	SAN DIEGO	66	51	74	50	59	-1	1.96	1.71	1.37	2.85	166	11.27	119	82	56	0	0	4	1
	SAN FRANCISCO	57	43	67	38	50	-2	1.29	0.69	0.85	1.35	36	19.77	115	80	65	0	0	4	1
	STOCKTON	57	38	70	36	47	-3	0.86	0.45	0.34	1.09	37	13.57	113	85	63	0	0	5	0
CO	ALAMOSA	39	7	53	-3	23	-1	0.43	0.35	0.24	1.24	61	7.48	108	83	50	0	7	2	0
	CO SPRINGS	40	20	55	10	30	-3	0.40	0.34	0.34	2.04	78	11.81	70	76	40	0	7	2	0
	DENVER INTL	35	12	64	-2	24	-9	0.53	0.44	0.45	2.22	88	15.20	114	87	62	0	7	3	0
	GRAND JUNCTION	45	26	53	18	35	1	0.50	0.38	0.27	1.15	44	8.02	95	76	56	0	6	3	0
	PUEBLO	46	21	64	11	34	-1	0.07	-0.02	0.05	2.15	104	12.89	107	66	47	0	7	2	0
CT	BRIDGEPORT	50	34	58	29	42	0	0.49	-0.32	0.44	8.09	75	43.77	108	78	53	0	2	2	0
	HARTFORD	51	32	64	22	41	3	1.35	0.45	1.27	11.03	91	44.50	105	76	47	0	4	2	1
DC	WASHINGTON	55	39	62	35	47	1	0.21	-0.48	0.20	8.33	83	39.10	108	79	46	0	0	2	0
DE	WILMINGTON	53	34	63	30	44	1	0.58	-0.19	0.58	7.14	69	44.06	112	83	40	0	4	1	1
FL	DAYTONA BEACH	75	51	80	46	63	-2	0.23	-0.40	0.23	19.82	140	55.64	119	100	51	0	0	1	0
	JACKSONVILLE	74	44	81	39	59	0	0.00	-0.55	0.00	9.35	66	41.48	83	93	44	0	0	0	0
	KEY WEST	81	73	84	71	77	2	0.00	-0.49	0.00	8.83	71	27.68	75	85	65	0	0	0	0
	MIAMI	82	64	86	58	73	0	0.16	-0.46	0.16	8.80	49	60.72	108	80	51	0	0	1	0
	ORLANDO	77	53	84	48	65	-2	0.44	-0.11	0.44	9.22	85	43.10	94	90	45	0	0	1	0
	PENSACOLA	75	50	84	40	62	4	0.00	-0.99	0.00	5.78	40	45.40	75	87	56	0	0	0	0
	TALLAHASSEE	73	44	84	36	59	1	0.00	-0.89	0.00	5.22	43	35.59	60	86	52	0	0	0	0
	TAMPA	77	57	83	53	67	0	0.33	-0.13	0.33	8.94	86	56.26	133	88	51	0	0	1	0
	WEST PALM BEACH	81	58	85	53	70	-1	0.11	-1.08	0.11	10.02	52	53.98	93	87	58	0	0	1	0
GA	ATHENS	69	42	78	31	56	6	0.07	-0.77	0.07	7.36	69	41.17	93	76	36	0	1	1	0
	ATLANTA	66	45	77	37	56	5	0.24	-0.74	0.24	7.03	62	39.59	85	72	48	0	0	1	0
	AUGUSTA	68	39	74	31	53	1	0.01	-0.55	0.01	7.52	79	44.76	108	87	42	0	2	1	0
	COLUMBUS	70	44	78	36	57	3	0.02	-1.00	0.02	9.47	101	40.91	93	84	40	0	0	1	0
	MACON	71	39	79	31	55	2	0.01	-0.79	0.01	8.54	96	35.83	87	88	40	0	1	1	0
	SAVANNAH	70	44	81	39	57	1	0.00	-0.50	0.00	14.74	139	45.54	97	92	46	0	0	0	0
HI	HILO	80	68	83	66	74	1	4.29	0.69	2.76	31.82	93	89.20	77	91	83	0	0	7	3
	HONOLULU	87	75	88	72	81	4	0.00	-0.53	0.00	5.91	114	14.97	97	74	64	0	0	0	0
	KAHULUI	89	69	92	64	79	4	0.00	-0.55	0.00	0.65	18	10.38	66	75	64	3	0	0	0
	LIHUE	83	75	84	71	79	4	0.27	-0.80	0.25	13.66	117	31.35	90	84	78	0	0	3	0
ID	BOISE	40	25	47	17	33	-3	0.04	-0.29	0.01	1.14	39	13.35	123	82	62	0	7	4	0
	LEWISTON	40	26	54	18	33	-5	0.10	-0.16	0.09	2.59	87	12.02	103	75	60	0	6	2	0
	POCATELLO	36	20	48	6	28	-3	0.14	-0.11	0.11	2.24	75	11.56	101	81	68	0	7	4	0
IL	CHICAGO/O'HARE	46	33	55	31	40	5	0.99	0.32	0.37	16.19	180	48.03	142	89	71	0	3	3	0
	MOLINE	49	32	57	30	41	6	1.30	0.71	0.44	12.69	146	47.48	132	85	72	0	4	5	0
	PEORIA	50	33	58	30	42	6	0.94	0.24	0.49	14.78	167	50.00	149	86	66	0	3	5	0
	ROCKFORD	46	32	55	29	39	6	0.72	0.13	0.31	15.62	180	49.55	143	87	72	0	4	4	0
	SPRINGFIELD	52	34	62	31	43	5	1.50	0.84	0.81	10.93	131	46.02	139	88	62	0	2	5	1
IN	EVANSVILLE	54	37	63	30	46	4	4.03	3.01	2.91	12.31	124	58.31	143	81	65	0	1	5	2
	FORT WAYNE	47	33	56	24	40	3	0.84	0.15	0.54	7.65	91	36.91	109	91	71	0	2	3	1
	INDIANAPOLIS	49	35	58	31	42	3	1.76	0.92	0.83	7.65	83	45.69	121	91	69	0	1	4	2
	SOUTH BEND	47	33	56	28	40	4	0.70	-0.10	0.29	13.33	128	43.91	120	87	67	0	2	3	0
IA	BURLINGTON	49	33	59	30	41	5	0.65	0.04	0.24	11.67	126	43.60	122	89	62	0	3	4	0
	CEDAR RAPIDS	43	30	54	27	36	4	0.44	-0.04	0.23	10.90	141	40.91	128	97	71	0	6	3	0
	DES MOINES	43	32	56	28	37	4	0.58	0.17	0.35	13.53	172	47.95	144	88	67	0	5	4	0
	DUBUQUE	41	29	51	27	35	4	0.63	0.09	0.35	21.63	253	53.28	158	91	76	0	6	5	0
	SIOUX CITY	41	28	59	24	34	4	0.64	0.40	0.31	7.54	130	32.78	129	90	73	0	6	4	0
	WATERLOO	42	30	53	27	36	6	0.75	0.34	0.39	12.58	167	40.82	127	87	71	0	6	4	0
KS	CONCORDIA	47	32	64	26	39	3	0.29	0.01	0.19	4.68	81	34.02	123	81	64	0	3	3	0
	DODGE CITY	50	28	68	18	39	1	0.16	-0.02	0.15	1.83	44	21.56	100	77	47	0	6	2	0
	GOODLAND	41	23	67	6	32	-2	0.51	0.38	0.45	1.76	59	23.01	119	81	66	0	7	3	0
	TOPEKA	50	32	67	25	41	3	0.83	0.37	0.47	5.72	63	46.61	136	84	58	0	4	4	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending November 30, 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 SEP 1	PCT. NORMAL SINCE SEP 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	54	32	67	25	43	3	0.39	0.02	0.30	4.85	67	40.44	139	84	63	0	3	2	0
KY	JACKSON	54	36	67	33	45	0	3.21	2.16	2.09	11.85	106	51.31	114	91	51	0	0	4	2
	LEXINGTON	54	38	64	36	46	3	3.66	2.78	2.67	13.60	147	50.11	120	75	59	0	0	3	2
	LOUISVILLE	55	39	64	35	47	3	3.89	2.95	2.97	11.31	117	51.09	125	82	56	0	0	4	2
	PADUCAH	57	40	66	32	49	6	1.57	0.42	1.00	12.36	107	68.18	152	83	61	0	1	4	1
LA	BATON ROUGE	75	51	83	36	63	7	0.93	-0.23	0.93	12.07	90	62.08	107	86	47	0	0	1	1
	LAKE CHARLES	76	57	81	41	67	10	0.20	-0.90	0.20	12.83	88	65.07	124	91	57	0	0	1	0
	NEW ORLEANS	75	55	84	41	65	6	0.04	-1.26	0.02	12.98	95	59.74	101	86	54	0	0	2	0
	SHREVEPORT	72	50	77	34	61	8	0.12	-0.95	0.05	8.69	70	41.03	88	80	51	0	0	3	0
ME	CARIBOU	33	22	40	13	28	2	0.86	0.14	0.57	12.42	132	38.94	114	83	69	0	7	3	1
	PORTLAND	43	28	51	20	36	1	1.51	0.46	0.78	9.64	77	43.94	106	81	56	0	5	2	2
MD	BALTIMORE	55	36	64	31	45	2	0.27	-0.47	0.26	7.48	73	35.37	92	77	41	0	1	2	0
MA	BOSTON	51	36	63	25	43	1	1.86	0.97	1.51	10.00	89	44.63	115	72	48	0	2	3	1
	WORCESTER	43	30	57	18	37	1	1.56	0.63	1.34	12.48	94	47.71	105	84	54	0	3	2	1
MI	ALPENA	42	29	50	24	36	5	1.87	1.43	1.79	11.57	160	35.89	135	92	64	0	6	2	1
	GRAND RAPIDS	44	32	54	28	38	3	1.42	0.61	0.77	17.13	164	48.65	141	90	68	0	4	4	2
	HOUGHTON LAKE	41	27	48	24	34	3	0.90	0.44	0.83	11.84	158	36.61	137	87	69	0	7	3	1
	LANSING	44	32	53	28	38	4	0.91	0.28	0.49	11.70	139	39.05	133	88	70	0	5	4	0
	MUSKEGON	44	33	54	30	39	4	1.43	0.70	0.60	17.16	180	47.59	157	85	69	0	3	4	2
	TRAVERSE CITY	43	30	51	28	36	3	0.63	0.04	0.54	13.80	150	40.09	130	87	66	0	6	4	1
MN	DULUTH	33	25	47	13	29	6	1.51	1.09	0.99	12.54	144	34.41	114	88	76	0	7	6	1
	INT'L FALLS	30	23	44	19	27	8	0.26	0.01	0.22	12.40	195	33.36	144	89	75	0	7	3	0
	MINNEAPOLIS	36	30	45	22	33	5	1.36	1.00	0.67	11.43	170	45.31	159	85	71	0	5	4	1
	ROCHESTER	35	28	45	22	32	6	1.26	0.86	0.51	17.05	233	56.27	185	89	80	0	7	6	1
	ST. CLOUD	34	27	45	21	31	7	0.86	0.61	0.48	13.89	207	42.55	161	90	71	0	6	4	0
MS	JACKSON	70	45	77	32	58	6	0.30	-0.94	0.24	16.30	139	58.93	116	82	46	0	1	3	0
	MERIDIAN	71	44	79	35	58	5	0.08	-1.16	0.04	13.73	116	59.11	111	86	47	0	0	3	0
	TUPELO	64	42	72	34	53	5	3.47	2.16	1.63	12.61	107	70.98	143	74	56	0	0	3	2
MO	COLUMBIA	55	35	66	28	45	6	1.61	0.83	1.00	10.24	102	48.48	128	88	54	0	3	4	1
	KANSAS CITY	48	33	62	27	40	2	0.59	0.08	0.38	9.01	88	52.32	144	93	59	0	3	4	0
	SAINT LOUIS	55	36	67	30	45	4	2.89	2.02	1.51	10.12	107	53.18	148	85	60	0	3	5	2
	SPRINGFIELD	55	36	66	29	45	3	1.29	0.22	0.68	13.04	102	53.11	127	88	65	0	2	4	1
MT	BILLINGS	34	19	60	9	27	-4	0.47	0.33	0.30	5.84	174	22.06	157	83	58	0	6	2	0
	BUTTE	24	5	45	-10	15	-8	0.00	-0.11	0.00	2.50	101	12.56	103	79	56	0	7	0	0
	CUT BANK	21	8	44	-13	15	-11	0.16	0.08	0.11	2.67	129	12.68	104	86	67	0	7	4	0
	GLASGOW	34	25	51	21	29	6	0.07	0.01	0.03	6.44	310	19.43	179	82	70	0	6	4	0
	GREAT FALLS	25	10	51	-12	18	-11	0.74	0.63	0.29	4.67	170	18.47	130	85	63	0	7	6	0
	HAVRE	30	16	48	-1	23	-2	0.37	0.29	0.16	4.00	190	13.58	124	87	79	0	7	5	0
	MISSOULA	32	18	48	8	25	-3	0.14	-0.08	0.08	3.88	135	14.60	115	76	65	0	7	3	0
NE	GRAND ISLAND	41	26	63	13	34	2	0.85	0.57	0.49	4.35	81	42.43	168	80	66	0	6	3	0
	LINCOLN	44	28	63	22	36	3	0.40	0.09	0.26	7.50	116	34.02	124	88	64	0	6	5	0
	NORFOLK	41	27	62	18	34	4	1.26	0.98	0.85	5.24	97	31.87	123	85	66	0	7	5	1
	NORTH PLATTE	41	21	67	3	31	0	0.43	0.31	0.29	2.09	63	30.75	160	88	61	0	7	4	0
	OMAHA	44	31	59	28	38	5	0.37	0.00	0.24	12.45	173	39.63	135	91	75	0	5	5	0
	SCOTTSBLUFF	37	21	61	-1	29	-1	0.89	0.72	0.34	3.73	123	30.77	195	88	71	0	7	4	0
	VALENTINE	39	23	65	6	31	2	1.10	0.97	0.43	5.14	145	35.65	186	80	63	0	7	4	0
NV	ELY	34	14	58	1	24	-6	0.63	0.53	0.25	1.76	68	13.83	146	84	63	0	7	3	0
	LAS VEGAS	55	41	65	34	48	-3	0.36	0.30	0.36	1.30	151	5.94	145	61	41	0	0	1	0
	RENO	41	25	55	20	33	-5	0.28	0.09	0.17	0.70	42	9.46	144	82	61	0	7	3	0
	WINNEMUCCA	39	18	54	8	28	-6	0.31	0.14	0.12	1.52	76	8.94	119	80	59	0	7	4	0
NH	CONCORD	43	25	59	16	34	0	2.18	1.40	1.65	9.80	96	38.82	112	86	57	0	6	3	1
NJ	NEWARK	52	36	62	30	44	1	0.70	-0.21	0.69	10.36	94	53.07	124	74	50	0	2	2	1
NM	ALBUQUERQUE	45	27	55	20	36	-5	0.74	0.65	0.34	3.03	113	8.93	99	81	44	0	7	3	0
NY	ALBANY	46	30	58	18	38	2	0.98	0.27	0.87	12.32	126	42.39	120	80	56	0	4	2	1
	BINGHAMTON	41	28	56	17	35	1	0.46	-0.34	0.24	11.39	115	41.58	117	86	72	0	4	3	0
	BUFFALO	45	34	62	26	40	3	0.26	-0.68	0.21	13.91	127	42.28	115	83	63	0	3	2	0
	ROCHESTER	45	32	61	22	38	2	0.27	-0.40	0.20	9.54	107	30.85	99	83	64	0	3	2	0
	SYRACUSE	45	29	60	18	37	1	0.31	-0.59	0.16	11.61	104	43.56	118	86	63	0	5	2	0
NC	ASHEVILLE	60	39	76	31	49	5	0.85	-0.01	0.63	11.26	105	52.97	121	76	43	0	2	2	1
	CHARLOTTE	61	40	65	31	51	1	0.76	0.04	0.63	9.59	88	48.71	121	81	44	0	1	2	1
	GREENSBORO	57	37	62	29	47	0	1.46	0.77	1.08	9.95	95	48.04	120	88	47	0	1	2	1
	HATTERAS	64	48	73	43	56	1	0.37	-0.65	0.28	***	***	55.76	105	91	57	0	0	2	0
	RALEIGH	60	39	65	32	49	1	0.78	0.10	0.31	7.75	74	40.14	100	87	49	0	1	3	0
	WILMINGTON	66	41	76	35	53	-1	0.05	-0.78	0.05	16.61	125	42.67	80	95	44	0	0	1	0
ND	BISMARCK	35	27	56	21	31	8	0.50	0.39	0.46	10.96	305	30.20	184	83	73	0	6	2	0
	DICKINSON	33	23	56	18	28	4	0.00	-0.08	0.00	7.99	225	25.37	158	90	70	0	6	0	0
	FARGO	34	26	46	22	30	9	0.42	0.27	0.37	9.90	190	33.00	160	90	73	0	7	3	0
	GRAND FORKS	32	25	39	21	29	9	0.40	0.25	0.25	14.19	305	31.03	163	86	74	0	7	3	0
	JAMESTOWN	34	26	53	20	30	8	0.02	-0.09	0.02	8.80	229	30.06	167	94	72	0	6	1	0
	WILLISTON	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0	0	0	0
OH	AKRON-CANTON	47	35	59	32	41	3	0.28	-0.46	0.26	8.04	89	43.81	123	86	68	0	1	2	0
	CINCINNATI	51	36	58	33	44	3	1.45	0.65	0.97	7.33	79	51.64	131	84	64	0	0	3	1
	CLEVELAND	49	37	61	30	43	5	0.20	-0.63	0.19	6.81	69	39.14	110	80	59	0	1	2	0
	COLUMBUS	48	35	59	31	42	2	0.38	-0.39	0.31	6.42	76	42.25	119	82	61	0	1	3	0
	DAYTON	48	36	57	31	42	3	0.76	-0.01	0.37	5.63	65	40.86	112	87	65	0	1	3	0
	MANSFIELD	47	35	59	31	41	4	0.25	-0.64	0.24	8.24	83	46.85	117	90	64	0	1	2	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending November 30, 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 SEP 1	PCT. NORMAL SINCE SEP 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	47	35	58	31	41	4	0.44	-0.22	0.36	9.08	114	42.58	139	80	63	0	1	2	0
	YOUNGSTOWN	47	35	59	32	41	4	0.35	-0.42	0.28	11.16	118	51.76	148	79	64	0	2	2	0
OK	OKLAHOMA CITY	58	35	69	28	46	1	0.26	-0.18	0.17	6.57	68	44.70	132	92	49	0	3	3	0
	TULSA	59	38	73	33	49	3	0.98	0.21	0.37	14.69	120	58.71	147	86	56	0	0	3	0
OR	ASTORIA	47	32	54	24	39	-6	0.30	-2.31	0.15	15.36	82	41.01	72	86	66	0	4	3	0
	BURNS	35	9	52	-10	22	-7	0.45	0.17	0.26	1.97	85	13.37	144	81	70	0	7	3	0
	EUGENE	44	28	53	20	36	-7	0.71	-1.44	0.36	7.77	58	30.98	73	89	80	0	6	5	0
	MEDFORD	44	29	52	26	36	-5	0.22	-0.52	0.09	2.76	55	17.48	113	93	64	0	6	4	0
	PENDLETON	41	27	55	12	34	-4	0.04	-0.34	0.02	1.84	57	11.58	103	75	61	0	4	2	0
	PORTLAND	47	35	51	26	41	-3	0.30	-1.12	0.15	6.91	68	22.30	71	73	57	0	2	3	0
	SALEM	45	30	52	20	38	-5	0.33	-1.30	0.17	6.22	57	25.94	77	85	64	0	3	3	0
PA	ALLENTOWN	51	32	63	28	42	3	0.71	-0.16	0.71	10.93	96	57.41	137	74	48	0	4	1	1
	ERIE	46	37	57	31	42	2	0.93	-0.01	0.52	10.92	87	39.79	102	76	62	0	1	3	1
	MIDDLETOWN	52	34	60	32	43	2	0.84	-0.01	0.84	11.79	118	44.81	120	77	45	0	2	1	1
	PHILADELPHIA	52	35	61	32	43	-1	0.68	-0.09	0.68	7.15	73	45.08	116	76	54	0	2	1	1
	PITTSBURGH	47	35	62	32	41	2	0.21	-0.53	0.12	14.10	166	50.85	145	83	56	0	1	3	0
	WILKES-BARRE	48	32	60	26	40	2	0.43	-0.29	0.35	9.31	93	47.58	136	79	52	0	4	3	0
	WILLIAMSPORT	47	31	57	27	39	1	0.61	-0.24	0.59	10.00	93	46.77	121	81	57	0	5	2	1
RI	PROVIDENCE	50	33	60	24	41	0	1.57	0.57	1.43	9.56	81	43.87	104	81	53	0	2	3	1
SC	CHARLESTON	67	42	76	36	54	-2	0.00	-0.63	0.00	10.78	92	40.67	84	91	41	0	0	0	0
	COLUMBIA	66	40	73	32	53	1	0.03	-0.61	0.03	7.35	76	33.19	74	82	45	0	1	1	0
	FLORENCE	65	41	74	35	53	0	0.00	-0.58	0.00	9.49	103	38.71	94	82	38	0	0	0	0
	GREENVILLE	62	41	66	32	51	3	0.14	-0.71	0.10	8.60	74	44.90	97	81	43	0	1	2	0
SD	ABERDEEN	37	27	60	23	32	8	0.81	0.72	0.60	9.07	216	31.19	157	81	70	0	7	3	1
	HURON	38	27	59	20	32	6	0.76	0.63	0.60	7.51	175	40.52	198	88	68	0	6	2	1
	RAPID CITY	37	21	62	11	29	-1	0.72	0.65	0.49	6.52	212	36.12	223	85	67	0	7	3	0
	SIOUX FALLS	38	26	54	23	32	6	0.68	0.45	0.41	6.84	117	37.37	155	79	69	0	7	4	0
TN	BRISTOL	54	35	67	28	45	2	2.23	1.44	1.92	11.87	140	53.40	141	89	55	0	2	3	1
	CHATTANOOGA	63	41	71	34	52	4	2.21	1.00	1.18	12.66	102	58.27	117	86	49	0	0	3	2
	KNOXVILLE	57	38	68	30	47	1	2.30	1.28	1.40	11.21	116	59.44	136	88	51	0	2	4	2
	MEMPHIS	62	45	70	32	53	4	2.15	0.65	1.39	17.39	140	69.63	142	83	54	0	1	3	1
	NASHVILLE	60	40	67	33	50	4	2.81	1.68	1.47	11.87	109	59.82	137	81	47	0	0	3	2
TX	ABILENE	65	42	80	35	53	3	0.21	-0.01	0.19	3.20	45	22.18	99	76	50	0	0	2	0
	AMARILLO	50	29	62	19	39	-2	0.49	0.41	0.32	7.91	195	24.89	130	79	42	0	6	3	0
	AUSTIN	74	51	87	36	63	6	0.21	-0.32	0.17	3.61	38	28.43	91	81	57	0	0	2	0
	BEAUMONT	75	60	81	41	67	9	0.19	-0.94	0.19	31.75	205	85.41	156	90	63	0	0	1	0
	BROWNSVILLE	81	64	85	49	73	8	0.17	-0.15	0.17	8.02	74	21.71	82	92	68	0	0	1	0
	CORPUS CHRISTI	81	60	91	49	70	8	0.15	-0.18	0.13	9.86	92	22.88	75	92	59	1	0	2	0
	DEL RIO	76	54	88	42	65	9	0.00	-0.17	0.00	1.76	35	15.02	86	71	49	1	0	0	0
	EL PASO	60	42	72	38	51	2	0.94	0.83	0.84	4.56	161	7.30	84	75	36	0	0	2	1
	FORT WORTH	66	45	74	36	56	4	0.85	0.35	0.44	6.22	68	33.35	104	82	40	0	0	3	0
	GALVESTON	74	64	79	51	69	6	0.00	-0.87	0.00	31.33	243	59.25	147	97	68	0	0	0	0
	HOUSTON	77	60	82	42	68	10	0.08	-0.83	0.08	21.88	168	51.10	116	82	57	0	0	1	0
	LUBBOCK	55	33	72	25	44	0	0.39	0.25	0.31	8.14	163	23.76	132	78	47	0	3	3	0
	MIDLAND	66	40	77	36	53	4	0.33	0.22	0.17	2.40	51	13.80	98	74	43	0	0	2	0
	SAN ANGELO	70	42	84	31	56	5	0.31	0.12	0.24	1.97	30	16.46	82	78	46	0	1	3	0
	SAN ANTONIO	75	53	85	40	64	7	0.21	-0.27	0.17	6.24	66	21.53	70	82	47	0	0	2	0
	VICTORIA	77	58	84	42	68	8	0.10	-0.45	0.06	8.85	74	24.71	66	85	62	0	0	3	0
	WACO	71	48	85	33	59	6	0.19	-0.40	0.11	4.82	53	32.31	106	84	58	0	0	3	0
	WICHITA FALLS	60	38	76	30	49	1	0.60	0.27	0.43	6.15	77	27.18	100	90	71	0	2	3	0
UT	SALT LAKE CITY	38	27	48	20	33	-2	1.05	0.75	0.45	3.22	75	18.48	121	91	67	0	7	4	0
VT	BURLINGTON	41	28	53	17	35	2	1.15	0.49	0.76	15.43	154	41.70	123	84	62	0	6	2	1
VA	LYNCHBURG	56	34	67	28	45	1	0.45	-0.29	0.30	8.59	82	37.26	93	84	51	0	3	2	0
	NORFOLK	60	42	69	34	51	1	0.34	-0.31	0.19	8.64	82	44.26	104	80	47	0	0	2	0
	RICHMOND	56	38	66	30	47	1	0.08	-0.59	0.03	6.91	65	40.94	100	84	46	0	1	3	0
	ROANOKE	57	38	68	34	47	3	0.58	-0.15	0.36	8.94	88	40.43	102	79	53	0	0	2	0
	WASH/DULLES	53	35	62	28	44	2	0.21	-0.53	0.19	8.01	76	37.85	98	76	44	0	3	2	0
WA	OLYMPIA	46	26	54	16	36	-5	0.20	-1.81	0.16	10.44	73	27.65	64	83	72	0	5	2	0
	QUILLAYUTE	46	31	53	20	38	-5	0.25	-3.32	0.20	28.96	101	66.25	76	84	69	0	3	2	0
	SEATTLE-TACOMA	47	35	52	26	41	-2	0.20	-1.25	0.11	8.72	81	25.94	83	73	59	0	3	2	0
	SPOKANE	33	21	44	15	27	-4	0.04	-0.53	0.04	4.20	103	13.32	92	78	55	0	7	1	0
	YAKIMA	42	19	57	5	31	-2	0.00	-0.27	0.00	1.10	56	7.87	114	73	55	0	6	0	0
WV	BECKLEY	50	32	64	28	41	0	1.40	0.70	0.72	9.24	106	44.86	116	83	60	0	5	3	2
	CHARLESTON	53	35	70	29	44	1	1.16	0.27	0.66	9.43	96	43.45	107	87	47	0	2	3	1
	ELKINS	52	31	67	22	42	4	0.23	-0.60	0.15	8.12	80	46.83	110	79	59	0	3	3	0
	HUNTINGTON	53	36	69	32	45	2	1.83	1.03	1.07	9.13	103	45.79	118	87	53	0	1	3	2
WI	EAU CLAIRE	38	28	47	15	33	6	1.11	0.73	0.60	13.13	166	43.70	141	87	67	0	6	4	1
	GREEN BAY	41	33	48	30	37	7	1.68	1.20	0.95	17.19	228	46.89	169	87	66	0	3	4	2
	LA CROSSE	40	31	50	28	36	5	1.33	0.89	0.46	13.69	179	44.15	142	87	66	0	5	5	0
	MADISON	42	30	51	27	36	5	1.14	0.63	0.71	15.70	207	47.19	151	90	76	0	6	3	1
	MILWAUKEE	45	33	53	29	39	5	1.03	0.41	0.52	15.63	184	44.56	137	82	71	0	3	3	1
WY	CASPER	28	10	46	-9	19	-9	1.32	1.15	0.75	4.92	167	19.81	160	87	76	0	6	4	1
	CHEYENNE	32	15	56	-5	23	-7	6.33	6.19	5.62	8.25	293	28.37	189	80	70	0	6	3	1
	LANDER	28	11	47	2	19	-7	1.30	1.11	0.37	5.00	143	20.56	160	95	66	0	7	5	0
	SHERIDAN	35	17	60	4	26	-1	0.30	0.16	0.12	4.80	134	21.02	150	77	61	0	6	4	0

Based on 1971-2000 normals

***** Not Available**

National Agricultural Summary

November 25 – December 1, 2019

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

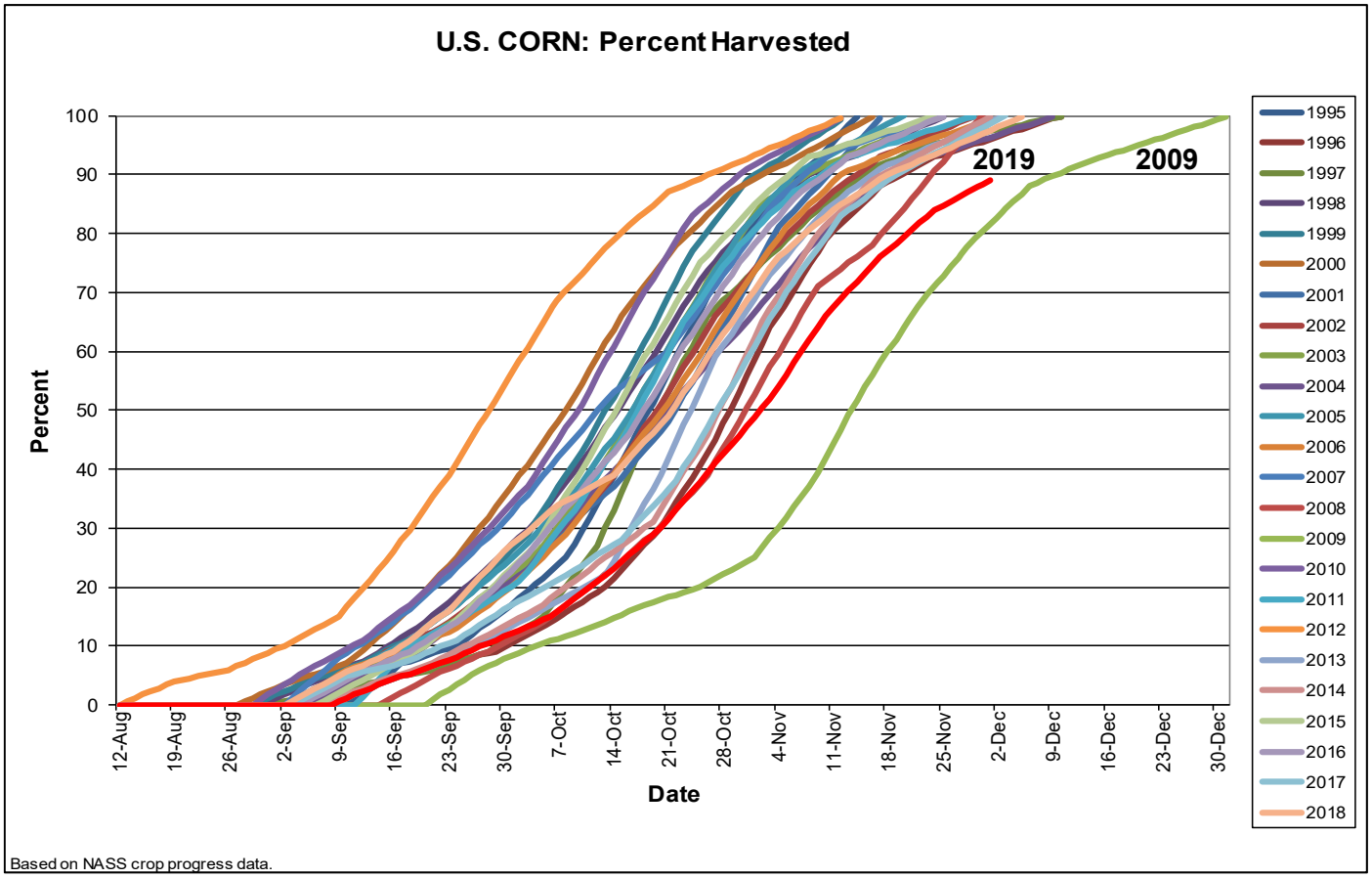
Except for parts of the East Coast, Gulf Coast States, and Pacific Northwest, most of the nation received above-normal precipitation. Portions of Arizona, California, New Mexico, Indiana, and Kentucky received at least 3 inches of precipitation. Weekly temperatures were more than 2°F below normal across most of the western half of the country. Parts of California, Colorado, Montana, Nevada, and Wyoming were more than 10°F below normal. In contrast, temperatures were 10°F or more above normal in parts of Louisiana, Minnesota, and Texas.

Corn: Eighty-nine percent of the acreage was harvested by week's end, 8 percentage points behind last year and 9 points behind the 5-year average. Harvest progress was behind the average pace by 18 percentage points or more in Michigan, North Dakota, South Dakota, and Wisconsin.

Soybeans: Soybean harvest was 96 percent complete, 1 percentage point behind last year and 3 points behind the 5-year average. Harvest progress was behind average by 12 percentage points or more in Michigan and Wisconsin.

Cotton: By December 1, eighty-three percent of the nation's cotton acreage was harvested, 9 percentage points ahead of last year and 2 points ahead of the 5-year average. Harvest progress advanced 9 percentage points or more from the previous week in Arizona and Oklahoma.

Sunflowers: By December 1, sixty-five percent of this year's sunflower crop was harvested, 16 percentage points behind last year and 29 points behind the 5-year average. Harvest progress advanced 10 percentage points or more from the previous week in North Dakota and South Dakota. However, harvest progress was behind the average pace in North Dakota and South Dakota by 43 and 23 percentage points, respectively.



Crop Progress and Condition

Week Ending December 1, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Corn Percent Harvested

	Prev Year	Prev Week	Dec 1 2019	5-Yr Avg
CO	100	96	98	99
IL	100	88	93	100
IN	99	89	93	98
IA	98	86	92	99
KS	96	97	99	99
KY	99	99	100	100
MI	89	56	66	89
MN	99	86	91	99
MO	100	92	95	100
NE	99	93	96	99
NC	100	100	100	100
ND	87	30	36	95
OH	90	83	90	95
PA	82	80	86	88
SD	94	68	80	98
TN	100	100	100	100
TX	98	98	100	99
WI	94	57	66	91
18 Sts	97	84	89	98

These 18 States harvested 94% of last year's corn acreage.

Soybeans Percent Harvested

	Prev Year	Prev Week	Dec 1 2019	5-Yr Avg
AR	93	96	98	98
IL	100	95	100	100
IN	98	94	96	99
IA	100	97	98	100
KS	95	95	97	98
KY	90	92	96	95
LA	99	100	100	100
MI	92	80	85	97
MN	100	98	99	100
MS	98	98	99	99
MO	98	91	96	96
NE	100	100	100	100
NC	71	67	75	77
ND	95	89	92	99
OH	97	93	95	99
SD	100	99	100	100
TN	88	91	95	95
WI	99	82	86	99
18 Sts	97	94	96	99

These 18 States harvested 96% of last year's soybean acreage.

Cotton Percent Harvested

	Prev Year	Prev Week	Dec 1 2019	5-Yr Avg
AL	78	92	94	86
AZ	78	70	86	77
AR	99	98	99	100
CA	84	90	93	92
GA	72	85	89	83
KS	47	64	71	64
LA	100	99	100	100
MS	96	94	97	99
MO	100	91	95	97
NC	85	89	93	89
OK	80	74	83	76
SC	65	92	95	81
TN	95	88	95	96
TX	60	68	74	65
VA	93	93	95	96
15 Sts	74	78	83	81

These 15 States harvested 99% of last year's cotton acreage.

Sunflowers Percent Harvested

	Prev Year	Prev Week	Dec 1 2019	5-Yr Avg
CO	89	97	98	96
KS	88	94	97	93
ND	86	41	51	94
SD	81	60	71	94
4 Sts	81	56	65	94

These 4 States harvested 86% of last year's sunflower acreage.

VP - Very Poor; P - Poor; F - Fair; G - Good; EX - Excellent

NA - Not Available; *Revised

International Weather and Crop Summary

November 24-30, 2019

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

EUROPE: Mild, unsettled weather continued, with additional heavy rain and localized flooding in parts of southern and western Europe.

MIDDLE EAST: Much-needed rain eased drought in Turkey, though moisture shortages continued across some western and central crop areas.

NORTHWESTERN AFRICA: Sunny skies favored winter grain development, though drought lingered in southwestern Morocco.

SOUTHEAST ASIA: Rainfall increased in Java, Indonesia, but significant early-season moisture deficits remained for wet-season rice.

AUSTRALIA: A band of rain brought some drought relief to northeastern Australia.

SOUTH AFRICA: Drier weather promoted summer crop planting, following recent weeks of beneficial rain.

ARGENTINA: Rain further improved prospects for newly planted summer grains, oilseeds, and cotton.

BRAZIL: Widespread, locally heavy showers maintained generally favorable conditions for soybeans and other summer crops.

November 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	21	11	29	4	16	1.1	101	19
	BATNA	16	5	23	-2	10	-0.2	45	28
ARGENT	IGUAZU	32	20	37	14	26	2.1	142	6
	FORMOSA	33	22	40	16	28	3	127	-42
	CERES	31	19	39	12	25	2.5	81	-21
	CORDOBA	29	16	35	10	22	1.8	113	3
	RIO CUARTO	28	16	34	11	22	2.6	209	76
	ROSARIO	29	16	35	10	23	2.1	89	-22
	BUENOS AIRES	28	15	36	9	21	2.3	30	-63
	SANTA ROSA	30	15	38	8	22	3.1	86	-10
	TRES ARROYOS	24	12	31	4	18	1.1	40	-45
AUSTRA	DARWIN	34	26	36	22	30	0.4	29	-105
	BRISBANE	27	20	30	13	23	1	31	-76
	PERTH	30	14	41	6	22	2.6	14	-12
	CEDUNA	25	12	45	3	18	-0.7	0	-20
	ADELAIDE	22	13	39	8	18	-0.6	6	-15
	MELBOURNE	22	10	43	4	16	0.6	51	1
	WAGGA	27	11	40	5	19	1.3	63	22
	CANBERRA	27	10	39	2	18	2.5	13	-54
AUSTRI	VIENNA	11	6	19	-2	8	3.6	95	50
	INNSBRUCK	9	2	17	-4	6	2.6	118	52
BAHAMA	NASSAU	29	22	32	19	26	1.3	34	-34
BARBAD	BRIDGETOWN	31	25	32	23	28	0.6	98	-34
BELARU	MINSK	6	3	16	-8	4	3.6	68	19
BERMUD	ST GEORGES	24	20	27	15	22	0.2	124	34
BOLIVI	LA PAZ	16	3	20	0	10	0	103	49
BRAZIL	FORTALEZA	31	26	33	25	29	0.5	2	-23
	RECIFE	30	26	31	24	28	-0.5	5	-23
	CAMPO GRANDE	32	23	37	19	27	1.7	168	17
	FRANCA	28	19	33	18	24	1.3	211	58
	RIO DE JANEIRO	28	22	40	19	25	-0.1	52	-47
	LONDRINA	32	20	38	16	26	3.2	168	-2
	SANTA MARIA	28	18	36	14	23	1.3	161	38
	TORRES	24	18	28	13	21	-1.8	85	-56
BULGAR	SOFIA	14	7	24	1	10	5.5	46	3
BURKIN	OUAGADOUGOU	37	22	38	19	30	2.1	0	-3
CANADA	LETHBRIDGE	4	-8	15	-28	-2	*****	18	******
	REGINA	-1	-10	9	-25	-5	*****	11	******
	WINNIPEG	-2	-8	5	-17	-5	*****	16	******
	TORONTO	5	-3	12	-14	1	-2.2	41	-28
	MONTREAL	2	-5	11	-14	-1	-3	68	-23
	PRINCE ALBERT	-3	-11	10	-23	-7	0.9	8	-8
	CALGARY	3	-7	15	-21	-2	1	43	31
	VANCOUVER	10	2	14	-6	6	-0.2	86	-94
CANARY	LAS PALMAS	24	19	30	16	21	0.7	7	-10
CHILE	SANTIAGO	30	12	35	8	21	4.2	0	-5
CHINA	HARBIN	0	-9	10	-17	-5	0.2	17	8
	HAMI	9	-6	21	-16	2	1.3	0	-2
	BEIJING	10	2	19	-7	6	1.5	75	67
	TIENTSIN	12	3	20	-5	8	1.8	12	2
	LHASA	16	0	19	-3	8	4.1	5	4
	KUNMING	20	10	25	4	15	2.8	12	-30
	CHENGCHOW	16	7	23	-2	11	3.3	8	-14
	YEHCHANG	17	10	26	2	14	1.1	39	-7
	HANKOW	18	9	27	0	14	1.4	123	74
	CHUNGKING	16	13	23	8	15	0.2	112	64
	CHIHKIANG	18	11	26	5	14	1.6	111	57
	WU HU	19	9	27	1	14	2.1	62	4
	SHANGHAI	19	11	25	5	15	1.6	61	8
	NANCHANG	20	12	29	5	16	2.8	31	-26
	TAIPEI	25	20	31	16	22	0.9	10	-62
	CANTON	27	15	31	11	21	1.1	0	-35
	NANNING	25	17	30	11	21	1.5	11	-30
COLOMB	BOGOTA	20	10	23	6	15	1.6	193	106
COTE D	ABIDJAN	31	25	32	22	28	0.6	141	9
CUBA	CAMAGUEY	30	21	33	17	25	0.8	71	5
CYPRUS	LARNACA	26	16	29	12	21	4	7	-46
CZECHR	PRAGUE	8	3	13	-4	5	2.6	34	5
DENMAR	COPENHAGEN	8	5	12	-2	7	1.9	48	3
EGYPT	CAIRO	27	18	32	12	23	3.4	0	-5

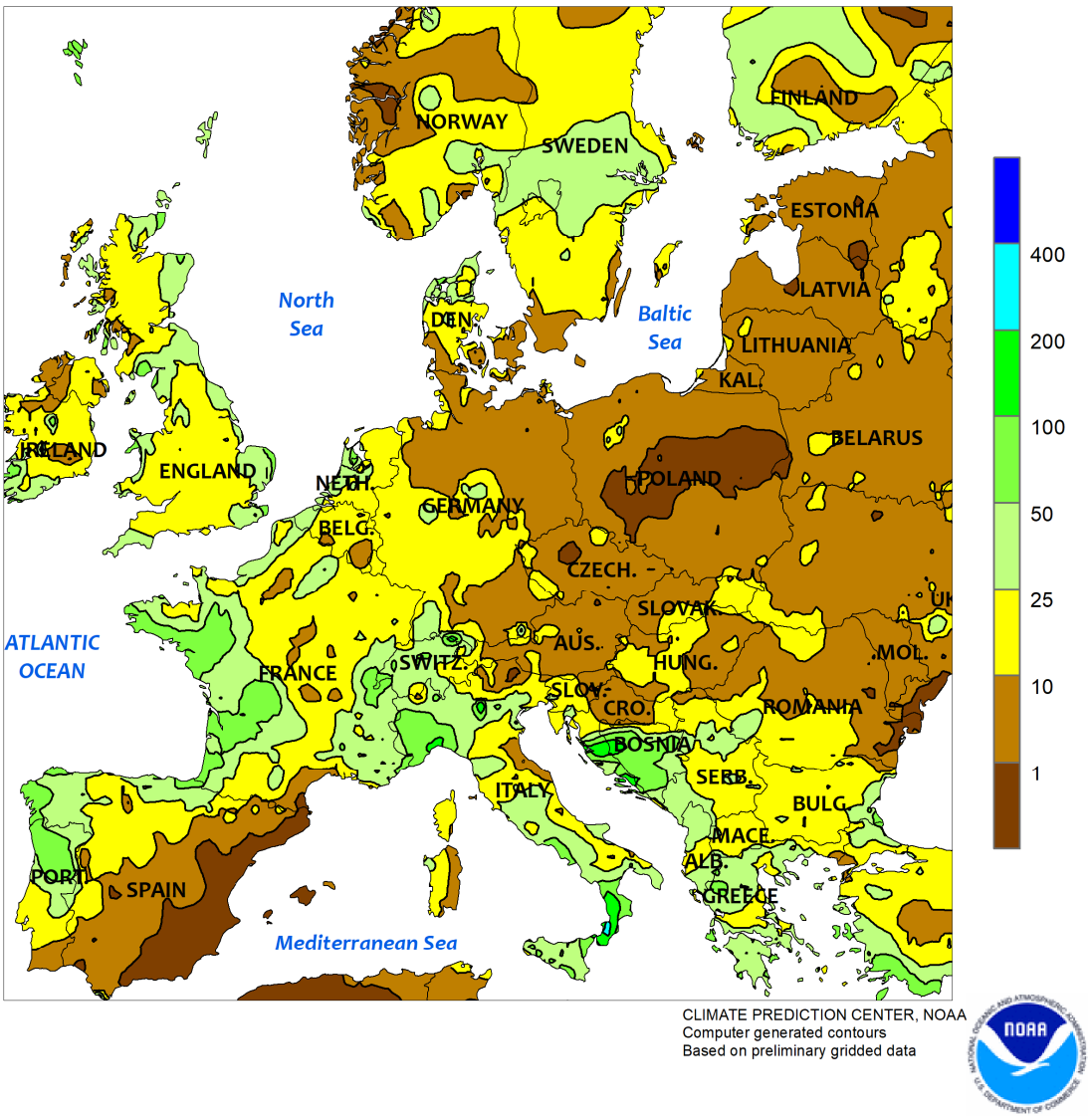
Based on Preliminary Reports

November 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ESTONI	TALLINN	4	2	12	-6	3	2.2	32	-36
ETHIOP	ADDIS ABABA	23	11	25	9	***	*****	18	10
F GUIA	CAYENNE	33	23	34	22	28	1.6	141	-12
FIJI	NAUSORI	28	21	31	18	25	0.0	207	-37
FINLAN	HELSINKI	3	0	11	-7	2	1.5	97	26
FRANCE	PARIS/ORLY	11	6	16	-1	8	1.0	99	50
	STRASBOURG	10	3	20	-2	6	1.3	30	-18
	BOURGES	11	6	16	-1	9	2.0	87	24
	BORDEAUX	13	7	19	-1	10	1.0	217	113
	TOULOUSE	13	6	18	-1	10	0.9	101	51
	MARSEILLE	15	8	22	0	11	0.9	203	153
GABON	LIBREVILLE	30	27	32	24	29	2.8	171	-352
GERMAN	HAMBURG	8	4	15	-1	6	0.9	63	-7
	BERLIN	9	5	16	-2	7	2.1	32	-12
	DUSSELDORF	10	4	16	-2	7	-0.1	88	26
	LEIPZIG	9	3	18	-3	6	1.7	34	-1
	DRESDEN	9	4	14	-1	7	2.2	25	-18
	STUTTGART	9	2	18	-3	5	1.1	33	-12
	NURNBERG	9	3	17	-2	6	2.2	37	-7
	AUGSBURG	8	3	17	-4	5	1.6	41	-10
GREECE	THESSALONIKA	19	12	23	8	16	5.1	56	-2
	LARISSA	19	10	24	5	15	4.5	76	4
	ATHENS	22	15	25	11	18	3.4	126	58
GUADEL	RAIZET	31	23	32	21	27	0.6	98	-98
HONGKO	HONG KONG INT	27	21	31	16	24	2.4	0	-36
HUNGAR	BUDAPEST	12	6	19	1	9	4.8	87	38
ICELAN	REYKJAVIK	4	1	7	-5	3	1.3	51	-31
INDIA	AMRITSAR	25	13	30	10	19	0.7	56	49
	NEW DELHI	28	15	32	12	21	0.9	2	-6
	AHMEDABAD	32	21	34	16	26	1.7	4	-6
	INDORE	29	18	32	14	24	1.6	3	-12
	CALCUTTA	30	21	32	17	25	0.8	118	81
	VERAVAL	32	23	35	20	27	1.0	22	-4
	BOMBAY	34	23	35	21	28	1.1	109	104
	POONA	30	17	32	14	24	1.5	95	68
	BEGAMPET	31	20	33	17	25	2.1	2	-27
	VISHAKHAPATNAM	31	24	33	23	28	1.7	0	-102
	MADRAS	32	24	35	23	28	1.8	300	-55
	MANGALORE	33	24	36	22	29	0.9	36	-30
INDONE	SERANG	35	24	37	22	29	1.6	103	-47
IRELAN	DUBLIN	9	4	13	-2	6	-1.2	178	113
ITALY	MILAN	12	7	19	2	10	2.3	229	153
	VERONA	13	7	19	1	10	3.5	205	139
	VENICE	14	9	19	5	11	3.2	141	71
	GENOA	15	11	20	7	13	0.5	619	517
	ROME	18	12	23	6	15	2.6	240	144
	NAPLES	19	12	22	5	15	2.6	382	243
JAMAIC	KINGSTON	32	24	35	23	28	0.7	78	-12
JAPAN	SAPPORO	7	1	17	-5	4	-0.3	85	-17
	NAGOYA	18	10	23	3	14	2.0	20	-60
	TOKYO	17	10	24	2	14	0.5	158	66
	YOKOHAMA	18	11	24	4	14	1.1	117	18
	KYOTO	18	10	23	4	14	1.1	27	-36
	OSAKA	19	11	25	5	15	1.3	2	-62
KAZAKH	KUSTANAY	-4	-10	10	-25	-7	-1.0	24	1
	TSELINOGRAD	-6	-10	3	-26	-8	-1.4	60	34
	KARAGANDA	-4	-11	6	-27	-7	-1.8	35	8
KENYA	NAIROBI	25	17	27	15	21	1.3	187	72
LIBYA	BENGHAZI	24	15	31	12	20	1.9	76	34
LITHUA	KAUNAS	7	3	13	-4	5	3.1	23	-24
LUXEMB	LUXEMBOURG	7	3	14	-2	5	1.1	92	14
MALAYS	KUALA LUMPUR	33	25	35	23	29	2.1	312	24
MALI	BAMAKO	36	19	37	15	28	0.3	28	23
MARSHA	MAJURO	30	27	32	24	28	1.0	378	58
MARTIN	LAMENTIN	31	24	34	21	27	1.5	199	-2
MAURIT	NOUAKCHOTT	34	18	39	13	26	0.1	0	-3
MEXICO	GUADALAJARA	26	14	28	10	20	2.3	79	66
	TLAXCALA	24	10	26	6	17	1.9	75	57
	ORIZABA	22	15	28	12	18	1.0	81	5
MOROCC	CASABLANCA	20	13	25	7	17	0.5	41	-12
	MARRAKECH	23	11	31	5	17	0.9	9	-15
MOZAMB	MAPUTO	30	22	41	19	26	1.8	67	-7
N KORE	PYONGYANG	11	1	21	-8	6	1	32	-9
NEW CA	NOUMEA	28	21	31	18	24	0.4	2	-68
NIGER	NIAMEY	39	24	40	18	31	3.3	0	-1
NORWAY	OSLO	0	-2	4	-10	-1	-0.5	127	39
NZEALA	AUCKLAND	21	14	25	10	17	*****	41	******
	WELLINGTON	19	13	23	8	16	*****	107	******
P RICO	SAN JUAN	31	25	33	23	28	1.4	110	-47
PAKIST	KARACHI	31	20	38	15	26	1.5	0	******
PERU	LIMA	23	18	25	15	20	0.9	0	-1
PHILIP	MANILA	31	26	33	24	28	0.5	104	-38
PNEWGU	PORT MORESBY	29	24	31	22	27	-0.6	92	39
POLAND	WARSAW	9	4	17	-5	6	3.6	12	-24
	LODZ	9	3	15	-7	6	3.5	12	-29
	KATOWICE	11	3	17	-5	7	3.8	34	-15
PORTUG	LISBON	18	13	23	7	15	1.3	132	30
ROMANI	BUCHAREST	14	6	25	-2	10	5.6	65	26
RUSSIA	ST.PETERSBURG	3	1	10	-7	2	1.9	29	-25
	KAZAN	0	-4	15	-16	-2	1.8	17	-30
	MOSCOW	4	0	13	-11	2	3.5	37	-21
	YEKATERINBURG	-3	-8	7	-25	-6	0.5	23	-6
	OMSK	-6	-12	6	-27	-9	-0.9	9	-20
	BARNAUL	-6	-12	14	-33	-9	-2.2	48	19
	KHABAROVSK	-5	-11	7	-20	-8	-0.2	36	13
	VLADIVOSTOK	2	-4	12	-13	-1	0.1	85	59
	VOLGOGRAD	4	-3	21	-15	1	0.9	7	-24
	ASTRAKHAN	7	-2	18	-15	3	-0.3	0	-17
	ORENBURG	-1	-7	10	-20	-4	-0.2	10	-26
S AFRI	JOHANNESBURG	28	15	31	9	21	3.2	143	26
	BETHAL	***	***	27	14	***	*****	*****	******
	DURBAN	26	19	31	16	23	0.9	46	-66
	CAPE TOWN	24	15	33	9	19	1.2	1	-17
S KORE	SEOUL	13	4	22	-5	8	0.7	80	17
SAMOA	PAGO PAGO	30	26	32	23	28	0.5	191	-92
SENEGA	DAKAR	29	23	35	22	26	0.4	0	-3
SPAIN	VALLADOLID	12	6	19	-1	9	1.1	60	12
	MADRID	14	7	22	-2	11	0.7	23	-29
	SEVILLE	19	11	28	2	15	-0.3	63	-34
SWITZE	ZURICH	8	4	16	-1	6	1.8	64	-24
	GENEVA	10	4	17	-1	7	1.5	115	30
SYRIA	DAMASCUS	22	7	28	-1	15	2.8	28	5
TAHITI	PAPEETE	30	25	32	23	28	1.2	84	-47
TANZAN	DAR ES SALAAM	31	24	33	22	28	1.3	327	212
THAILA	PHITSANULOK	33	22	36	19	28	1.0	13	-19
	BANGKOK	34	25	37	23	30	2.2	7	-42
TOGO	TABLIGBO	33	24	36	21	29	1.5	46	10
TRINID	PORT OF SPAIN	32	24	34	23	28	1.4	205	7
TUNISI	TUNIS	21	13	27	9	17	0.8	42	-22
TURKEY	ISTANBUL	20	13	25	8	17	5.4	25	-56
	ANKARA	16	0	22	-7	8	3.3	36	-4
TURKME	ASHKHABAD	13	2	24	-6	8	-2.2	6	-14
UKINGD	ABERDEEN	7	3	11	-5	5	-0.2	175	92
	LONDON	10	4	16	-2	7	-0.7	84	34
UKRAIN	KIEV	7	2	19	-10	5	3.3	27	-21
	LVOV	9	4	17	-6	7	4.4	44	0
	KIROVOGRAD	8	2	19	-11	5	4.1	21	-14
	ODESSA	12	7	22	-3	10	4.2	6	-37
	KHARKOV	6	1	17	-12	4	3.0	18	-26
UZBEKI	TASHKENT	11	2	25	-6	6	-2.0	40	-8
YUGOSL	BELGRADE	17	10	25	3	13	6.6	55	1
ZAMBIA	LUSAKA	30	23	36	17	***	*****	17	-75
ZIMBAB	KADOMA	***	***	35	15	***	*****	*****	******

Based on Preliminary Reports

EUROPE
Total Precipitation (mm)
November 24 - 30, 2019

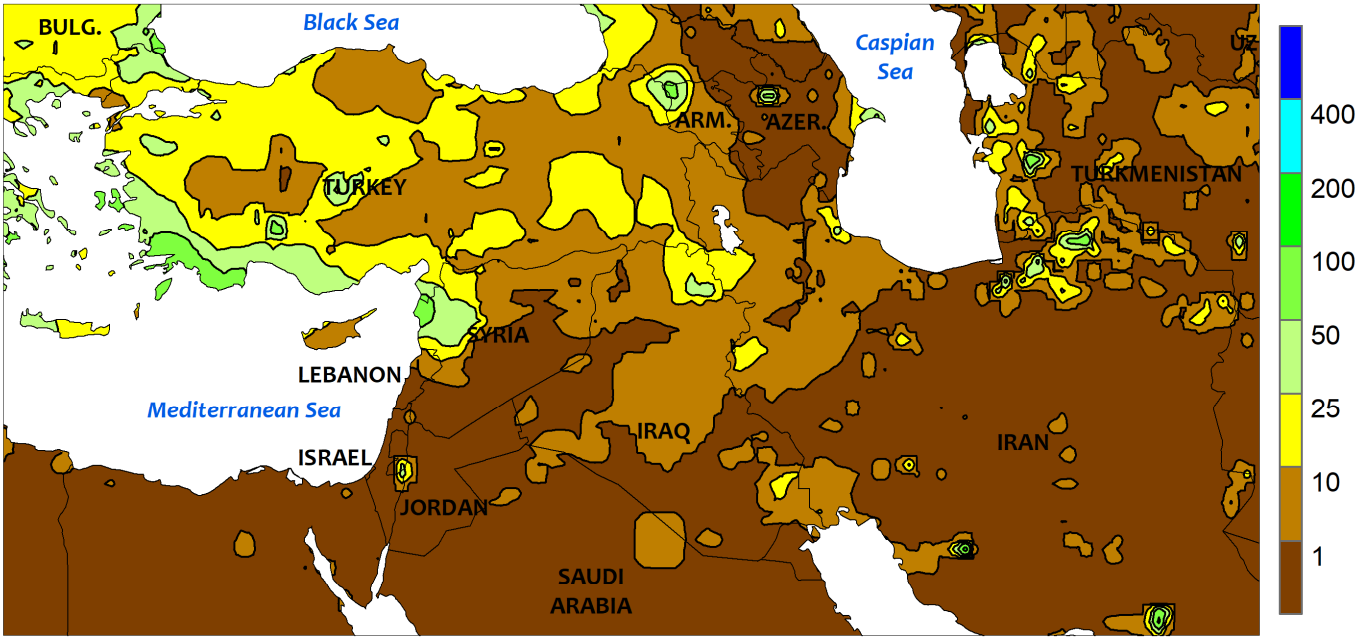


EUROPE

With a strong high to the east acting as a block, slow-moving storms continued to bring drenching rains to much of western and southern Europe. The result was another round of widespread moderate to heavy rainfall (5-70 mm, locally more) from England into France, Germany, Italy, and the northern Iberian Peninsula. Storms would subsequently split around the high to the east, with moderate to heavy rain (10-40 mm) observed in Scandinavia and the lower Balkans. The recent spate of wet weather maintained adequate to abundant moisture supplies for winter crops across most of Europe, with 90-day rainfall totaling more than 100 percent of normal over most major growing areas save for Serbia, northeastern Bulgaria, and the southwestern Iberian Peninsula. As the calendar turned to December, satellite-derived vegetation health data indicated winter crops were approaching or entering dormancy in good shape, though signs of poor establishment were noted in parts of northeastern Europe and — more notably — the lower Danube River Valley. The blocking high also maintained warmer-than-normal weather (2-6°C above normal) over most of Europe during the period, though cooler conditions by week's end eased winter crops toward dormancy across Germany and Poland. Furthermore, the blocking high began to weaken and shift east, allowing moisture to return to previously dry northeastern growing areas (30-day rainfall locally less than 50 percent of normal) at the end of the period.

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

MIDDLE EAST
Total Precipitation (mm)
November 24 - 30, 2019



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

MIDDLE EAST

Much-needed rain arrived in western crop areas, though more moisture is needed in Turkey to aid late winter grain establishment. A slow-moving Mediterranean storm system eased drought on central Turkey's Anatolian Plateau, with 4 to 40 mm of rainfall marking the first appreciable moisture of the winter crop growing season. Even with this week's rain, season-to-date moisture deficits (since September 1) in central Turkey are locally more than 40 mm (50 percent of normal); additional rain and mountain snow will be needed across central and eastern Turkey to recharge the soil moisture profile and boost mountain snowpacks, with the latter critical for spring runoff and summer crop irrigation. Moderate to heavy showers (3-40 mm, locally more) also eased short-term dryness in coastal Syria as well as northern Iraq and immediate environs, though many of these same crop areas have been abnormally dry since the beginning of autumn and are in need of more rain. Satellite-derived vegetation health data indicated very poor wheat and barley establishment on the Anatolian Plateau due to this autumn's drought, with areas of poor vegetation health also noted in southeastern Turkey and northern Syria. Sunny skies prevailed across central and eastern Iran, where moisture supplies are favorable for wheat and barley establishment.

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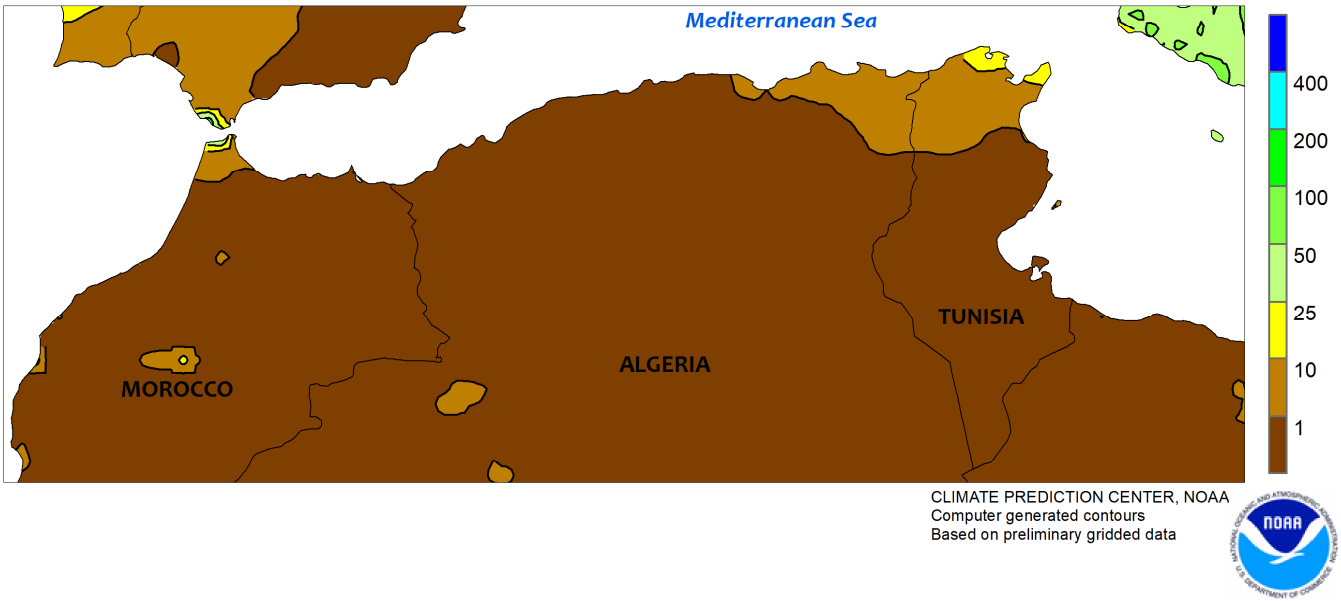
NORTHWESTERN AFRICA
Total Precipitation (mm)
November 24 - 30, 2019

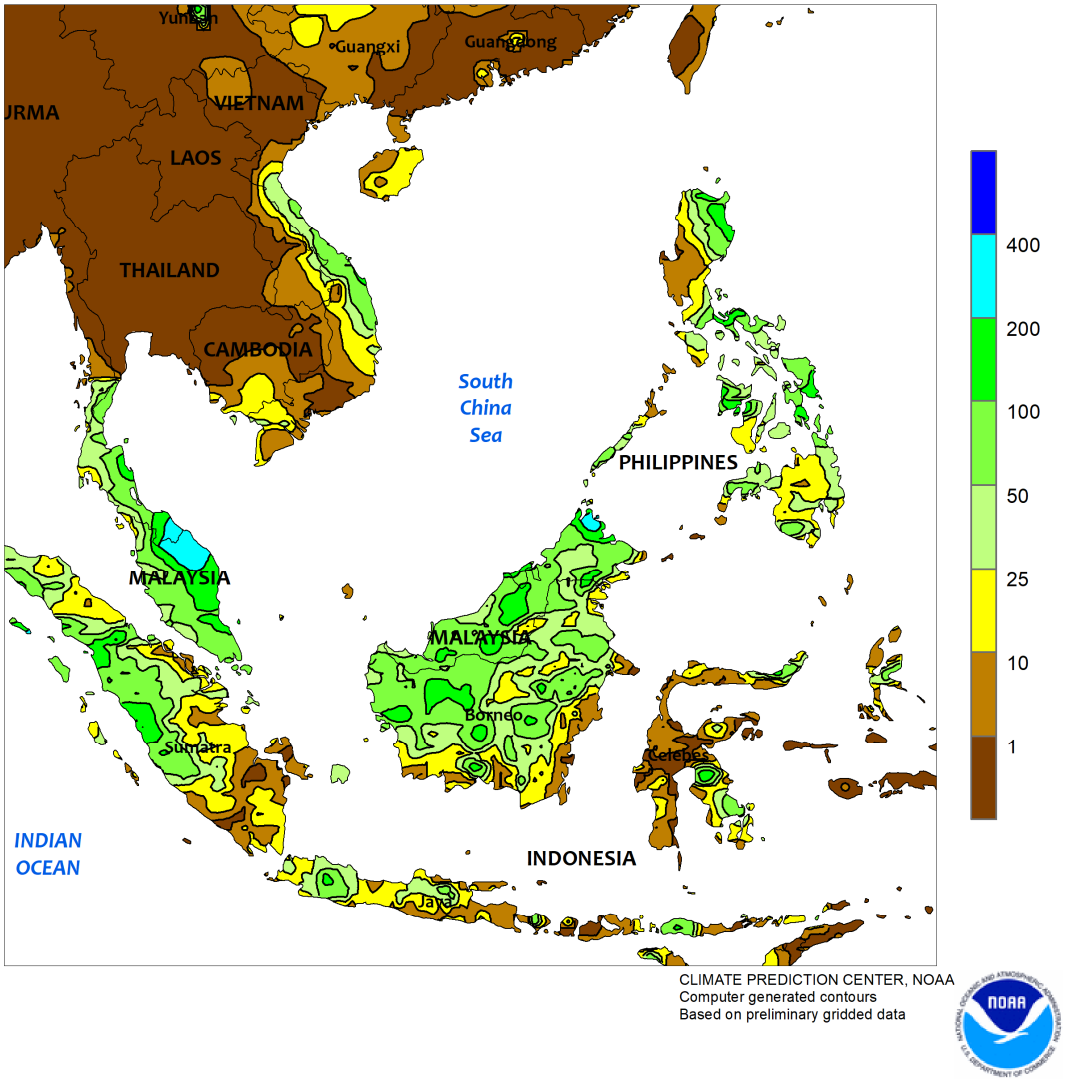


NORTHWESTERN AFRICA

After recent rain, sunny skies promoted winter grain planting and establishment across much of the region. A departing storm system was responsible for lingering showers (2-20 mm) over northern Tunisia and northeastern Algeria. Otherwise, sunny skies and near- to above-normal temperatures (1-3°C above normal) favored wheat and barley emergence following recent beneficial rain during November. Despite the favorable start to the winter crop growing season (October 1 – June 1), Morocco's southwestern growing areas remained mired in drought; 90-day rainfall in this region has totaled locally less than 25 percent of normal.

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

SOUTHEAST ASIA
Total Precipitation (mm)
November 24 - 30, 2019



SOUTHEAST ASIA

Showers (10-25 mm, locally more) increased across portions of Java, Indonesia, but the onset of seasonally heavy rainfall remained slow. Typically, the wet-season begins in early November, and the current lack of consistent moisture has discouraged rice sowing. Rainfall (25-100 mm or more) has been more seasonable in oil palm areas of Indonesia and Malaysia, boosting short-term moisture supplies. However, longer-term (90 days or more) deficits lingered. Elsewhere, showers (25-100 mm) throughout the eastern Philippines maintained good soil moisture for winter rice and corn, although Typhoon Kammuri was approaching the Eastern Visayas late in the period. Meanwhile heavy showers (25-100 mm) were reported in central Vietnam, as 10th month rice harvesting and winter/spring rice sowing was underway in the north.

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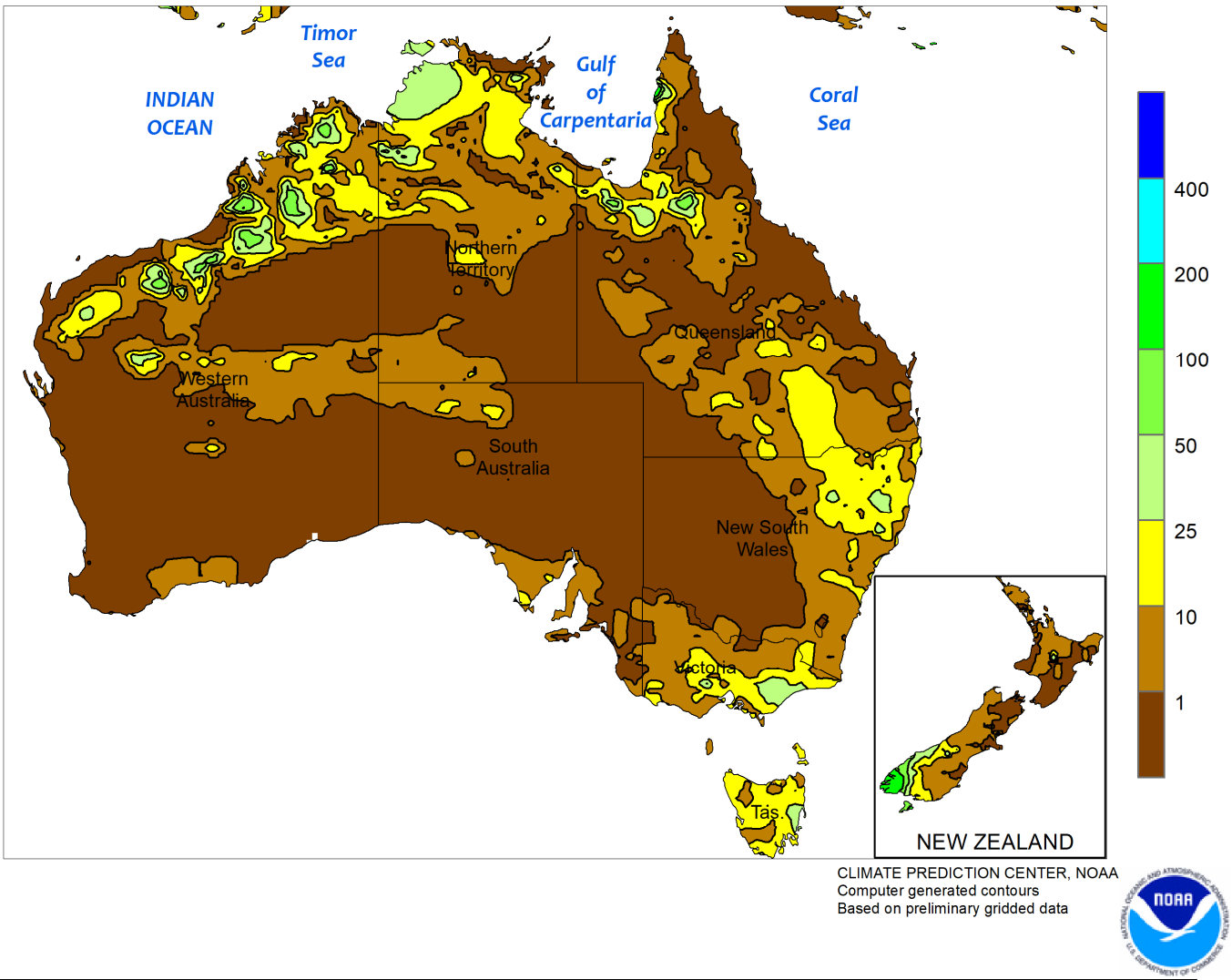

AUSTRALIA

In western and southeastern Australia, mostly dry weather (generally less than 5 mm) favored wheat, barley, and canola dry down and harvesting. Elsewhere in the wheat belt, a band of rain (5-25 mm, locally more) brought some drought relief to portions of northern New South Wales and southern Queensland. The rain likely had minimal impact on wheat and other winter crops because the harvest is approaching completion in this area. Significantly, the showers likely triggered little additional cotton sowing because the primary planting window has passed. However, the rain may have prompted more sorghum sowing because planting often carries over into early the next calendar year. Although the rain was welcome, frequent soaking rain is needed to end the severe, long-term drought that continues to grip much of eastern Australia. Temperatures averaged 2 to 4°C above normal in eastern Australia, 1 to 2°C below normal in southern Australia, and near normal in Western Australia.

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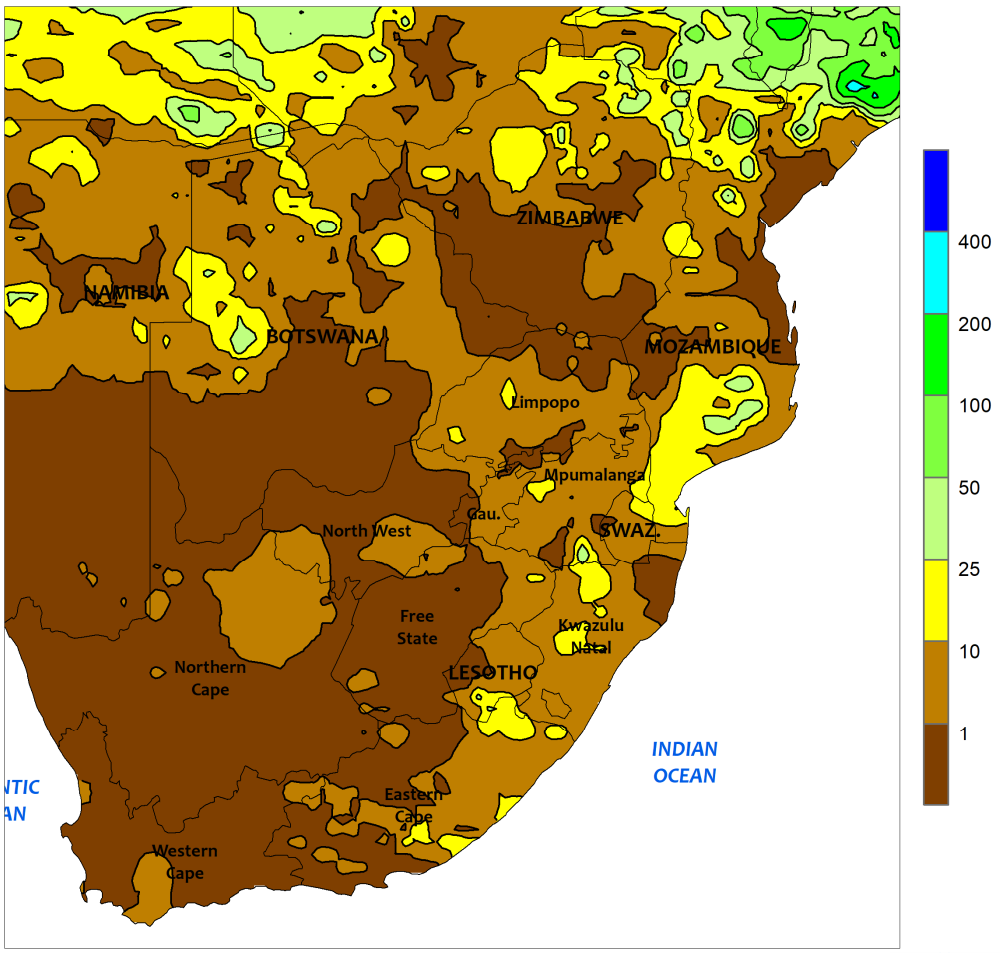
SOUTH AFRICA
Total Precipitation (mm)
November 24 - 30, 2019



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

SOUTH AFRICA

Following several weeks of beneficial rainfall, drier weather dominated the region, supporting summer crop planting in areas with sufficient soil moisture. However, unseasonable warmth (weekly temperatures averaging 3-4°C above normal, with daytime highs reaching well into the 30s degrees C) accompanied the dryness, maintaining high losses through evaporation. Temperatures reached 40°C in the tree and vine crop areas of Western Cape, and in sugarcane areas of northern KwaZulu-Natal and eastern Mpumalanga, maintaining high moisture requirements of the mostly irrigated crops. Regionwide, most locations recorded little to no rain (5 mm or less), with only a few reports of rainfall in excess of 10 mm, mostly in eastern commercial production areas (Mpumalanga, KwaZulu-Natal, and environs). A return to a more seasonable pattern of rainfall and temperatures is needed to maintain current yield prospects of rain-fed summer crops in central and eastern sections of the corn belt, where planting has likely occurred or is underway. Meanwhile, farmers in western sections of the corn belt (including commercial white corn areas in North West and Free State) typically plant closer to the end of December as seasonal rainfall becomes more firmly established.

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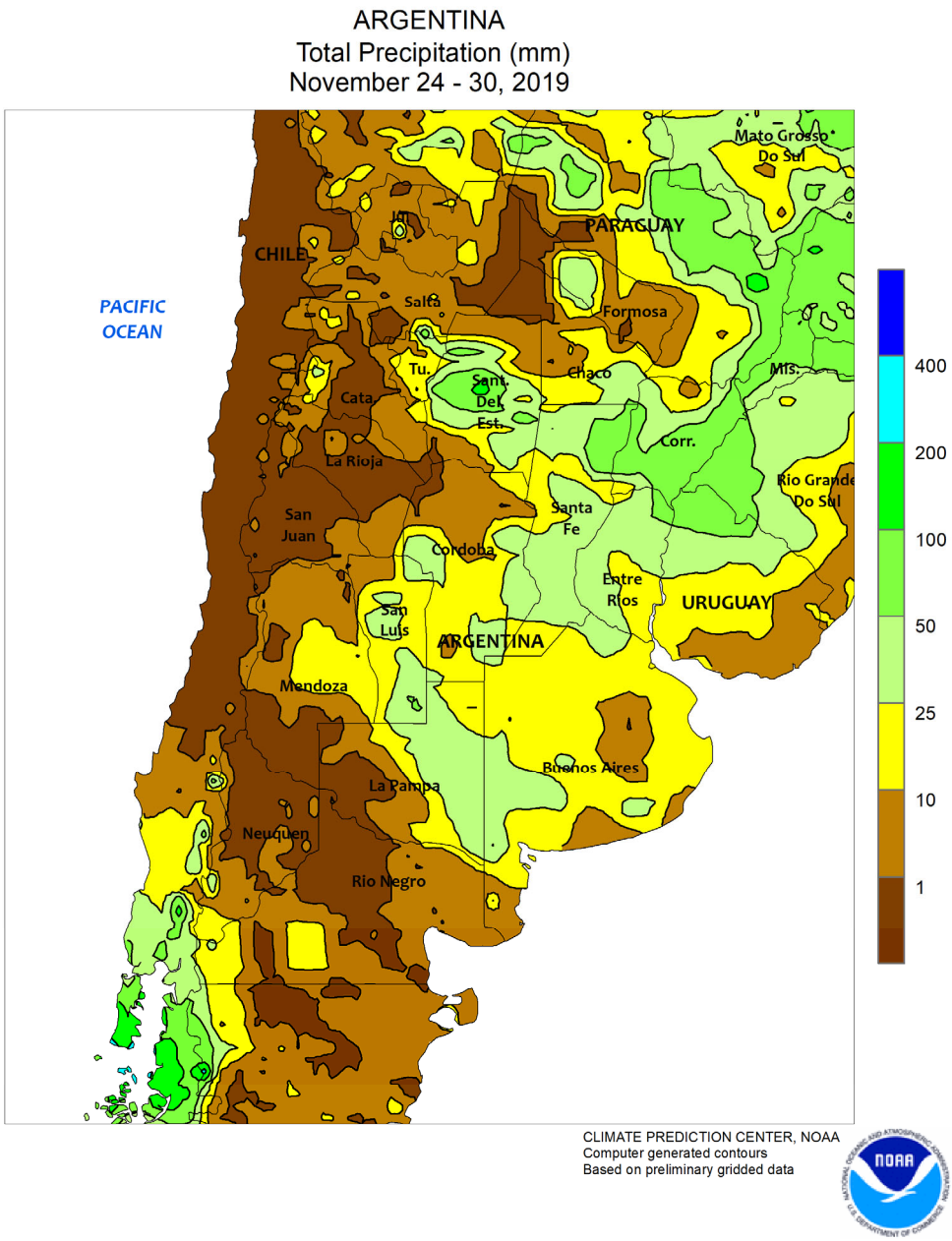

ARGENTINA

Beneficial rain brought further relief from earlier periods of dryness to large parts of central Argentina, improving prospects for newly planted summer grains and oilseeds. Rainfall totaled 10 to 50 mm over much of La Pampa and western Buenos Aires northeastward through southern Cordoba, Santa Fe, and Entre Rios. Drier conditions (rainfall totaling less than 10 mm locally) persisted, however, in southern Buenos Aires, accelerating maturation of winter grains and sustaining limited supplies of moisture for germination of sunflowers, corn, and the upcoming second soybean crop. Farther north, dry weather returned to western farming areas (notably Salta and Santiago del Estero), while moderate to heavy showers (rainfall totaling 10 to more than 50 mm) returned to the northeastern cotton belt after a dry week that encouraged planting. Weekly temperatures averaged near to slightly above normal throughout Argentina's agricultural areas, though daytime highs reached the lower and middle 30s (degrees C) as far south as La Pampa and Buenos Aires. Summer heat (highs in the upper 30s) was again recorded in traditionally warmer northern areas. According to the government of Argentina, sunflowers were 90 percent planted as of November 28 versus 94 percent last year; in addition, corn and sunflowers were 51 and 46 percent planted, respectively, and cotton was 68 percent planted. Meanwhile, wheat was 28 percent harvested, on par with last year's pace.

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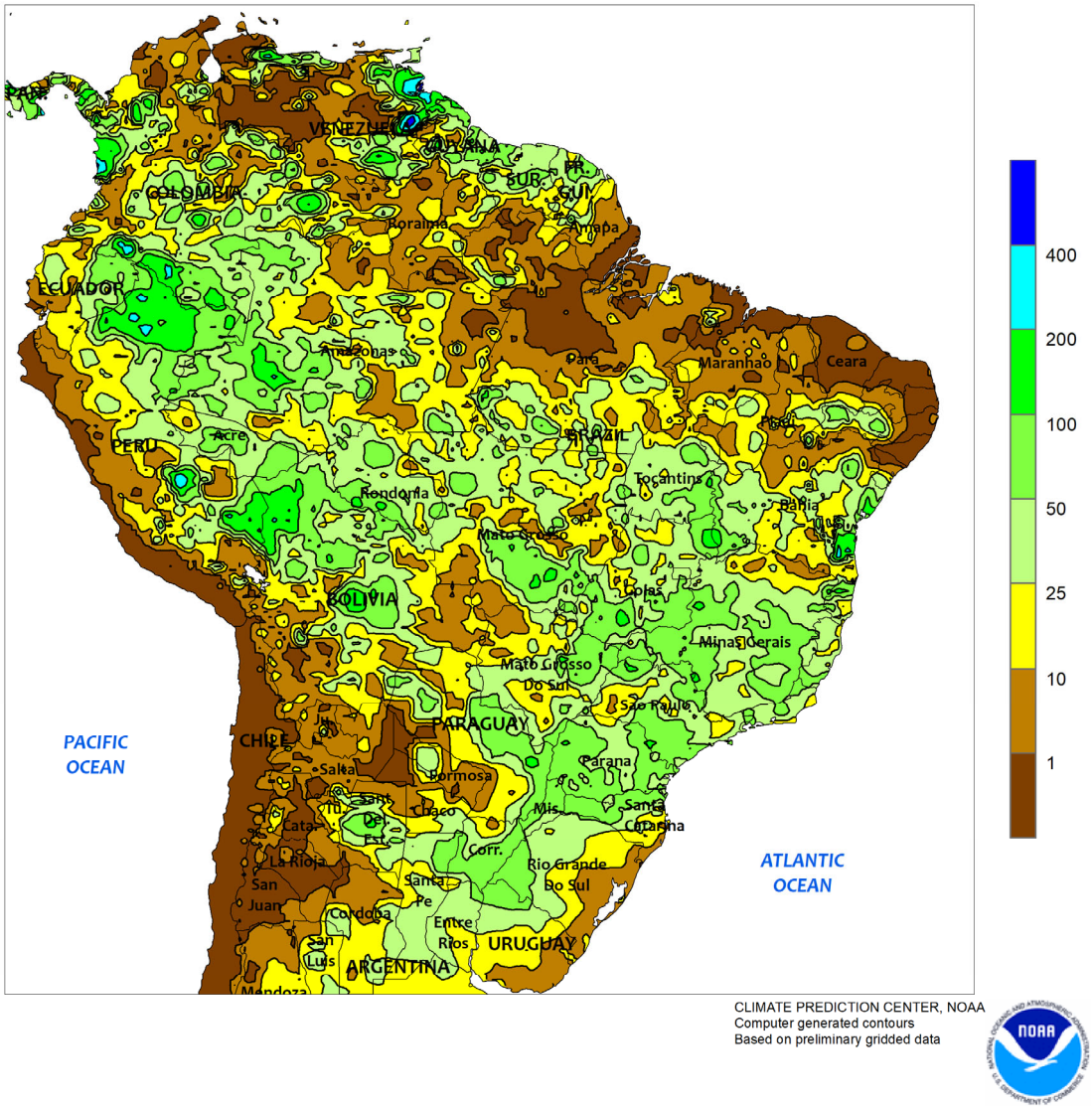
BRAZIL
Total Precipitation (mm)
November 24 - 30, 2019



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
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BRAZIL

Seasonal rainfall expanded in coverage to reach nearly all major agricultural areas. Moderate to heavy rain (25-100 mm, locally higher) fell from Mato Grosso and western Bahia southward through Rio Grande do Sul, maintaining generally favorable levels of moisture for soybeans, corn, and other crops including sugarcane and coffee. Despite the rain, however, daytime highs continued to reach the lower to middle 30s (degrees C) in the aforementioned area, with a brief period of hot weather (highs in the upper 30s and lower 40s) in the vicinity of southern Mato Grosso. According to the government of Parana, first-crop corn and soybeans were 23 and 12 percent reproductive to filling, respectively, as of November 25. In Rio Grande do Sul, corn and soybeans were 86 and 72 percent planted, respectively, as of November 28, with 42 percent of corn in the reproductive to filling stages of development. Meanwhile, wheat harvesting was nearly complete in Rio Grande do Sul at 98 percent complete. One of the few exceptions to the regions receiving beneficial rain was the far northeastern interior (northern Tocantins, Piaui, and Maranhao), where unseasonable warmth and dryness returned following last week's locally heavy showers.

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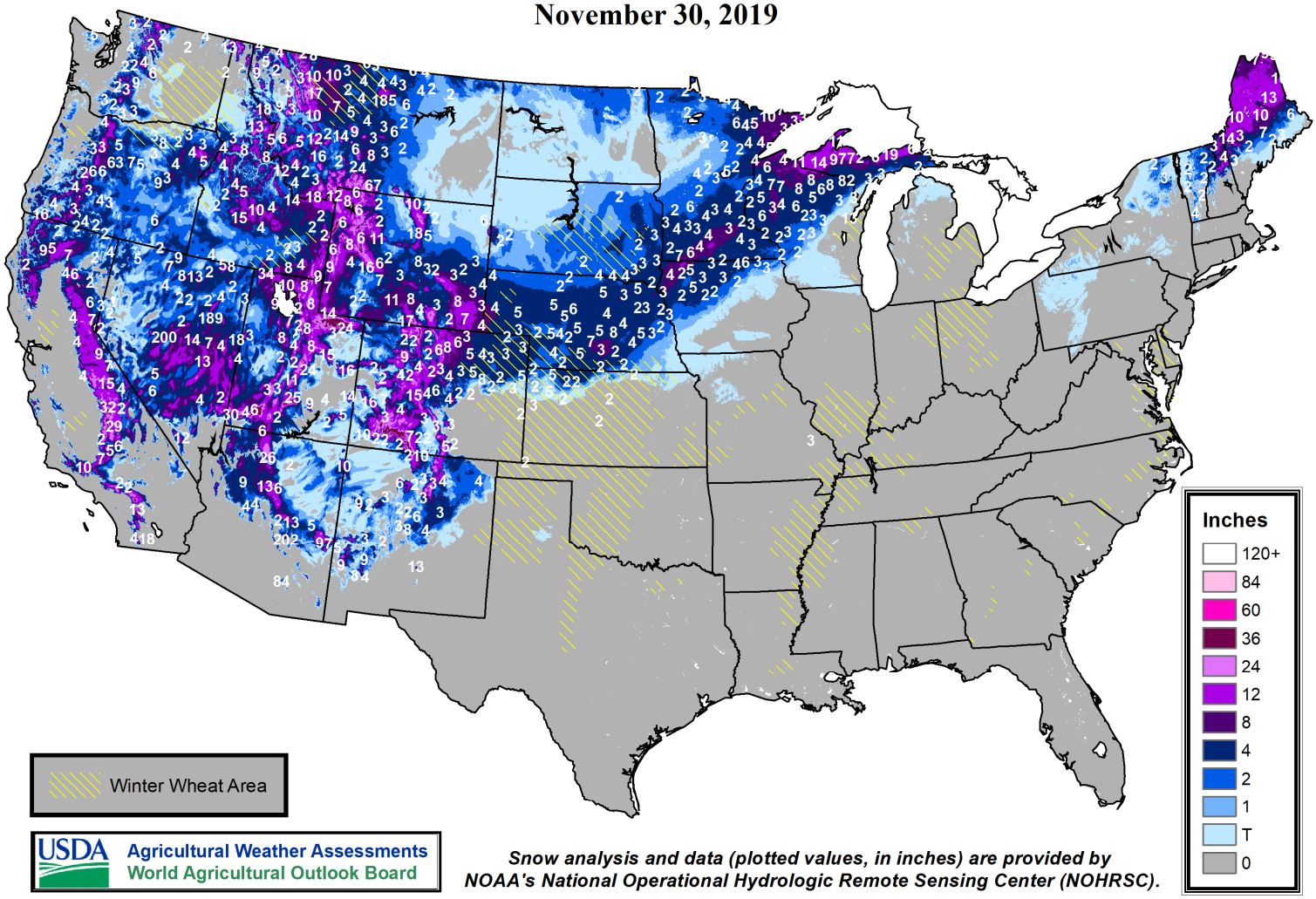
Snow Depth

November 30, 2019



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

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