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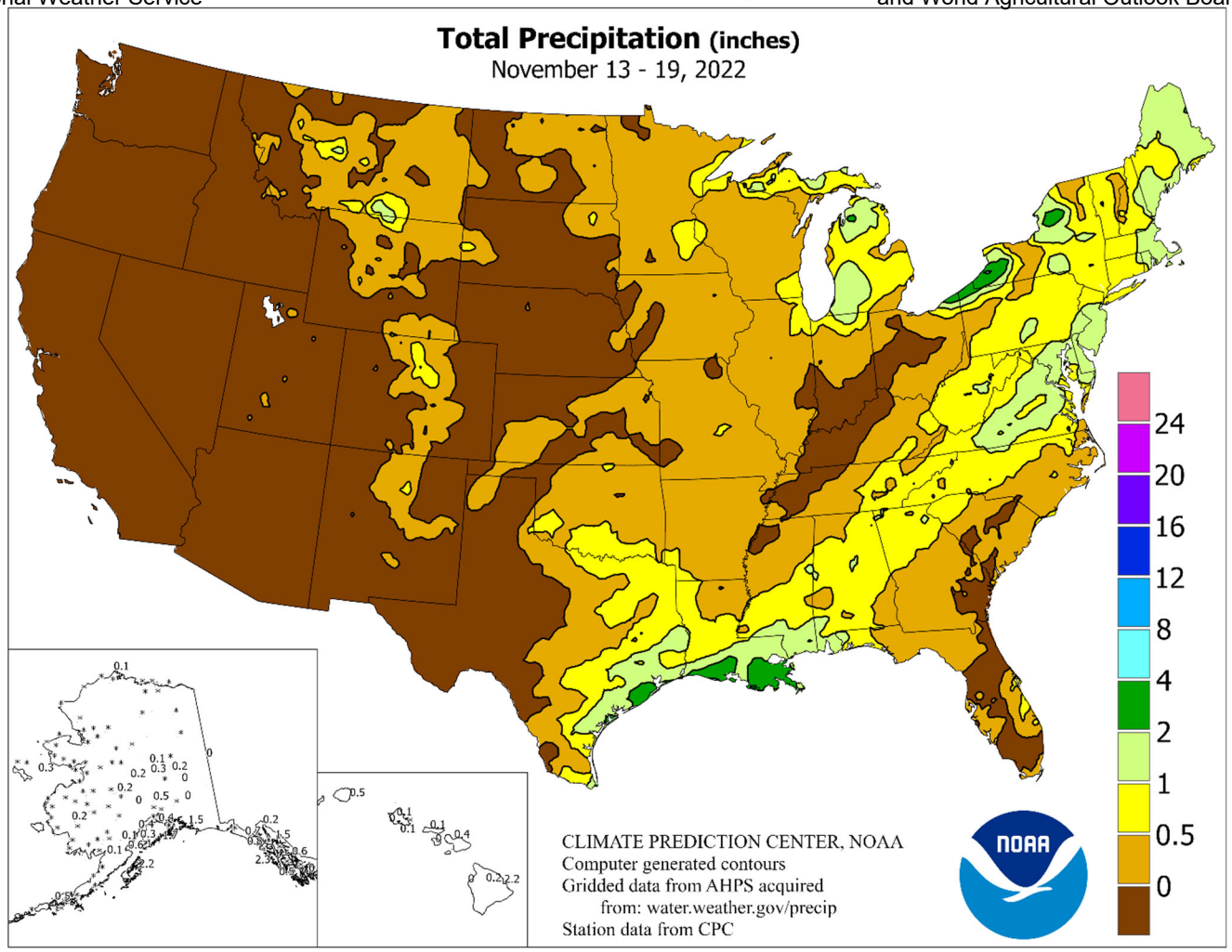
Weekly Weather and Crop Bulletin

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 13-19, 2022

Highlights provided by USDA/WAOB

Cold, dry weather prevailed nearly coast to coast, with a few exceptions. Notably, snow squalls developed downwind of the **Great Lakes**, especially east of **Lakes Erie and Ontario**, resulting in localized totals of 2 to 6 feet or more. In addition, precipitation fell in parts of the **South**, **East**, and **Midwest**, primarily during the first half of the week, although most liquid-equivalent totals were under 2 inches. Snow broadly blanketed the **Midwest** and interior Northeast, especially on November 15-16, although amounts were mostly light to moderately heavy. Still, cold,

(Continued on page 3)

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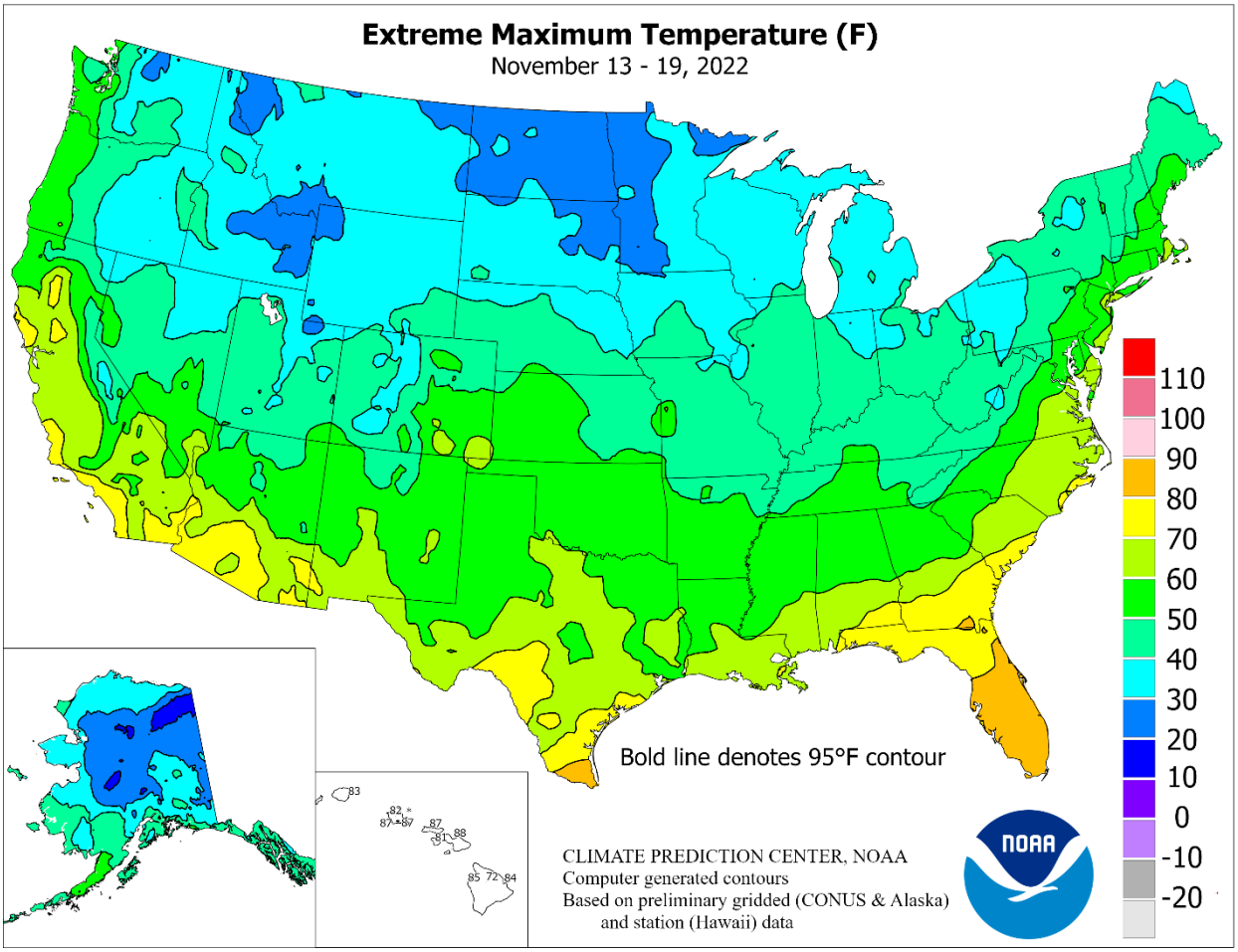
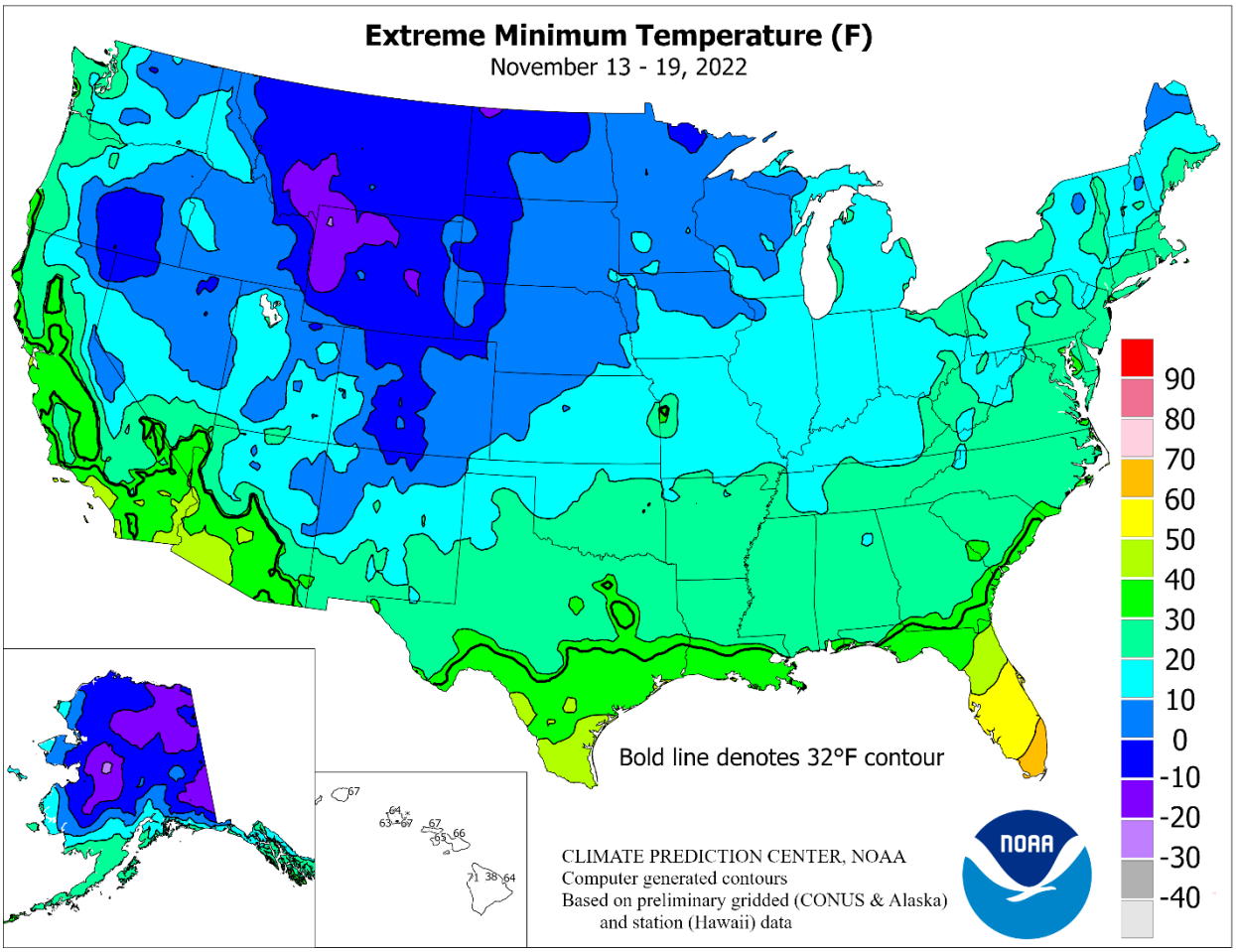
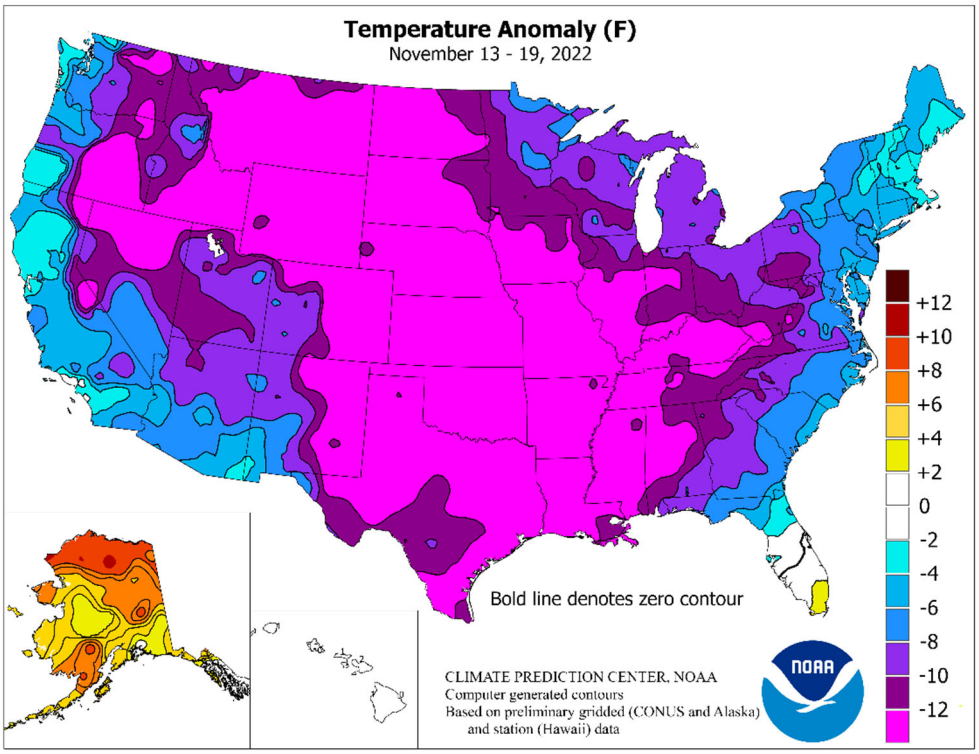

Extreme Maximum Temperature (F)
November 13 - 19, 2022
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


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

(Continued from front cover)



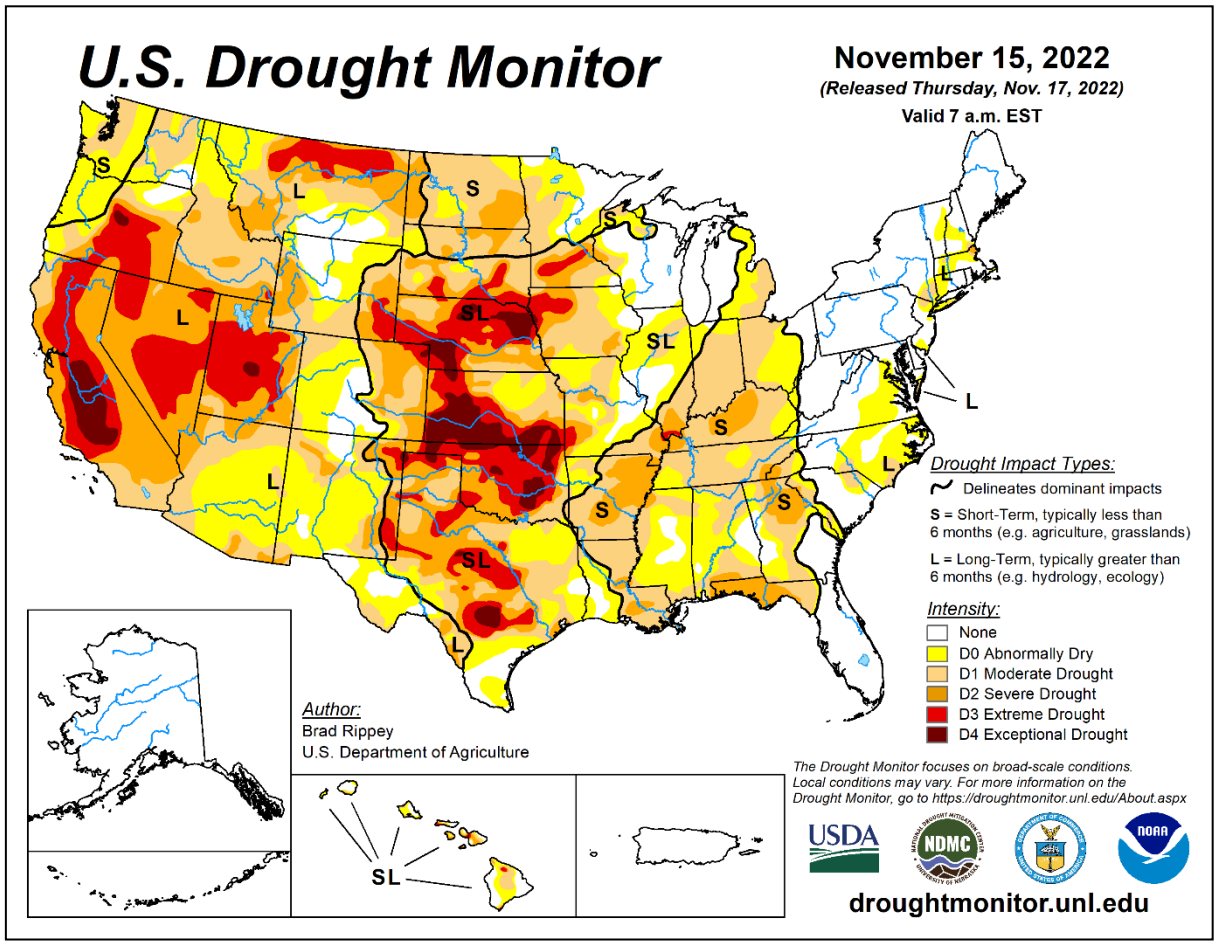
windy weather and a variable snow cover hampered final **Midwestern** corn and soybean harvest efforts. Meanwhile, deep snow from a previous storm remained on the ground in much of **Montana** and **North Dakota**. As the week progressed, periods of rain occurred in the **western Gulf Coast region**. Elsewhere, negligible precipitation fell across the **western half of the country**. On the **Plains**, the combination of cold weather and soil moisture shortages maintained significant stress on rangeland, pastures, and winter wheat. Weekly temperatures averaged 10 to 20°F below normal nationwide, except in the **Desert Southwest** and along the **Atlantic and Pacific Coasts**. The coldest weather, relative to normal, gripped the **Plains**, **mid-South**, and **northern Intermountain West**. Lingering warmth was limited to **southern Florida**, where near- to slightly above-normal temperatures prevailed.

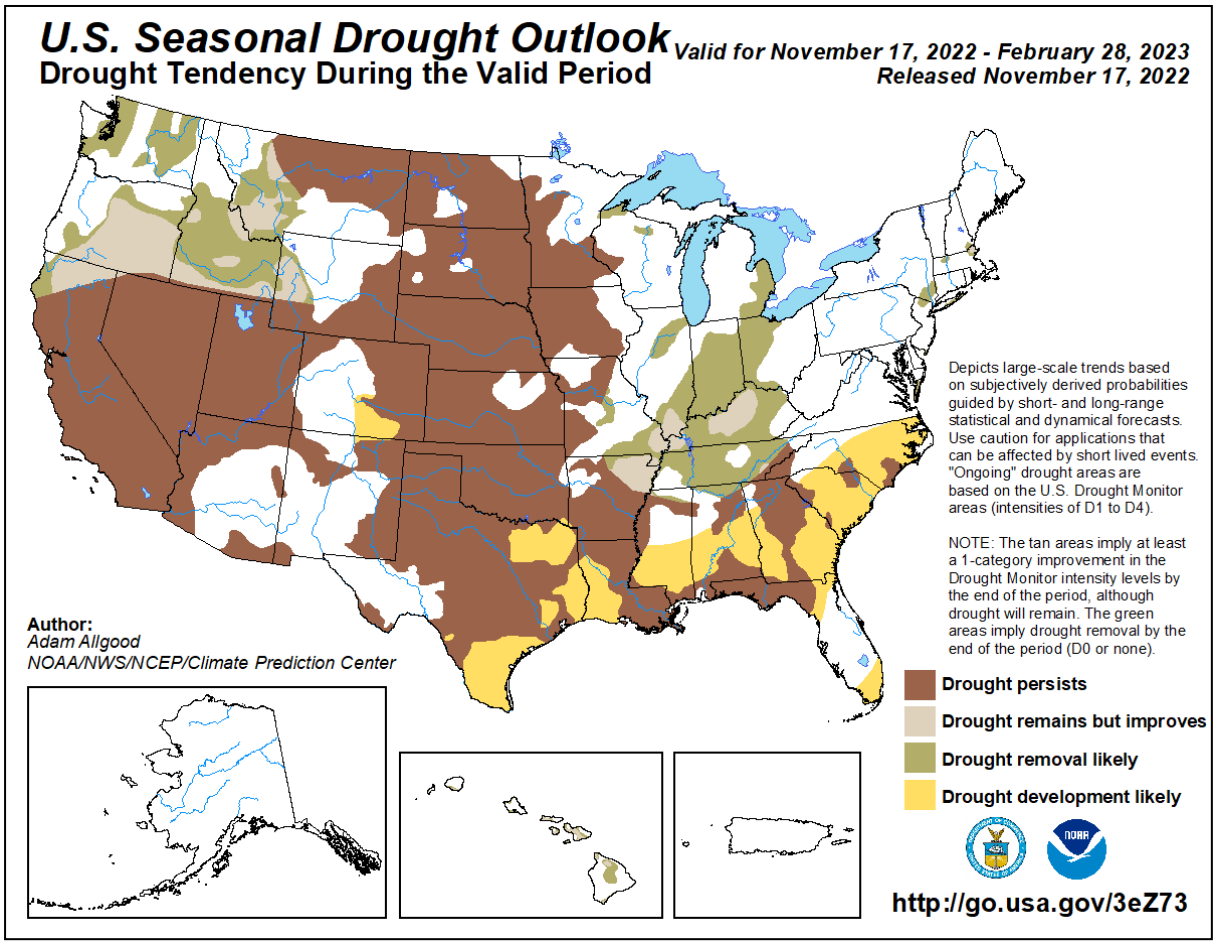
With ongoing warmth in **Florida**, **Miami** posted a daily record-tying high of 88°F on November 13. Three days later, **Florida's** record-tying highs for the 16th reached 87°F in **Vero Beach** and 85°F in **Melbourne**. In contrast, the latest cold wave surged southward. In **Kansas**, daily-record lows for November 15 dipped to 9°F in **Russell** and 13°F in **Garden City**. On the same date, **Midland, TX**, posted a daily record-tying low of 24°F. Bitterly cold air settled across the **Northwest**, where daily-record lows for November 17 included -16°F in **Butte, MT**; -11°F in **Casper, WY**; and -3°F in **Burns, OR**. On November 18-19, **Big Piney, WY**, closed the week with consecutive daily-record lows of -15°F. Other **Northwestern** locations reporting consecutive daily-record lows on November 18-19 were **Eugene, OR** (21 and 18°F); **Olympia, WA** (17 and 18°F); and **Montana's Bozeman Airport** (-14 and -16°F). On the 18th, lows plunged to -22°F in **Butte, MT**, and -21°F at **Lake Yellowstone, WY**, while sub-zero, daily-record readings on the **Plains** included -7°F in **Miles City, MT**, and -2°F in **Sidney, NE**. In **Kansas**, record-setting lows for November 19 plunged to 8°F in **Garden City** and 11°F in **Medicine Lodge**. With a low of 6°F, **Cedar Rapids, IA**, also posted a daily-record low for the 19th.

Aside from early week precipitation across the **South** and **East**; snow squalls downwind of the **Great Lakes**; and rain in the **western Gulf Coast region**, significant storminess was scarce. In **coastal Texas**, **Galveston** received 1.66 inches of rain, a record for the date, on November 14. Although widespread snow blanketed the **Midwest** and **interior Northeast** in mid-November, amounts were mostly light.

Nevertheless, record-setting snowfall totals for November 15 included 6.6 inches in **Alpena, MI**; 3.5 inches in **Waterloo, IA**; and 2.8 inches in **Madison, WI**. **Caribou, ME**, received a record-setting snowfall, 5.8 inches, for November 16. Subsequently, locally heavy snow developed in the vicinity of the **Great Lakes**. In **Michigan**, daily-record amounts for November 17 reached 7.6 inches in **Grand Rapids** and 3.3 inches in **Lansing**. From November 15-19, snowfall in **Grand Rapids** totaled 26.9 inches, with at least 7 inches falling on each of the last 3 days of the event. Totals exceeding 2 feet were common in lake-effect streamers, with **Buffalo, NY**, reporting 36.6 inches from November 17-19. In **western New York**, unofficial totals topped 6 feet in **Orchard Park** and **Hamburg**. With 21.5 inches on the 19th, **Buffalo** weathered its snowiest day since December 28, 2001, when 26.2 inches fell.

Mild weather further expanded across the **Alaskan mainland** and reached the southeastern part of the state. By November 16, highs rose to daily-record levels in **Sitka** (54°F) and **King Salmon** (50°F). Later in **western Alaska**, daily-record highs included 38°F (on November 17) in **Nome** and 32°F (on November 18) in **Kotzebue**. On the **Arctic Coast**, **Utqiagvik** tallied a trio of daily-record highs (34, 35, and 28°F) from November 17-19. Relatively tranquil weather accompanied **Alaska's** warmth, although **Kodiak** received rainfall totaling 1.21 inches on November 19. Earlier, **Yakutat** had received 4.09 inches of rain from November 12-14. Farther south, **Hawaiian** rain fell mostly in windward locations, consistent with a trade-wind regime. Through November 19, month-to-date rainfall at the state major airport observation sites ranged from 0.09 inch (6 percent of normal) in **Honolulu, Oahu**, to 13.45 inches (149 percent) in **Hilo**, on the **Big Island**.


U.S. Drought Monitor
November 15, 2022
(Released Thursday, Nov. 17, 2022)
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
USDA
NDMC
NOAA
droughtmonitor.unl.edu


U.S. Seasonal Drought Outlook
Valid for November 17, 2022 - February 28, 2023
Drought Tendency During the Valid Period
Released November 17, 2022
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
Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center
http://go.usa.gov/3eZ73

National Weather Data for Selected Cities

Weather Data for the Week Ending November 19, 2022

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE 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
AK	ANCHORAGE	32	23	43	19	28	5	0.45	0.18	0.26	8.31	145	24.00	161	93	69	0	7	2	0
	BARROW	28	14	35	-3	21	0	0.13	0.06	0.09	1.61	102	8.55	170	89	71	0	7	3	0
	FAIRBANKS	21	5	37	-3	13	10	0.12	-0.06	0.08	2.51	96	7.09	65	86	73	0	7	2	0
	JUNEAU	40	30	46	21	35	2	1.53	0.05	0.96	27.99	129	80.20	138	99	88	0	4	4	1
	KODIAK	44	37	45	27	40	5	2.24	0.67	1.27	21.44	102	71.65	106	96	78	0	1	6	1
	NOME	30	22	36	2	26	8	0.31	0.03	0.24	8.15	166	18.52	117	89	75	0	7	2	0
AL	BIRMINGHAM	51	30	57	25	41	-13	0.79	-0.20	0.79	5.33	53	43.76	87	88	42	0	6	1	1
	HUNTSVILLE	49	29	56	24	39	-13	0.58	-0.37	0.58	7.14	75	44.62	95	86	45	0	5	1	1
	MOBILE	58	38	64	30	48	-11	1.45	0.37	0.81	6.81	55	50.42	84	84	42	0	1	3	2
	MONTGOMERY	56	33	62	23	44	-12	0.63	-0.31	0.59	4.36	49	45.31	101	91	44	0	4	2	1
AR	FORT SMITH	47	29	54	23	38	-14	0.08	-0.82	0.08	8.95	81	44.08	103	86	41	0	6	1	0
	LITTLE ROCK	50	31	56	25	40	-10	0.25	-0.83	0.25	4.57	44	37.18	85	78	38	0	5	1	0
AZ	FLAGSTAFF	44	19	51	9	31	-6	0.01	-0.33	0.01	3.82	88	14.90	82	69	24	0	7	1	0
	PHOENIX	71	45	73	43	58	-7	0.00	-0.12	0.00	1.76	120	3.63	58	49	15	0	0	0	0
	PRESCOTT	52	22	55	18	37	-10	0.00	-0.15	0.00	3.60	143	10.54	91	69	19	0	7	0	0
	TUCSON	71	41	75	38	56	-5	0.00	-0.11	0.00	1.34	58	4.81	51	47	16	0	0	0	0
CA	BAKERSFIELD	63	40	67	38	52	-4	0.00	-0.11	0.00	0.65	105	2.50	49	83	36	0	0	0	0
	EUREKA	54	36	55	35	45	-6	0.00	-1.13	0.00	4.68	82	18.71	62	93	64	0	0	0	0
	FRESNO	63	40	67	39	51	-4	0.00	-0.19	0.00	0.72	64	1.80	20	89	38	0	0	0	0
	LOS ANGELES	71	49	75	48	60	-2	0.00	-0.18	0.00	2.10	207	3.57	37	83	22	0	0	0	0
	REDDING	66	38	73	34	52	0	0.00	-0.78	0.00	3.35	78	8.24	32	75	20	0	0	0	0
	SACRAMENTO	65	37	70	34	51	-3	0.00	-0.35	0.00	1.23	68	3.42	24	89	29	0	0	0	0
	SAN DIEGO	69	47	75	43	58	-5	0.00	-0.17	0.00	1.79	175	4.27	55	85	26	0	0	0	0
	SAN FRANCISCO	63	45	67	43	54	-2	0.00	-0.46	0.00	1.86	96	3.68	25	87	38	0	0	0	0
	STOCKTON	64	36	67	33	50	-5	0.00	-0.31	0.00	1.28	81	2.88	27	89	34	0	0	0	0
CO	ALAMOSA	37	2	51	-4	20	-10	0.50	0.43	0.46	1.46	77	10.70	154	94	37	0	7	2	0
	CO SPRINGS	38	15	57	8	27	-13	0.12	0.05	0.10	0.81	34	10.81	69	67	34	0	7	2	0
	DENVER INTL	36	13	50	6	25	-15	0.20	0.06	0.07	2.03	72	10.24	73	80	37	0	7	3	0
	GRAND JUNCTION	43	21	47	16	32	-7	0.00	-0.13	0.00	4.57	176	7.90	95	75	28	0	7	0	0
	PUEBLO	41	12	61	1	27	-14	0.07	-0.03	0.05	0.73	42	9.07	78	77	34	0	7	3	0
CT	BRIDGEPORT	47	34	58	30	41	-5	0.45	-0.23	0.22	10.15	105	29.93	77	81	43	0	3	3	0
	HARTFORD	46	29	54	22	38	-5	0.95	0.17	0.59	14.29	129	41.31	99	82	41	0	5	3	1
DC	WASHINGTON	49	35	54	30	42	-7	1.21	0.59	1.21	6.44	68	35.93	96	74	42	0	2	1	1
DE	WILMINGTON	49	32	60	28	41	-6	1.04	0.37	0.96	8.74	88	34.99	86	78	41	0	4	3	1
FL	DAYTONA BEACH	73	56	81	49	65	-2	0.00	-0.65	0.00	16.35	118	43.38	90	89	61	0	0	0	0
	JACKSONVILLE	67	47	81	37	57	-5	0.01	-0.45	0.01	9.03	70	47.01	94	90	50	0	0	1	0
	KEY WEST	82	74	86	71	78	2	0.00	-0.42	0.00	15.35	107	34.16	90	95	74	0	0	0	0
	MIAMI	84	70	88	65	77	3	0.01	-0.78	0.01	18.81	92	62.39	97	93	59	0	0	1	0
	ORLANDO	77	58	84	51	68	0	0.00	-0.38	0.00	28.13	256	59.69	123	91	55	0	0	0	0
	PENSACOLA	63	42	80	33	53	-8	0.59	-0.43	0.44	4.26	30	54.39	88	80	41	0	0	2	0
	TALLAHASSEE	65	43	76	34	54	-6	0.07	-0.66	0.05	2.61	26	50.56	94	87	44	0	0	2	0
	TAMPA	76	59	81	52	67	-2	0.15	-0.15	0.14	15.67	168	52.65	113	86	55	0	0	2	0
	WEST PALM BEACH	82	67	86	63	74	2	0.00	-0.83	0.00	16.26	99	44.85	78	92	57	0	0	0	0
GA	ATHENS	53	33	56	29	43	-10	0.40	-0.52	0.40	6.70	69	36.59	84	83	40	0	4	1	0
	ATLANTA	51	35	55	30	43	-11	0.37	-0.59	0.37	3.76	39	40.21	90	79	43	0	2	1	0
	COLUMBUS	57	37	60	30	47	-10	0.23	-0.73	0.23	5.85	68	38.69	91	84	37	0	1	1	0
	MACON	59	35	62	26	47	-9	0.05	-0.76	0.05	5.20	62	41.04	100	91	38	0	3	1	0
	SAVANNAH	63	40	79	32	52	-7	0.04	-0.52	0.04	7.40	77	33.74	76	89	44	0	1	1	0
HI	HILO	82	67	84	64	74	0	2.15	-1.34	0.83	24.14	86	81.22	78	92	63	0	0	7	2
	HONOLULU	85	71	87	67	78	0	0.05	-0.51	0.04	1.31	33	10.36	77	86	52	0	0	2	0
	KAHULUI	86	71	88	66	79	2	0.44	0.01	0.38	1.39	59	2.21	17	80	50	0	0	2	0
	LIHUE	81	72	83	67	77	1	0.53	-0.44	0.28	3.44	43	22.70	75	85	65	0	0	3	0
IA	BURLINGTON	33	22	40	14	28	-13	0.01	-0.52	0.01	7.74	95	24.13	68	82	60	0	7	1	0
	CEDAR RAPIDS	30	18	38	6	24	-13	0.05	-0.43	0.05	5.99	78	22.26	66	90	67	0	7	1	0
	DES MOINES	31	20	42	13	26	-14	0.33	-0.12	0.29	5.67	78	27.67	80	85	61	0	7	2	0
	DUBUQUE	31	21	37	9	26	-10	0.18	-0.34	0.17	4.52	55	27.11	76	88	63	0	7	2	0
	SIOUX CITY	31	14	37	10	23	-13	0.02	-0.29	0.02	1.78	30	12.91	46	86	50	0	7	1	0
	WATERLOO	31	20	40	9	26	-12	0.26	-0.17	0.24	5.02	70	32.05	93	82	61	0	7	2	0
ID	BOISE	38	22	41	20	30	-10	0.00	-0.28	0.00	2.68	137	8.23	86	85	58	0	7	0	0
	LEWISTON	37	24	40	19	31	-11	0.00	-0.29	0.00	4.22	170	13.86	122	83	56	0	7	0	0
	POCATELLO	29	11	31	1	20	-15	0.00	-0.21	0.00	3.15	128	10.43	101	85	61	0	7	0	0
IL	CHICAGO/O_HARE	35	26	42	16	31	-10	0.29	-0.27	0.25	4.37	53	28.00	80	78	50	0	6	2	0
	MOLINE	35	24	42	16	30	-10	0.23	-0.30	0.16	6.64	87	29.19	82	80	56	0	7	3	0
	PEORIA	35	24	42	17	30	-12	0.28	-0.35	0.25	3.46	41	22.86	66	79	57	0	7	2	0
	ROCKFORD	34	23	40	13	29	-10	0.28	-0.26	0.15	8.73	113	36.54	105	82	55	0	7	2	0
	SPRINGFIELD	36	23	42	15	29	-14	0.04	-0.59	0.03	7.56	95	30.09	86	80	49	0	6	2	0
IN	EVANSVILLE	41	26	47	16	34	-12	0.01	-0.96	0.01	7.96	86	40.42	94	80	45	0	6	1	0
	FORT WAYNE	35	26	40	16	31	-10	0.17	-0.54	0.09	4.05	51	28.83	80	86	58	0	7	4	0
	INDIANAPOLIS	37	27	42	19	32	-12	0.02	-0.80	0.02	3.85	45	30.30	76	82	51	0	6	1	0
	SOUTH BEND	34	27	39	18	30	-9	1.00	0.36	0.35	7.61	84	30.82	85	90	64	0	7	6	0
KS	CONCORDIA	38	18	47	12	28	-14	0.05	-0.21	0.05	3.78	68	20.14	74	73	38	0	7	1	0
	DODGE CITY	41	18	56	13	30	-14	0.11	-0.05	0.11	2.90	74	11.13	53	78	42	0	7	1	0
	GOODLAND	39	19	41	17	29	-10	0.00	-0.11	0.00	0.76	23	10.10	54	100	73	0	3	0	0
	TOPEKA	40	20	47	17	30	-14	0.13	-0.26	0.10	4.85	64	29.57	85	81	41	0	7	2	0
	WICHITA	42	21	50	15	32	-14	0.05	-0.23	0.05	3.86	56	28.03	85	81	42	0	7	1	0

Based on 1991-2020 normals ***** Not Available**

Weather Data for the Week Ending November 19, 2022

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE 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
KY	LEXINGTON	40	26	47	18	33	-12	0.20	-0.56	0.19	3.35	36	38.70	87	80	48	0	6	2	0
	LOUISVILLE	41	30	48	22	35	-13	0.04	-0.73	0.02	4.28	45	35.63	83	77	46	0	6	2	0
	PADUCAH	43	24	47	15	33	-14	0.05	-0.91	0.05	3.83	38	37.09	83	85	43	0	6	1	0
LA	BATON ROUGE	56	37	61	30	47	-12	1.66	0.81	1.36	4.52	38	37.23	67	93	48	0	1	3	1
	LAKE CHARLES	54	39	62	34	47	-15	1.83	0.93	1.15	6.89	54	30.70	57	90	51	0	0	2	2
	NEW ORLEANS	57	46	65	42	51	-11	1.87	0.98	1.34	6.73	59	44.04	77	81	46	0	0	3	1
	SHREVEPORT	53	35	61	30	44	-12	0.00	-0.89	0.00	2.36	22	37.74	83	86	39	0	3	0	0
MA	BOSTON	48	35	57	31	41	-3	0.88	0.06	0.76	8.20	83	25.17	66	79	44	0	2	3	1
	WORCESTER	43	29	50	25	36	-4	1.13	0.23	0.65	13.08	113	40.55	95	82	46	0	5	3	1
MD	BALTIMORE	48	32	53	29	40	-6	1.00	0.32	1.00	9.76	94	41.12	102	76	41	0	4	1	1
ME	CARIBOU	31	21	39	12	26	-6	1.45	0.70	0.69	9.74	101	37.69	105	90	70	0	6	4	2
	PORTLAND	44	27	55	22	36	-4	1.89	0.92	1.13	15.02	128	49.04	116	89	52	0	6	3	2
MI	ALPENA	32	23	38	16	28	-9	0.92	0.44	0.55	6.58	91	27.19	100	92	68	0	7	5	1
	GRAND RAPIDS	33	26	39	18	29	-10	0.83	0.12	0.37	5.95	62	32.07	89	91	66	0	7	5	0
	HOUGHTON LAKE	33	21	35	18	27	-9	0.01	-0.28	0.01	5.52	79	24.00	91	92	65	0	3	1	0
	LANSING	35	25	41	16	30	-9	0.58	0.00	0.21	4.66	61	31.20	102	86	59	0	7	5	0
	MUSKEGON	37	28	42	22	32	-8	0.48	-0.19	0.19	8.26	92	30.40	96	81	55	0	6	6	0
	TRAVERSE CITY	34	26	39	20	30	-8	0.76	0.26	0.24	12.31	145	28.35	107	88	63	0	7	6	0
MN	DULUTH	25	17	31	6	21	-8	0.55	0.09	0.20	6.82	88	29.36	101	86	67	0	7	6	0
	INT_L FALLS	26	13	32	-1	19	-7	4.28	3.96	3.97	8.17	131	34.87	145	90	68	0	7	5	1
	MINNEAPOLIS	29	21	33	11	25	-10	0.36	-0.02	0.16	2.05	30	19.87	66	84	64	0	7	4	0
	ROCHESTER	27	17	33	6	22	-11	0.35	-0.07	0.19	2.94	40	32.96	100	88	70	0	7	6	0
	ST. CLOUD	27	19	32	6	23	-8	0.37	0.06	0.23	4.37	66	23.13	85	90	65	0	7	4	0
MO	COLUMBIA	38	22	46	17	30	-15	0.31	-0.33	0.24	6.32	69	30.65	79	80	49	0	7	2	0
	KANSAS CITY	38	21	45	16	30	-13	0.16	-0.30	0.12	6.02	69	32.17	86	77	46	0	7	2	0
	SAINT LOUIS	40	26	44	21	33	-13	0.20	-0.63	0.19	6.61	78	45.27	119	72	44	0	6	2	0
	SPRINGFIELD	40	21	49	16	30	-16	0.12	-0.72	0.12	6.43	62	36.97	90	84	44	0	7	1	0
MS	JACKSON	52	32	60	26	42	-13	0.86	-0.17	0.44	6.43	64	53.10	105	89	44	0	4	2	0
	MERIDIAN	54	31	61	25	42	-13	0.46	-0.50	0.31	5.98	62	46.31	93	94	44	0	5	2	0
	TUPELO	51	31	57	26	41	-12	0.19	-0.82	0.18	5.88	58	41.91	84	82	39	0	5	2	0
MT	BILLINGS	30	13	38	1	22	-14	0.02	-0.11	0.01	2.52	80	14.24	105	83	59	0	7	2	0
	BUTTE	24	-5	32	-22	10	-18	0.02	-0.12	0.01	2.48	107	9.04	74	89	59	0	7	2	0
	CUT BANK	31	9	39	-1	20	-10	0.01	-0.10	0.01	1.07	54	7.58	73	87	58	0	7	1	0
	GLASGOW	26	8	32	-3	17	-13	0.06	-0.05	0.03	2.39	103	8.56	66	85	69	0	7	3	0
	GREAT FALLS	28	9	37	-6	19	-15	0.18	0.01	0.09	4.99	174	13.29	94	88	68	0	7	3	0
	HAVRE	28	8	32	-7	18	-13	0.02	-0.10	0.02	2.29	106	8.82	78	84	68	0	7	1	0
	MISSOULA	27	9	33	-5	18	-14	0.08	-0.20	0.07	2.72	93	9.08	71	86	58	0	7	2	0
NC	ASHEVILLE	45	28	50	22	37	-11	0.59	-0.28	0.59	8.50	87	41.98	95	82	45	0	5	1	1
	CHARLOTTE	54	32	60	25	43	-8	0.35	-0.44	0.35	7.70	85	34.60	89	85	40	0	4	1	0
	GREENSBORO	49	30	57	24	40	-10	0.65	-0.11	0.65	9.31	95	40.37	102	84	43	0	6	1	1
	HATTERAS	62	44	74	33	53	-6	0.05	-1.06	0.05	5.53	34	38.10	69	90	56	0	0	1	0
	RALEIGH	56	33	66	26	44	-7	0.39	-0.40	0.39	7.26	68	37.14	89	84	42	0	4	1	0
	WILMINGTON	63	39	72	30	51	-5	0.32	-0.52	0.26	6.86	44	37.17	67	93	43	0	2	2	0
ND	BISMARCK	21	5	30	2	13	-16	0.10	-0.06	0.08	2.45	67	25.43	139	84	67	0	7	2	0
	DICKINSON	20	5	28	-9	12	-18	0.00	-0.10	0.00	0.31	10	13.86	90	90	75	0	7	0	0
	FARGO	23	11	26	1	17	-12	0.21	-0.01	0.10	1.26	22	18.52	81	90	75	0	7	6	0
	GRAND FORKS	24	10	27	-1	17	-10	0.18	-0.03	0.07	1.21	25	20.95	100	90	72	0	7	5	0
	JAMESTOWN	23	9	28	2	16	-12	0.01	-0.10	0.01	1.04	25	14.83	76	86	72	0	7	1	0
NE	GRAND ISLAND	35	14	43	8	25	-15	0.00	-0.26	0.00	1.39	29	11.59	45	76	35	0	7	0	0
	LINCOLN	34	17	40	6	25	-14	0.01	-0.29	0.01	1.81	30	18.28	65	72	41	0	7	1	0
	NORFOLK	32	13	37	7	22	-14	0.00	-0.30	0.00	2.25	42	12.18	47	81	42	0	7	0	0
	NORTH PLATTE	38	11	44	4	25	-12	0.00	-0.10	0.00	1.57	43	12.38	60	76	35	0	7	0	0
	OMAHA	32	17	37	11	24	-15	0.00	-0.34	0.00	2.53	40	20.49	67	80	47	0	7	0	0
	SCOTTSBLUFF	39	13	46	4	26	-11	0.00	-0.13	0.00	1.44	50	8.05	53	74	31	0	7	0	0
	VALENTINE	31	7	39	0	19	-17	0.04	-0.09	0.01	0.29	8	9.74	48	86	50	0	7	3	0
NH	CONCORD	43	24	53	18	34	-5	0.87	0.10	0.73	8.61	84	32.80	88	92	48	0	6	4	1
NJ	ATLANTIC_CITY	51	31	62	26	41	-5	1.57	0.85	1.45	13.65	139	47.70	118	84	42	0	4	2	1
	NEWARK	50	34	63	27	42	-5	0.85	0.11	0.65	9.91	102	32.84	79	77	38	0	2	3	1
NM	ALBUQUERQUE	48	27	59	23	37	-8	0.08	-0.05	0.08	1.89	79	8.14	100	74	32	0	7	1	0
NV	ELY	38	9	49	1	24	-11	0.00	-0.15	0.00	2.86	152	6.57	77	86	34	0	7	0	0
	LAS VEGAS	58	41	60	38	50	-7	0.00	-0.07	0.00	0.59	74	1.72	48	41	18	0	0	0	0
	RENO	46	24	53	21	35	-9	0.00	-0.14	0.00	0.65	61	3.06	51	77	34	0	7	0	0
	WINNEMUCCA	38	13	47	4	26	-13	0.00	-0.15	0.00	0.70	46	3.48	50	84	44	0	5	0	0
NY	ALBANY	43	28	49	21	35	-5	0.54	-0.12	0.31	10.42	110	39.85	109	85	50	0	6	3	0
	BINGHAMTON	34	26	40	19	30	-8	0.72	0.02	0.44	12.12	124	38.36	101	94	61	0	7	5	0
	BUFFALO	37	29	41	23	33	-8	1.65	0.84	1.36	11.30	109	33.56	94	91	58	0	6	6	1
	ROCHESTER	37	29	44	24	33	-8	0.30	-0.32	0.09	6.34	77	25.32	80	91	59	0	7	4	0
	SYRACUSE	39	31	44	27	35	-5	0.55	-0.19	0.21	8.53	91	31.80	89	82	55	0	4	4	0
OH	AKRON-CANTON	37	29	42	21	33	-9	0.26	-0.44	0.07	6.91	78	33.89	90	81	55	0	6	6	0
	CINCINNATI	37	26	44	17	32	-12	0.13	-0.60	0.10	4.09	48	41.09	102	88	54	0	6	2	0
	CLEVELAND	36	30	39	22	33	-10	0.32	-0.45	0.16	8.35	86	37.11	100	79	55	0	4	4	0
	COLUMBUS	38	28	43	21	33	-10	0.11	-0.54	0.08	5.02	64	39.26	105	86	54	0	5	3	0
	DAYTON	37	27	43	19	32	-12	0.02	-0.69	0.02	3.70	45	33.02	89	81	54	0	7	1	0
	MANSFIELD	34	27	39	19	30	-11	0.19	-0.54	0.09	8.63	101	40.11	104	87	61	0	7	4	0
	TOLEDO	37	28	43	19	33	-10	0.14	-0.49	0.08	3.98	55	35.82	113	87	56	0	6	3	0

Based on 1991-2020 normals ***** Not Available**

Weather Data for the Week Ending November 19, 2022

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE 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
	YOUNGSTOWN	36	28	38	22	32	-9	0.17	-0.50	0.04	7.25	80	39.08	105	85	60	0	7	6	0
OK	OKLAHOMA CITY	46	25	57	21	36	-13	0.17	-0.18	0.17	4.65	56	21.39	62	89	41	0	7	1	0
	TULSA	46	27	55	24	37	-14	0.11	-0.48	0.10	5.72	60	30.07	79	85	37	0	6	2	0
OR	ASTORIA	54	33	58	30	43	-3	0.00	-2.72	0.00	12.94	79	54.58	98	81	44	0	4	0	0
	BURNS	27	3	33	-3	15	-19	0.00	-0.24	0.00	0.97	55	5.28	62	87	65	0	7	0	0
	EUGENE	48	26	52	19	37	-8	0.00	-1.43	0.00	5.35	66	24.06	77	92	56	0	5	0	0
	MEDFORD	56	27	64	26	42	-3	0.00	-0.62	0.00	2.79	87	9.95	72	92	31	0	7	0	0
	PENDLETON	34	24	41	18	29	-12	0.00	-0.33	0.00	2.68	107	13.63	125	92	72	0	7	0	0
	PORTLAND	50	35	55	30	42	-5	0.00	-1.30	0.00	6.42	77	29.30	101	72	40	0	2	0	0
	SALEM	52	29	60	26	41	-6	0.00	-1.42	0.00	7.37	87	31.63	103	88	42	0	6	0	0
PA	ALLENTOWN	44	26	54	20	35	-9	0.73	0.02	0.58	10.20	93	40.28	95	83	46	0	6	3	1
	ERIE	36	30	39	22	33	-10	2.62	1.77	0.94	18.85	170	45.07	120	91	61	0	4	6	2
	MIDDLETOWN	44	32	51	26	38	-6	0.73	0.08	0.72	9.52	90	35.71	90	79	47	0	4	2	1
	PHILADELPHIA	49	35	59	31	42	-5	1.34	0.72	1.15	9.74	101	33.76	86	79	41	0	2	3	1
	PITTSBURGH	36	28	40	20	32	-11	0.31	-0.34	0.26	8.16	102	34.62	96	84	55	0	6	3	0
	WILKES-BARRE	41	29	50	22	35	-7	0.60	-0.03	0.44	10.93	113	36.59	104	86	53	0	5	3	0
	WILLIAMSPORT	42	28	47	22	35	-7	0.61	-0.14	0.51	11.11	106	33.94	87	83	49	0	6	2	1
RI	PROVIDENCE	48	31	56	25	39	-5	1.22	0.25	0.89	13.67	125	37.93	92	84	46	0	5	3	1
SC	CHARLESTON	64	41	77	33	52	-6	0.17	-0.46	0.17	11.22	93	46.42	96	89	49	0	0	1	0
	COLUMBIA	57	37	62	27	47	-7	0.02	-0.61	0.02	6.37	72	36.31	89	91	41	0	3	1	0
	FLORENCE	59	37	66	28	47	-7	0.20	-0.43	0.20	7.13	75	33.91	83	89	43	0	3	1	0
	GREENVILLE	51	30	57	26	41	-11	0.47	-0.44	0.47	10.72	111	46.43	106	85	40	0	6	1	0
SD	ABERDEEN	26	12	30	5	19	-12	0.10	-0.05	0.08	0.86	18	17.76	84	89	73	0	7	2	0
	HURON	28	13	30	6	20	-12	0.06	-0.12	0.03	0.94	19	14.69	65	88	62	0	7	2	0
	RAPID CITY	31	9	39	-9	20	-14	0.12	0.01	0.11	1.06	35	14.89	87	90	57	0	7	2	0
	SIOUX FALLS	29	17	32	11	23	-12	0.01	-0.29	0.01	2.76	46	21.50	80	78	54	0	7	1	0
TN	BRISTOL	46	28	52	20	37	-9	0.97	0.26	0.97	5.39	74	36.19	93	81	46	0	5	1	1
	CHATTANOOGA	49	31	53	25	40	-10	1.01	-0.11	1.01	7.27	68	45.50	95	83	41	0	4	1	1
	KNOXVILLE	46	29	50	24	37	-11	1.07	0.10	1.07	5.95	68	43.96	97	84	49	0	5	1	1
	MEMPHIS	46	31	51	27	39	-14	0.10	-0.97	0.10	8.69	89	45.76	96	80	44	0	6	1	0
	NASHVILLE	47	30	52	24	38	-12	0.19	-0.69	0.19	4.38	46	44.37	99	76	40	0	6	1	0
TX	ABILENE	53	32	61	29	43	-13	0.01	-0.29	0.01	4.91	75	12.52	53	76	32	0	5	1	0
	AMARILLO	45	23	56	18	34	-13	0.00	-0.16	0.00	4.40	111	15.61	83	78	36	0	7	0	0
	AUSTIN	54	42	59	37	48	-13	0.36	-0.30	0.24	3.55	38	15.93	48	90	58	0	0	3	0
	BEAUMONT	56	41	60	36	49	-13	1.76	0.93	1.01	9.37	64	39.13	70	90	53	0	0	3	2
	BROWNSVILLE	67	52	85	45	59	-11	1.33	0.95	0.75	9.04	83	24.88	99	97	76	0	0	5	1
	CORPUS CHRISTI	60	47	73	43	54	-12	0.67	0.22	0.63	6.09	61	21.85	74	85	63	0	0	2	1
	DEL RIO	60	41	76	38	50	-10	0.00	-0.20	0.00	1.36	25	5.61	30	73	35	0	0	0	0
	EL PASO	58	37	67	32	47	-7	0.00	-0.09	0.00	3.54	148	9.14	114	50	27	0	1	0	0
	FORT WORTH	50	37	60	33	44	-13	0.44	-0.11	0.44	8.69	98	34.85	104	82	45	0	0	1	0
	GALVESTON	56	48	70	45	52	-13	2.75	1.84	1.74	8.31	57	30.19	72	79	62	0	0	2	2
	HOUSTON	56	41	59	36	49	-13	0.80	-0.04	0.59	4.75	37	33.83	72	90	48	0	0	2	1
	LUBBOCK	47	26	57	21	37	-13	0.00	-0.17	0.00	3.20	69	12.79	73	77	37	0	7	0	0
	MIDLAND	49	30	55	24	40	-14	0.00	-0.17	0.00	2.10	62	7.94	62	80	40	0	6	0	0
	SAN ANGELO	54	32	67	27	43	-12	0.00	-0.25	0.00	4.63	80	10.35	52	78	33	0	4	0	0
	SAN ANTONIO	58	43	66	38	50	-10	0.65	0.19	0.50	2.72	30	9.72	32	76	37	0	0	2	1
	VICTORIA	57	43	67	36	50	-13	1.56	0.88	1.05	5.83	56	20.06	54	93	56	0	0	3	1
	WACO	52	33	60	26	43	-14	0.37	-0.23	0.37	4.88	53	16.11	49	99	48	0	2	1	0
	WICHITA FALLS	51	29	60	26	40	-12	0.42	0.06	0.42	4.27	61	15.90	61	85	39	0	7	1	0
UT	SALT LAKE CITY	40	25	46	21	32	-9	0.00	-0.31	0.00	3.32	105	9.57	70	83	46	0	7	0	0
VA	LYNCHBURG	49	29	53	25	39	-7	0.88	0.11	0.88	6.74	73	39.34	103	80	40	0	6	1	1
	NORFOLK	55	38	67	32	47	-6	0.29	-0.40	0.23	7.09	62	31.02	69	88	52	0	1	2	0
	RICHMOND	53	31	64	25	42	-7	1.04	0.35	1.04	5.87	59	33.07	81	84	40	0	5	1	1
	ROANOKE	46	31	50	28	39	-9	0.95	0.26	0.95	12.36	139	42.11	109	74	41	0	5	1	1
	WASH/DULLES	47	30	51	25	38	-8	1.20	0.50	1.20	7.77	81	34.74	89	78	44	0	5	1	1
VT	BURLINGTON	39	28	49	24	34	-5	0.46	-0.15	0.42	11.20	121	34.73	101	82	53	0	7	4	0
WA	OLYMPIA	48	23	52	18	36	-8	0.00	-2.03	0.00	8.43	68	40.26	101	99	57	0	7	0	0
	QUILLAYUTE	54	28	60	24	41	-4	0.00	-3.69	0.00	14.31	57	74.07	90	97	51	0	7	0	0
	SEATTLE-TACOMA	51	34	54	31	42	-4	0.00	-1.56	0.00	4.37	46	29.09	93	84	42	0	3	0	0
	SPOKANE	31	17	35	11	24	-12	0.00	-0.50	0.00	2.85	88	12.26	92	85	57	0	7	0	0
	YAKIMA	39	17	44	9	28	-10	0.00	-0.19	0.00	0.67	48	4.67	75	89	50	0	7	0	0
WI	EAU CLAIRE	28	19	34	8	24	-10	0.19	-0.23	0.08	5.03	68	20.14	64	88	64	0	7	4	0
	GREEN BAY	31	22	36	11	27	-9	0.31	-0.16	0.26	7.01	98	29.79	102	89	62	0	7	4	0
	LA CROSSE	31	21	36	12	26	-11	0.30	-0.13	0.19	3.63	49	24.70	74	84	61	0	7	5	0
	MADISON	32	22	37	12	27	-10	0.35	-0.18	0.26	7.85	102	33.26	95	85	58	0	7	3	0
	MILWAUKEE	36	26	42	16	31	-9	0.46	-0.07	0.40	8.85	119	31.97	100	80	50	0	6	5	0
WV	BECKLEY	37	24	43	19	31	-13	0.41	-0.21	0.34	8.41	110	44.18	112	92	57	0	6	4	0
	CHARLESTON	40	28	46	24	34	-12	0.67	-0.06	0.61	5.32	64	51.02	123	92	59	0	6	4	1
	ELKINS	38	24	45	14	31	-11	0.89	0.26	0.68	8.43	101	51.33	120	86	58	0	7	4	1
	HUNTINGTON	40	28	45	21	34	-12	0.54	-0.16	0.49	4.74	59	41.40	102	85	53	0	6	4	0
WY	CASPER	31	5	38	-11	18	-15	0.16	0.02	0.15	1.65	64	11.87	104	87	49	0	7	2	0
	CHEYENNE	33	11	45	-9	22	-14	0.06	-0.07	0.06	1.42	49	7.93	53	80	35	0	7	1	0
	LANDER	30	10	38	1	20	-12	0.24	0.06	0.13	2.42	83	11.83	95	85	48	0	7	2	0
	SHERIDAN	31	11	36	-7	21	-12	0.16	-0.02	0.06	4.19	117	17.65	124	82	56	0	7	4	0

Based on 1991-2020 normals

***** Not Available**

National Agricultural Summary

November 14-20, 2022

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Much of the nation remained drier than normal, while parts of the western Gulf Coast, Great Lakes, northern Maine, Great Plains, and Rockies recorded at least twice the normal amount of weekly precipitation. Parts of the Louisiana Gulf Coast and western New York recorded at least 2.5 inches of precipitation. Meanwhile, most of the nation recorded below-normal temperatures. Except for East and West coastal areas, most of the country was at least 10°F cooler than normal. Parts of the Great Plains, Mississippi Valley, Pacific Northwest, and Rockies recorded temperatures 15°F or more below normal.

Corn: Ninety-six percent of the 2022 corn acreage was harvested as of November 20, two percentage points ahead of last year and 6 points ahead of the 5-year average. Harvest progress was complete or nearing completion in 15 of the 18 estimating states.

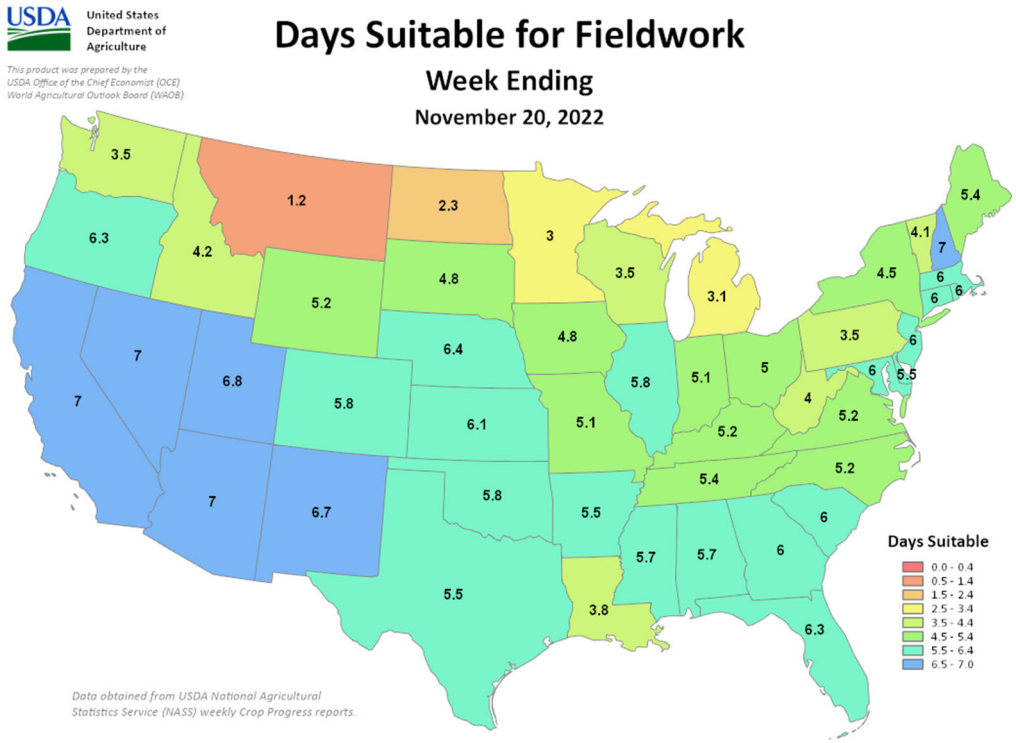
Winter Wheat: Nationwide, 87 percent of the winter wheat acreage had emerged by November 20, two percentage points ahead of last year and 1 point ahead of the 5-year average. Winter wheat emergence advanced by 10 percentage points or more during the week in seven of the 18 estimating states. On November 20, thirty-two percent of the 2023 winter wheat acreage was reported in good to excellent condition, equal to the previous week but 12 percentage points below the same time last year.

Cotton: By November 20, seventy-nine percent of the nation's cotton acreage was harvested, 5 percentage points ahead of last year and 8 points ahead of the 5-year average. Cotton harvest progress advanced 10 percentage points or more for the week in California, Georgia, Oklahoma, South Carolina, and Texas.

Sorghum: Ninety-seven percent of the 2022 sorghum acreage had been harvested by November 20, four percentage points ahead of last year and 6 points ahead of the 5-year average. Harvest progress was ahead of the 5-year average pace in all six estimating states.

Other Crops: Ninety-four percent of the nation's peanut acreage was harvested as of November 20, three percentage points ahead of last year and 2 points ahead of the 5-year average. Peanut harvest progress was ahead of the 5-year average pace in all eight estimating states.

By November 20, ninety-five percent of this year's sunflower crop was harvested, 6 percentage points ahead of last year and 17 points ahead of the 5-year average. Sunflower harvest advanced 17 percentage points during the week in Colorado.



Crop Progress and Condition

Week Ending November 20, 2022

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

Winter Wheat Percent Emerged

	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
AR	78	59	75	76
CA	39	25	45	35
CO	92	97	99	94
ID	97	91	95	96
IL	74	74	79	87
IN	84	77	86	85
KS	89	75	81	88
MI	85	94	98	89
MO	79	72	83	74
MT	84	95	98	88
NE	100	100	100	99
NC	51	48	61	53
OH	89	83	93	93
OK	89	82	90	89
OR	63	73	84	76
SD	99	78	88	98
TX	74	75	80	75
WA	95	93	95	92
18 Sts	85	81	87	86

These 18 States planted 89% of last year's winter wheat acreage.

Winter Wheat Condition by Percent

	VP	P	F	G	EX
AR	0	2	25	49	24
CA	0	0	0	50	50
CO	24	28	28	20	0
ID	2	1	59	32	6
IL	4	6	55	28	7
IN	2	5	30	53	10
KS	20	20	36	22	2
MI	1	6	26	51	16
MO	2	6	34	54	4
MT	1	15	54	24	6
NE	20	20	39	20	1
NC	0	3	16	79	2
OH	5	8	29	44	14
OK	21	20	36	21	2
OR	2	4	23	39	32
SD	6	26	36	31	1
TX	23	26	32	16	3
WA	1	9	30	50	10
18 Sts	15	18	35	27	5
Prev Wk	14	18	36	27	5
Prev Yr	8	14	34	37	7

Sorghum Percent Harvested

	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
CO	99	90	97	90
KS	90	90	95	88
NE	94	93	98	92
OK	92	92	97	88
SD	94	96	99	90
TX	100	100	100	98
6 Sts	93	93	97	91

These 6 States harvested 100% of last year's sorghum acreage.

Peanuts Percent Harvested

	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
AL	93	92	98	93
FL	99	99	100	99
GA	93	93	95	94
NC	95	96	99	91
OK	89	85	95	87
SC	83	87	94	87
TX	77	70	79	78
VA	97	99	100	97
8 Sts	91	91	94	92

These 8 States harvested 96% of last year's peanut acreage.

Corn Percent Harvested

	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
CO	97	84	95	93
IL	96	94	97	95
IN	90	91	95	90
IA	94	95	97	92
KS	97	96	97	96
KY	94	96	99	96
MI	84	78	86	75
MN	99	96	98	93
MO	97	94	96	94
NE	94	95	99	93
NC	100	100	100	100
ND	94	96	98	76
OH	83	87	92	82
PA	85	65	80	81
SD	92	96	99	85
TN	100	100	100	100
TX	100	100	100	98
WI	91	71	77	77
18 Sts	94	93	96	90

These 18 States harvested 93% of last year's corn acreage.

Cotton Percent Harvested

	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
AL	76	81	87	78
AZ	69	53	59	65
AR	97	99	100	97
CA	97	80	90	80
GA	65	68	79	72
KS	45	79	85	43
LA	97	100	100	98
MS	90	97	98	93
MO	93	93	97	92
NC	80	81	88	78
OK	72	61	75	64
SC	65	63	73	72
TN	81	83	90	84
TX	69	61	71	64
VA	72	82	87	76
15 Sts	74	71	79	71

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

Sunflowers Percent Harvested

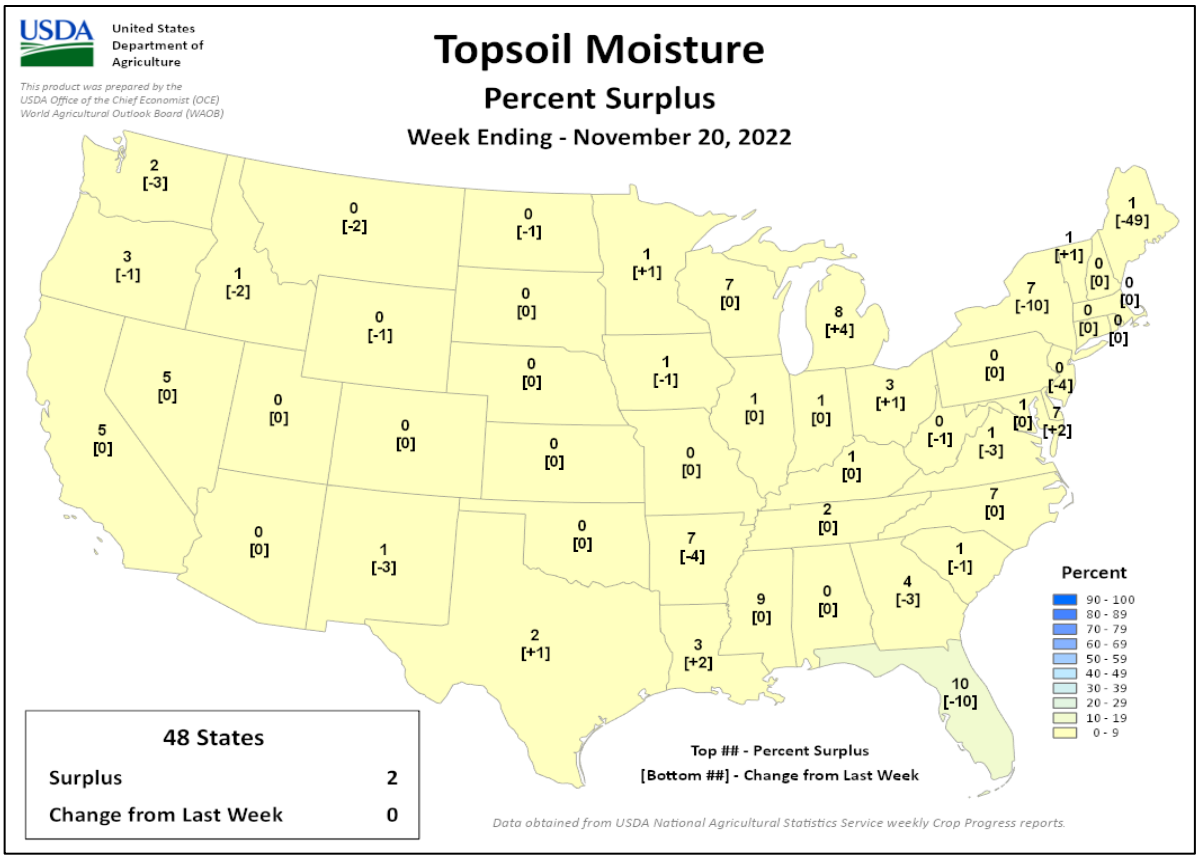
	Prev Year	Prev Week	Nov 20 2022	5-Yr Avg
CO	92	73	90	90
KS	92	88	93	87
ND	89	91	94	77
SD	89	93	96	77
4 Sts	89	91	95	78

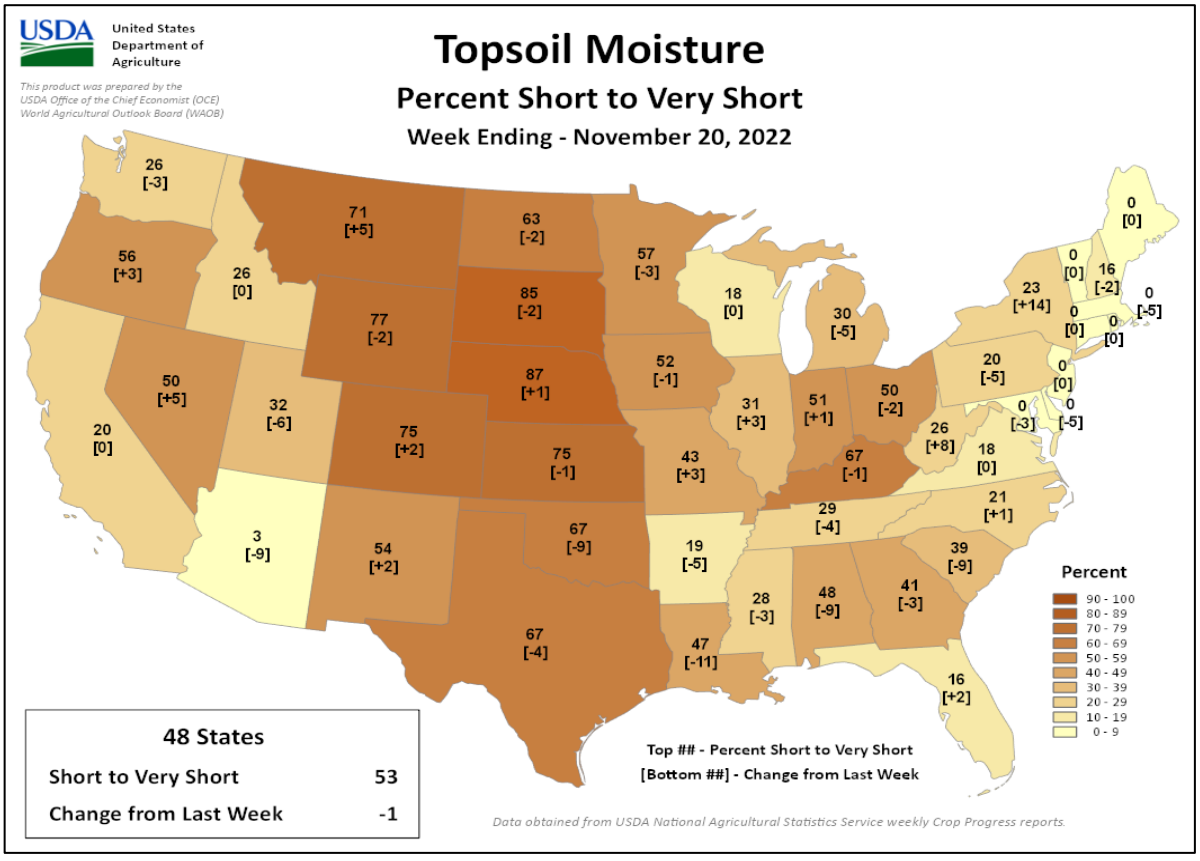
These 4 States harvested 86% of last year's sunflower acreage.

Crop Progress and Condition

Week Ending November 20, 2022

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

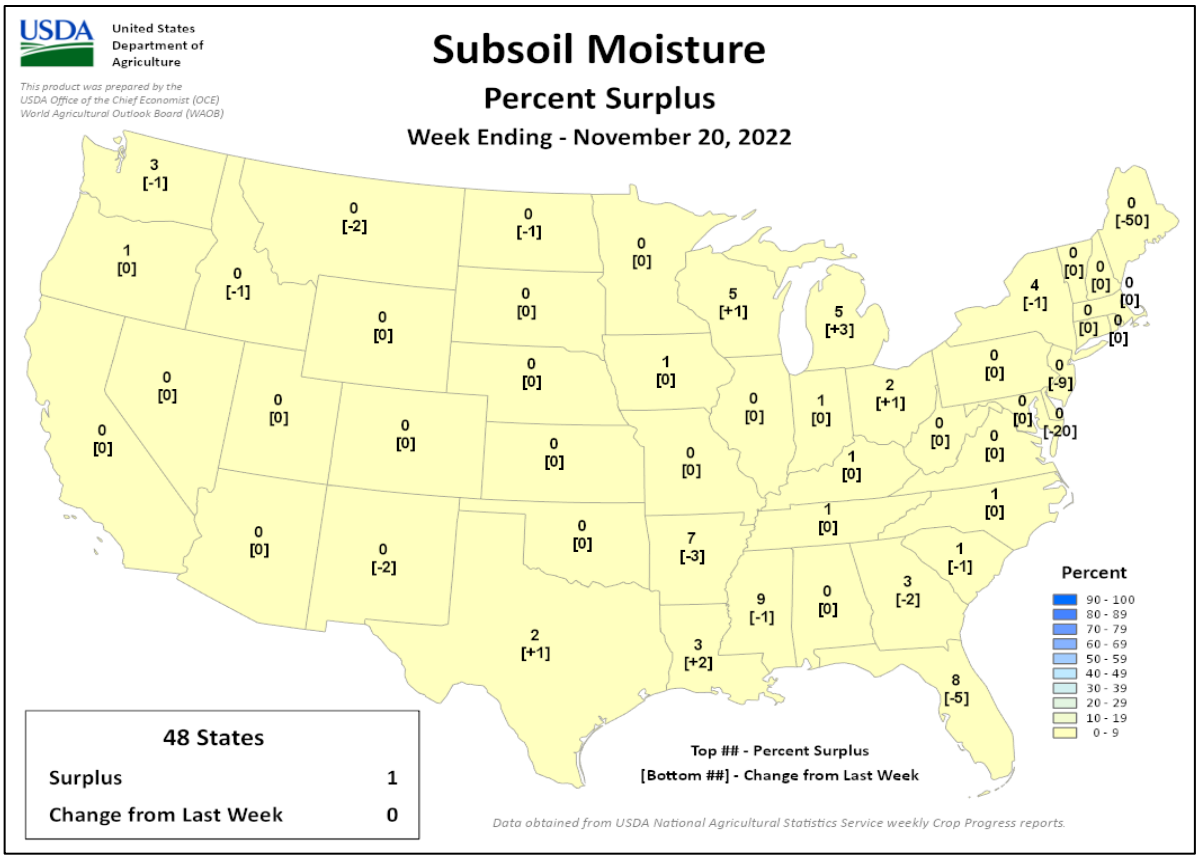


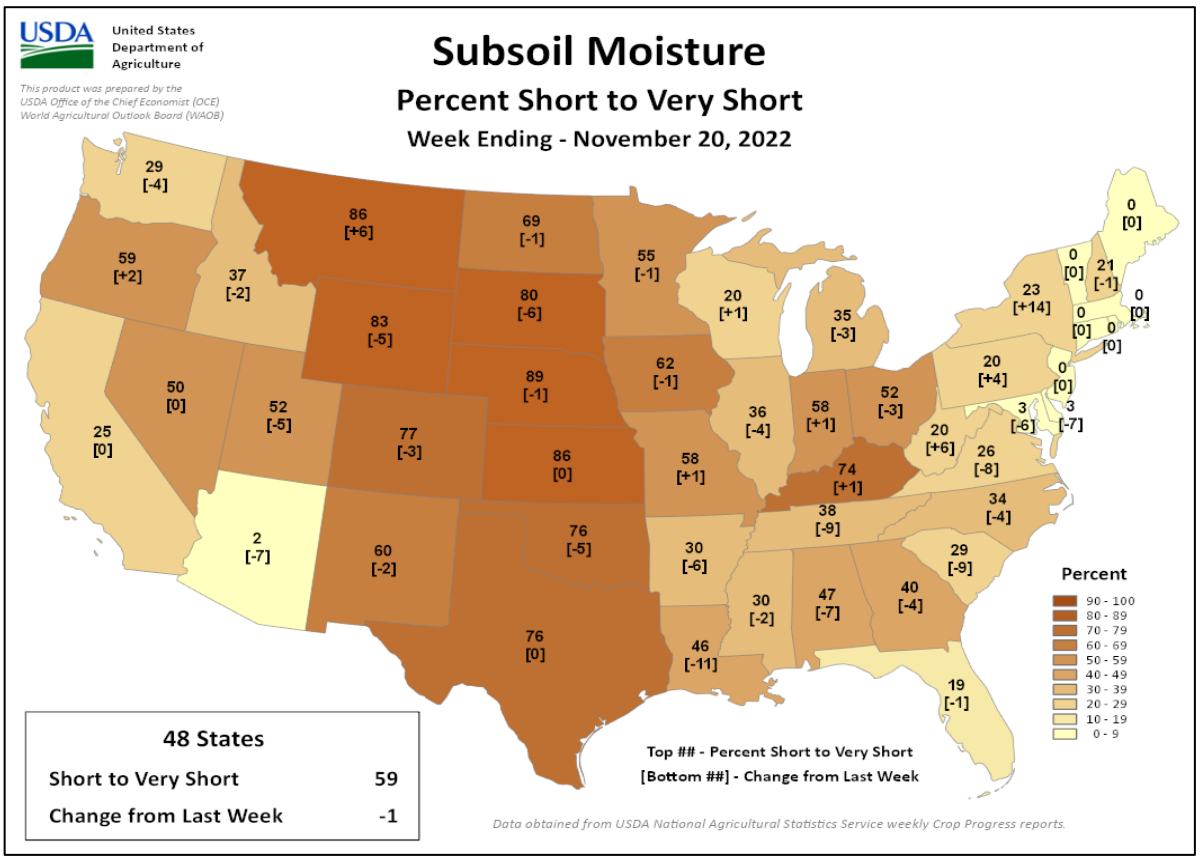


Crop Progress and Condition

Week Ending November 20, 2022

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





International Weather and Crop Summary

November 13-19, 2022

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

HIGHLIGHTS

EUROPE: Warm, wet weather continued over much of Europe, though dry conditions prevailed in northeastern- and southeastern-most growing areas.

MIDDLE EAST: Increasing showers in central growing areas contrasted with short-term dryness in western and central Turkey.

NORTHWESTERN AFRICA: Sorely-needed showers moistened soils but did little to reverse this season's severe drought.

SOUTH ASIA: Seasonably dry weather in the region supported seasonal fieldwork.

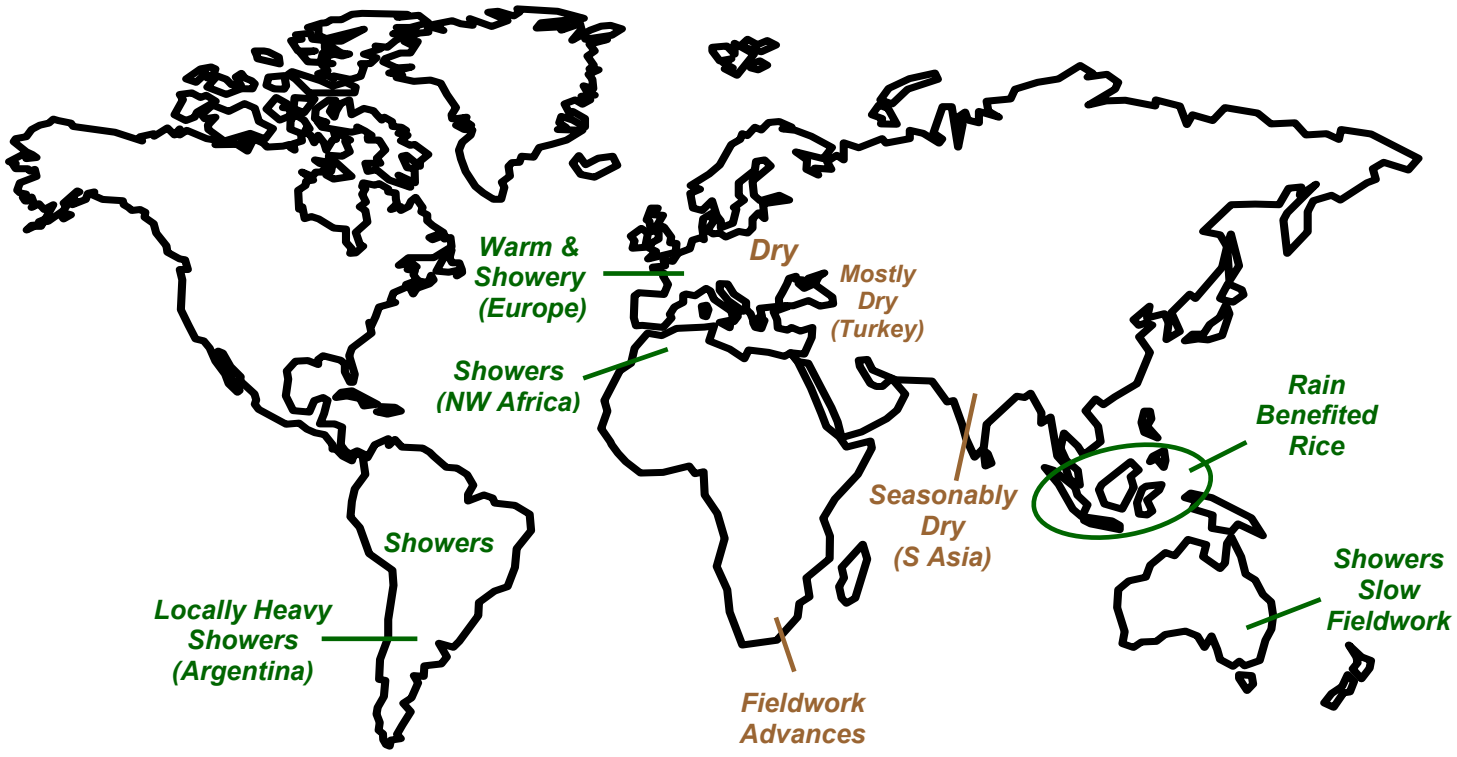
SOUTHEAST ASIA: Showers throughout southern and eastern portions of the region supported seasonal rice and other crops.

AUSTRALIA: Wet weather in the southeast further disrupted winter crop harvesting, while drier weather elsewhere allowed harvesting to progress at a steady pace.

SOUTH AFRICA: Drier conditions supported planting of corn and other summer crops.

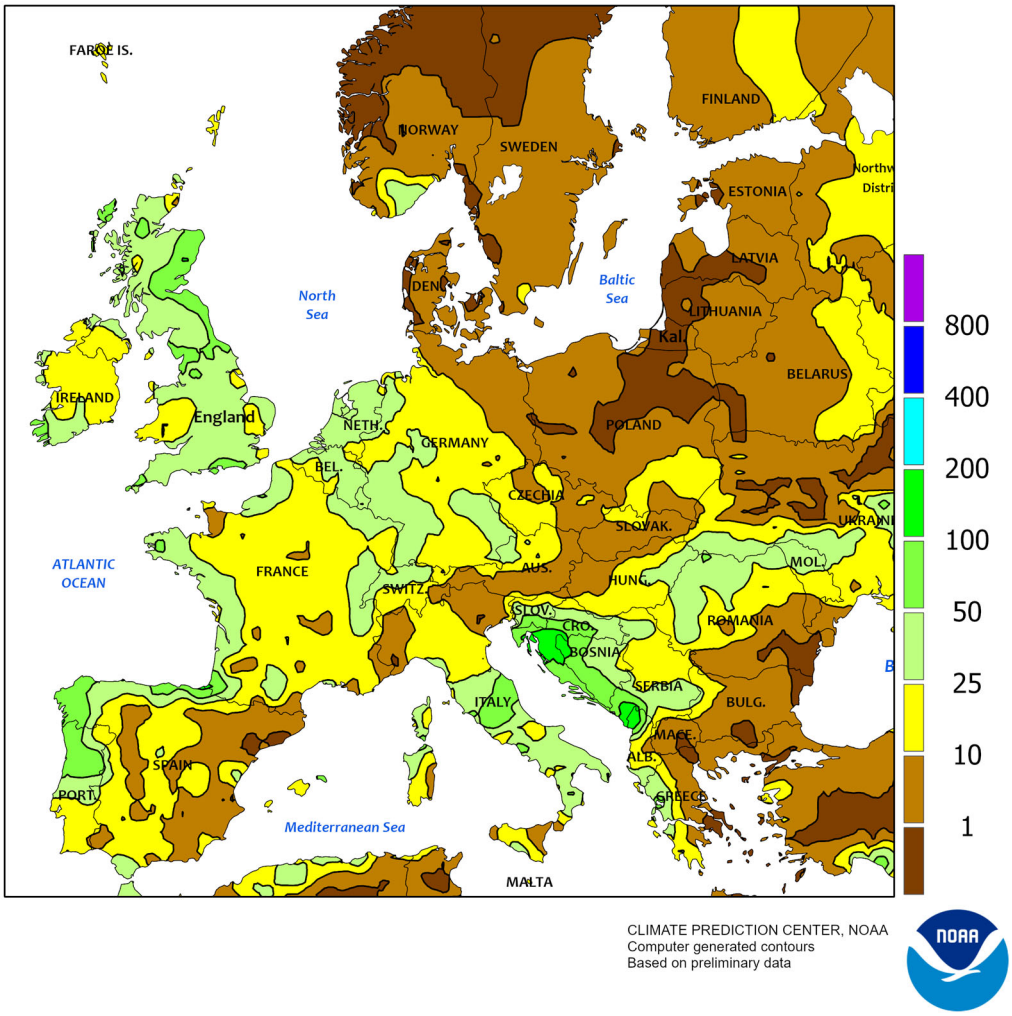
ARGENTINA: Much-needed rain benefited immature winter grains and emerging summer crops.

BRAZIL: Scattered showers maintained overall favorable prospects for main-season corn and soybeans.



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

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

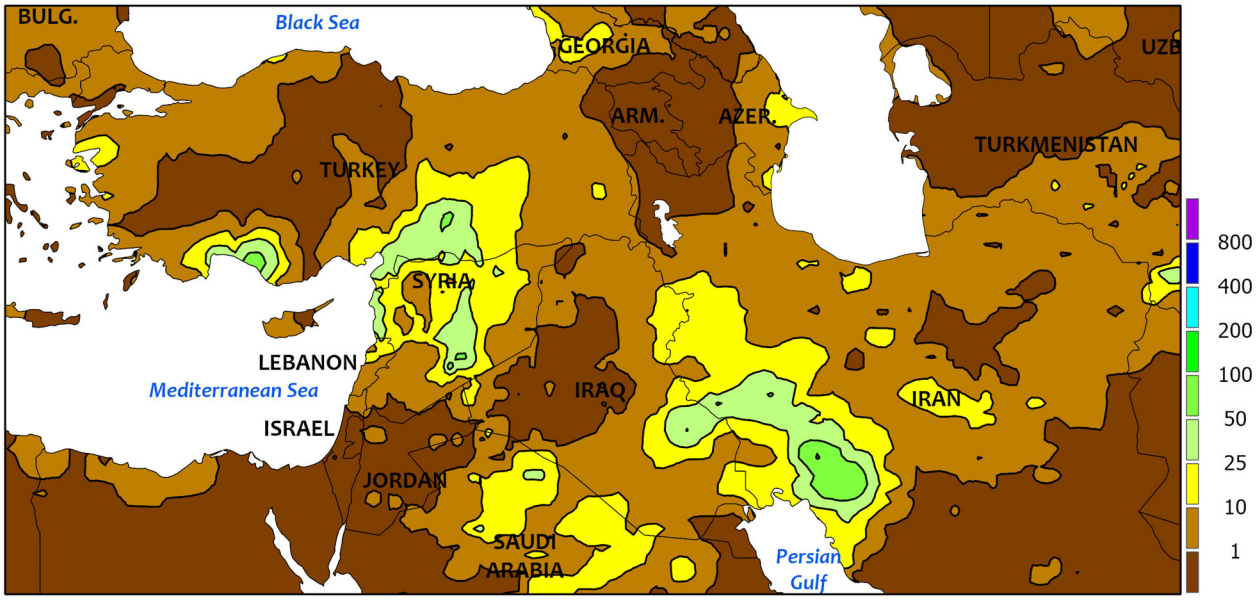


EUROPE

Warm and wet weather persisted, though northeastern- and southeastern-most growing areas were dry. Rainfall totaled 10 to 85 mm over many of the continent's primary winter crop areas, with amounts topping 100 mm in the western Balkans. Consequently, soil moisture remained adequate to abundant for winter wheat, barley, and rapeseed. However, precipitation was light (5 mm or less) from eastern Poland into the Baltic States and along the lower Danube River Valley. Cold weather (up to 2°C below normal) in eastern Germany and Poland resulted in the season's first snow and also ushered winter grains and oilseeds into dormancy. Conversely, anomalously warm weather (up to 4°C above normal) elsewhere kept winter crops vegetative.

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

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



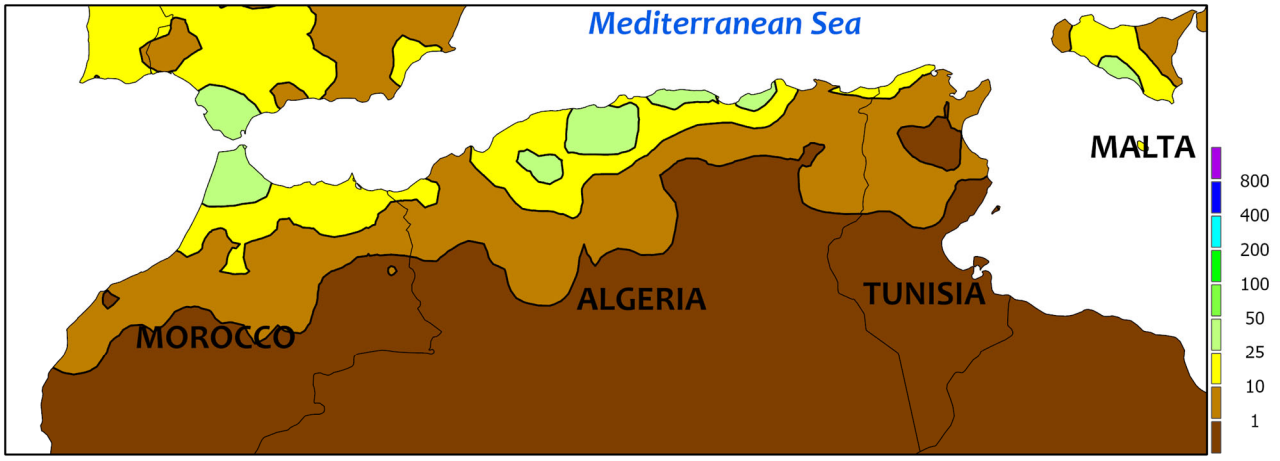
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

MIDDLE EAST

Increasing showers in central portions of the region contrasted with acute short-term dryness in western and central Turkey. Little to no rainfall was recorded from the Aegean Sea into central Turkey; consequently, season-to-date precipitation (since September 1) slipped to 33 and 60 percent of normal in Thrace (northwest) and the Anatolian Plateau, respectively. However, satellite and radar imagery indicated much-needed rain arrived in these locales at the end of the monitoring period. Meanwhile, moderate to heavy showers (10-85 mm) in southeastern Turkey's GAP Region boosted soil moisture for winter grains and improved summer crop irrigation reserves. Additional showers (5-40 mm) also benefitted winter grains along the immediate eastern Mediterranean Coast, but primary crop areas farther inland — from Aleppo, Syria eastward into northern Iraq and northwestern Iran — remained unfavorably dry. Meanwhile, moderate to heavy rainfall (5-90 mm) in southern Iraq and southwestern Iran favored the establishment of wheat and barley, while light rain (2-10 mm) in northeastern Iran moistened soils locally for winter crops. Temperatures up to 4°C above normal in western and central Turkey extended the window for fall establishment of winter grains, while temperatures averaged near normal in Iraq and northern Iran.

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

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



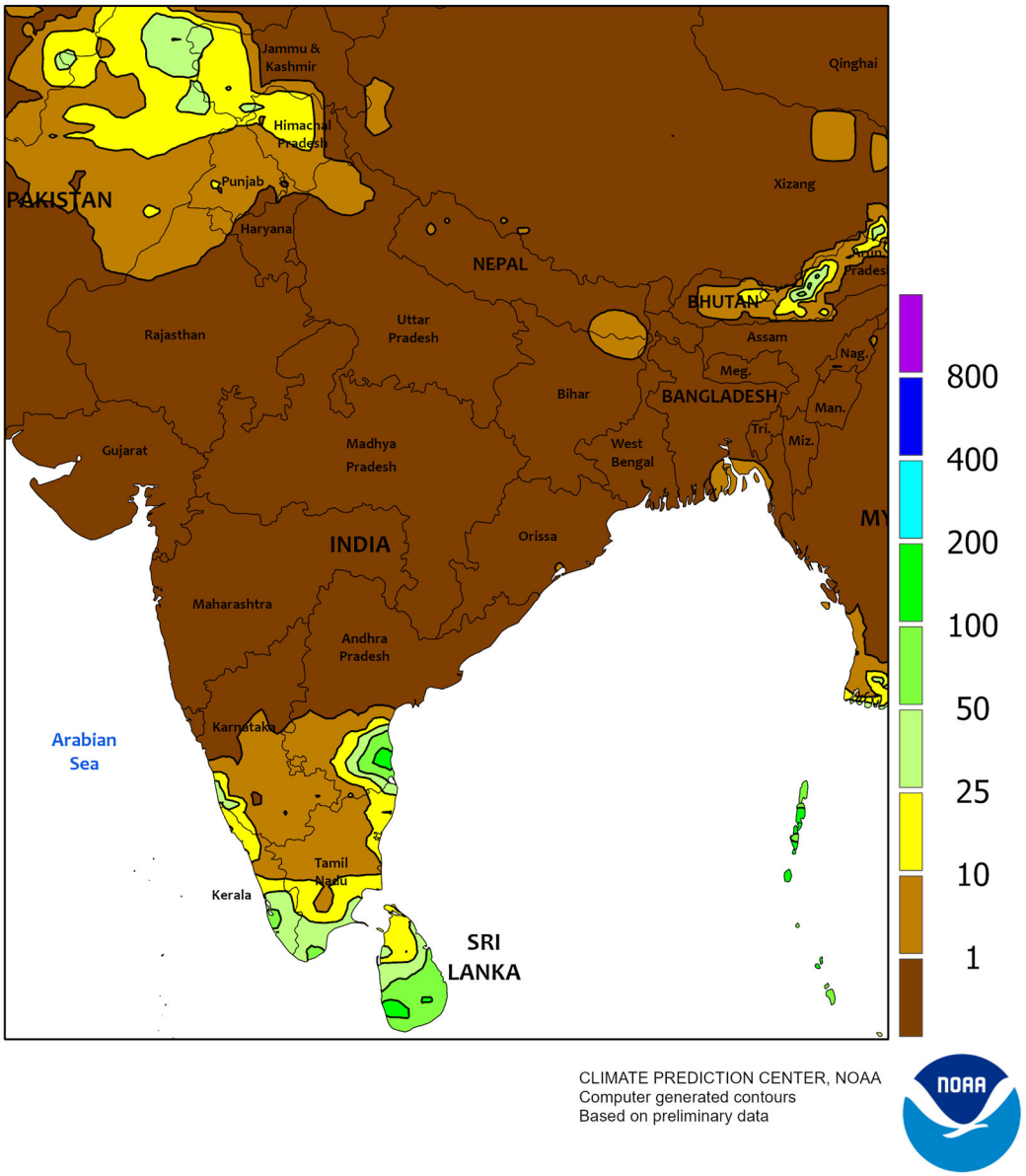
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

NORTHWESTERN AFRICA

Sorely-needed showers provided the first moisture of the season, although drought remained firmly entrenched across most of the region. Showers totaled 10 to 50 mm from northern Morocco into northern Tunisia, moistening soils for winter grain sowing. Even with this week's rain, season-to-date (since September 1) rainfall in Morocco's primary croplands remained mired below 40 mm, a deficit of more than 75 mm (less than 35 percent of normal) and the third driest start to the autumn-winter growing campaign over the past 30 years. Other notable season-to-date deficits persisted in eastern Algeria's Tell Region (shortfall of nearly 100 mm, or 33 percent of normal) and northern Tunisia (-80 mm, or 50 percent of normal). Anomalous warmth (up to 5°C above normal) maintained high evapotranspiration rates across the region; summer-like heat in Morocco (highs eclipsing 30°C) largely negated the benefits of this past week's rain. The satellite-derived Vegetation Health Index (VHI) continued to depict very poor conditions across the entire North African grain belt, with the latest VHI values markedly worse than the same time last year. In fact, the Moroccan VHI for the week ending November 20 was by far the worst on record for this time of year (dating back to 1982), easily surpassing the previous benchmark set in 1995.

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

SOUTH ASIA
Total Precipitation(mm)
November 13 - 19, 2022

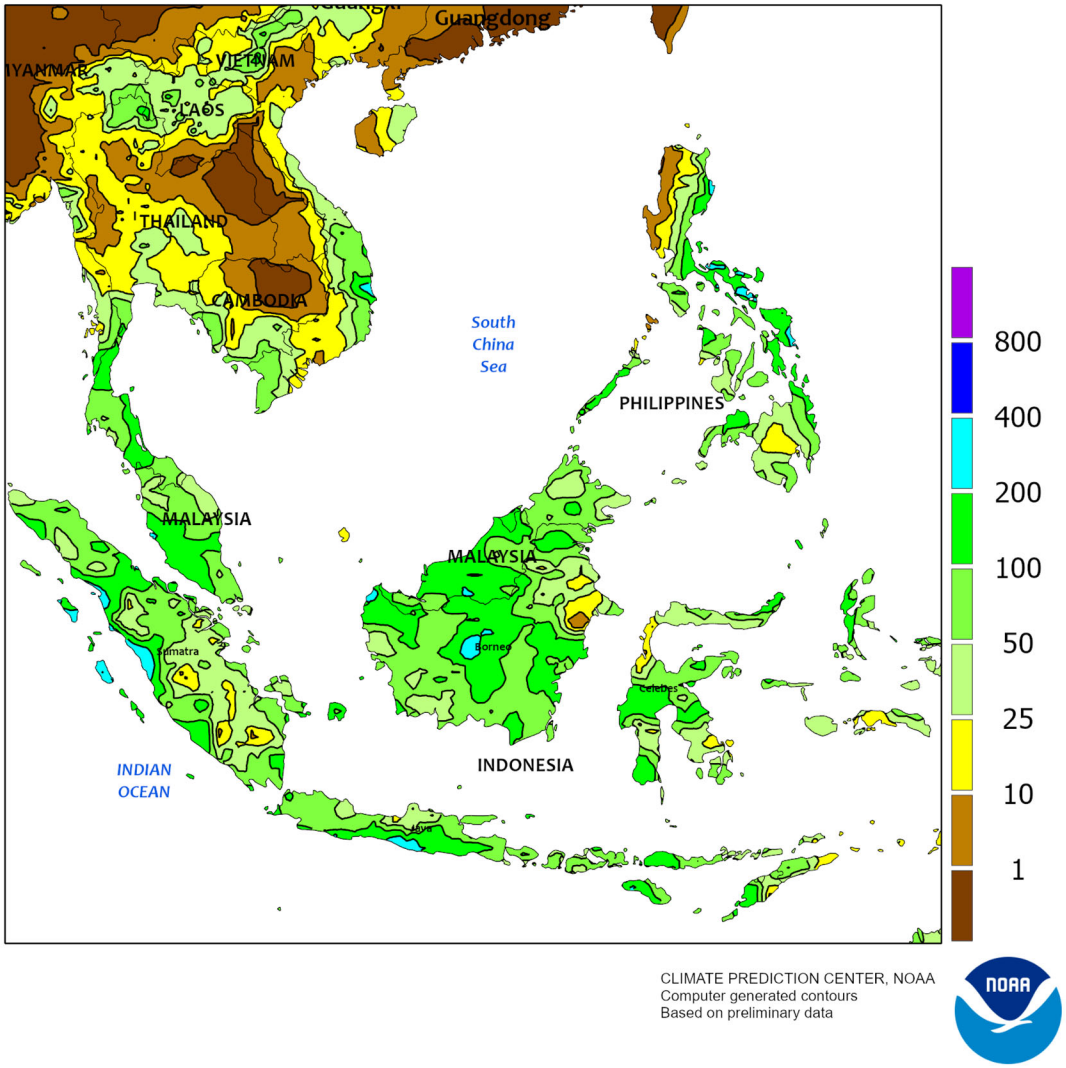


SOUTH ASIA

Seasonably dry weather continued across most of the region, supporting rabi crop planting in India and Pakistan as well as promoting seasonal rice (aman) development in Bangladesh. In India, rabi sowing progressed rapidly, with the pace of planting for most grains and oilseeds well ahead of last year at this time. Some showers in the south (1-50 mm) caused minor delays but boosted moisture reserves. The southern rainfall extended into Sri Lanka as well, bolstering moisture supplies for seasonal rice (maha).

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

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

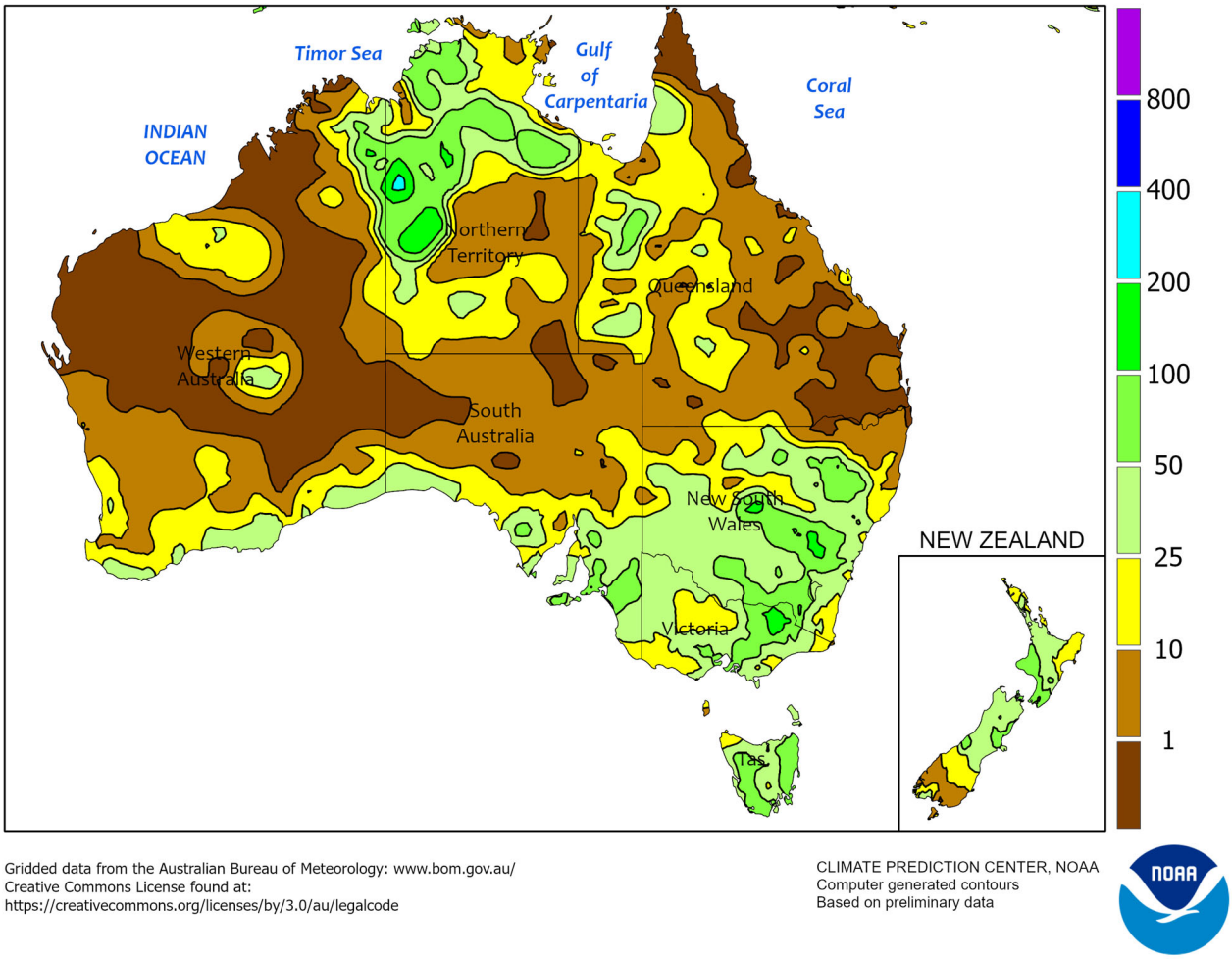


SOUTHEAST ASIA

Wet weather continued across eastern and southern sections of the region, bolstering moisture supplies for seasonal crops. Much of Malaysia and Indonesia recorded 25 to 100 mm (locally more) of rain, supporting oil palm and rice. In fact, seasonal (since August 1) rainfall in southern Indonesia (Java) continued to be above average and the third highest in the last 30 years. Similar showery weather prevailed in the Philippines as well, particularly in the traditionally rainy eastern locales. Moisture supplies remained high for rice and other crops following tropical downpours in October. Meanwhile, occasional rainfall (generally less than 25 mm) in Thailand and some of the surrounding areas aided establishment of the new rice crop without causing significant fieldwork delays.

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

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



Gridded data from the Australian Bureau of Meteorology: www.bom.gov.au/
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CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

AUSTRALIA

Scattered showers (locally more than 10 mm) in Western Australia and central South Australia temporarily delayed local fieldwork. Otherwise, relatively dry weather in most areas allowed wheat, barley, and canola harvesting to progress at a steady pace and helped maintain good grain quality. Farther east, wet weather returned to eastern South Australia, Victoria, and New South Wales. Moderate to heavy rain (10-50 mm, locally more than 100 mm) aggravated local flooding, further disrupted winter crop harvesting, and likely caused additional reductions in grain quality. Elsewhere, sunny skies in southern Queensland benefited wheat harvesting and summer crop sowing, including cotton and sorghum planting. However, soil moisture remained abundant in major crop producing areas, helping to promote summer crop germination and emergence. Unseasonably cool weather covered much of the wheat belt, with temperatures averaging up to 6°C below normal in parts of the southeast. Nevertheless, maximum temperatures climbed into the lower 30s (degrees C) in parts of Western Australia and southern Queensland, aiding winter crop drydown and harvesting.

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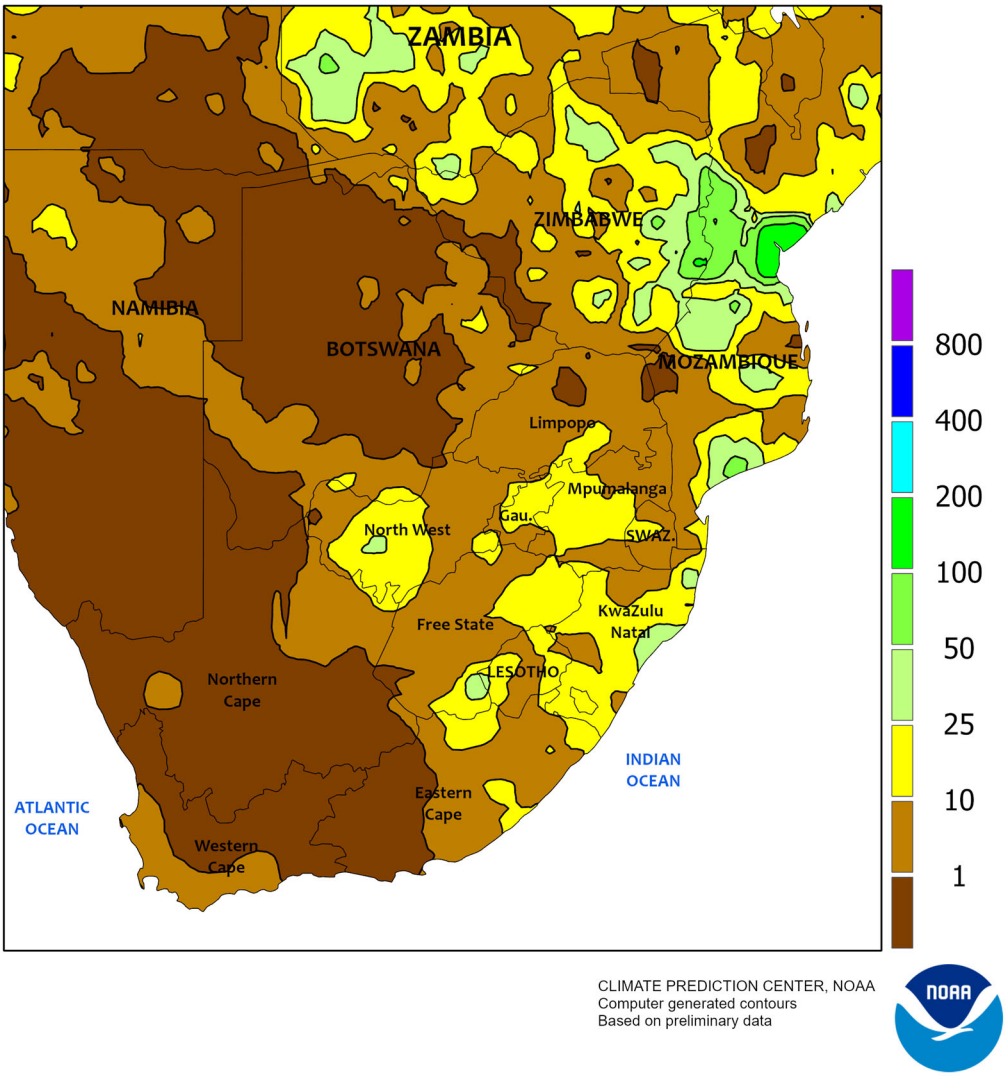
SOUTH AFRICA
Total Precipitation(mm)
November 13 - 19, 2022

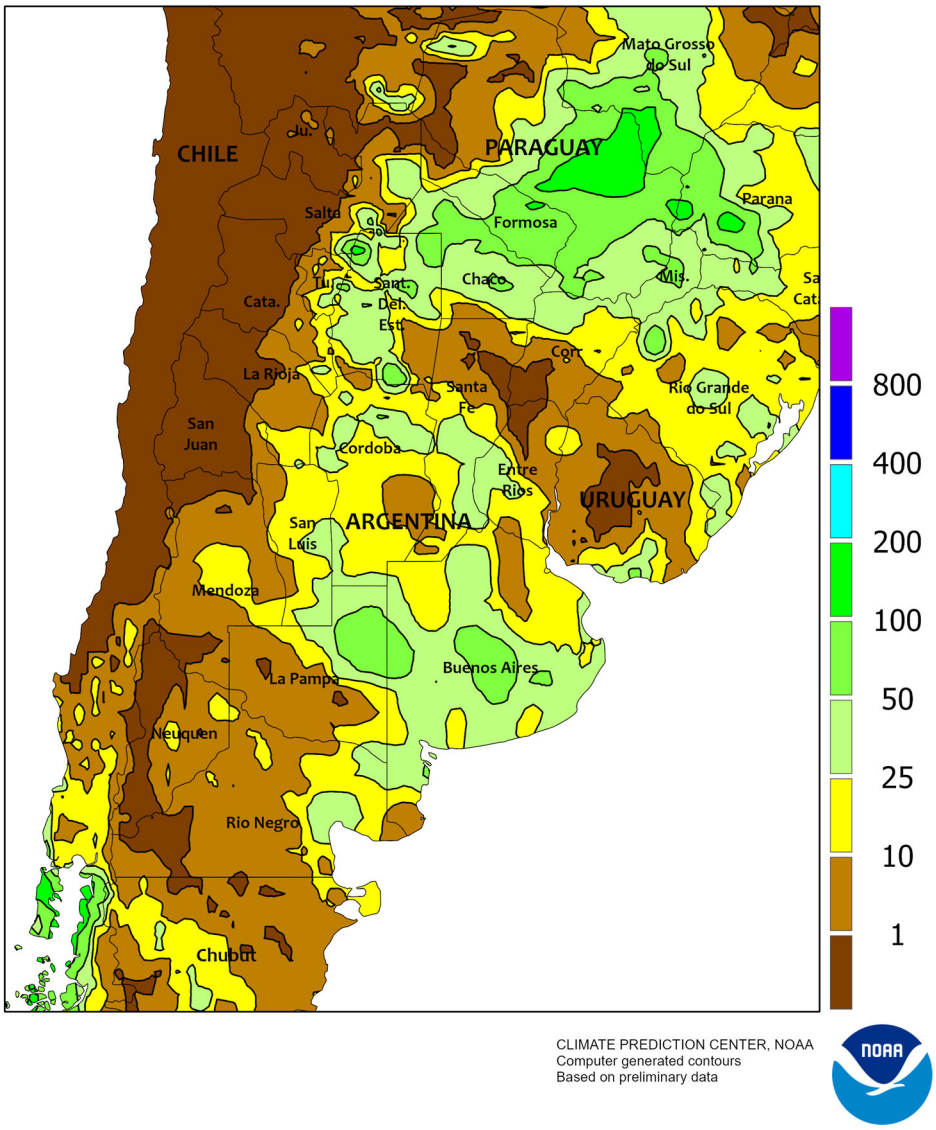


SOUTH AFRICA

Following several weeks of unseasonably heavy rainfall, drier conditions prevailed, encouraging planting of corn and other main-season summer crops. Large sections of the corn belt (North West and Free State eastward) recorded less than 10 mm, with few reports approaching 25 mm. Somewhat heavier rain (10-45 mm) fell farther south, increasing moisture for rain-fed sugarcane in KwaZulu-Natal and helping to build long-term moisture reserves in watersheds feeding the Orange Rivers and other major suppliers of irrigation. Highest daytime temperatures in the aforementioned areas ranged from the upper 20s and lower 30s (degrees C) from Gauteng and Mpumalanga southward to the middle and upper 30s in traditionally warmer locations farther north. Elsewhere, sunny, seasonably warm weather (highs reaching the lower and middle 30s) favored growth of irrigated tree and vine crops in Western Cape.

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

ARGENTINA
Total Precipitation(mm)
November 13 - 19, 2022



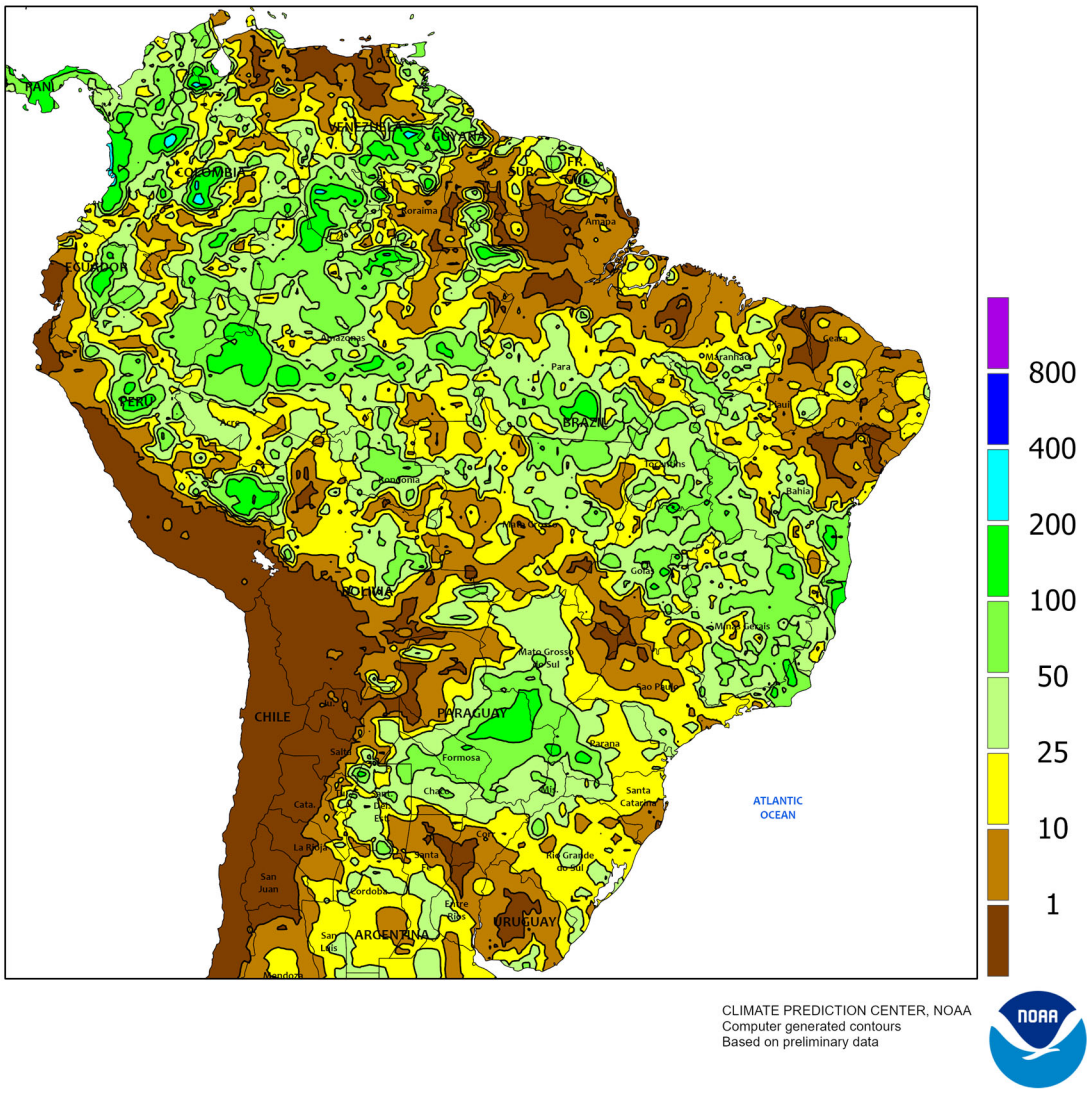
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

ARGENTINA

In a continuation of last week's much-needed rainfall, showers spread eastward into key winter grain and summer crop areas, benefiting immature wheat and barley and providing timely moisture for germinating corn, soybeans, and cotton. Rainfall totaling 10 to 50 mm – locally higher – covered most major farming areas, with few lingering pockets of dryness. In central Argentina (La Pampa, Buenos Aires, and from Cordoba to Entre Rios), the moisture was timely for reproductive to filling winter grains, although many locations had already reported some irreversible damage from drought and frost. Farther north, the moisture aided planting of summer grains, oilseeds, and cotton but came too late for winter wheat and barley. Weekly temperatures averaged 2 to 4°C above normal in all but the far northeast, spurring rapid development of all crops; daytime highs reached the middle 30s (degrees C) as far south as Buenos Aires and La Pampa. According to the government of Argentina, sunflowers and corn were 72 and 32 percent planted, respectively, as of November 17; meanwhile, soybeans were 17 percent planted versus 31 percent last year. In addition, cotton was 24 percent planted (33 percent last year).

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

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



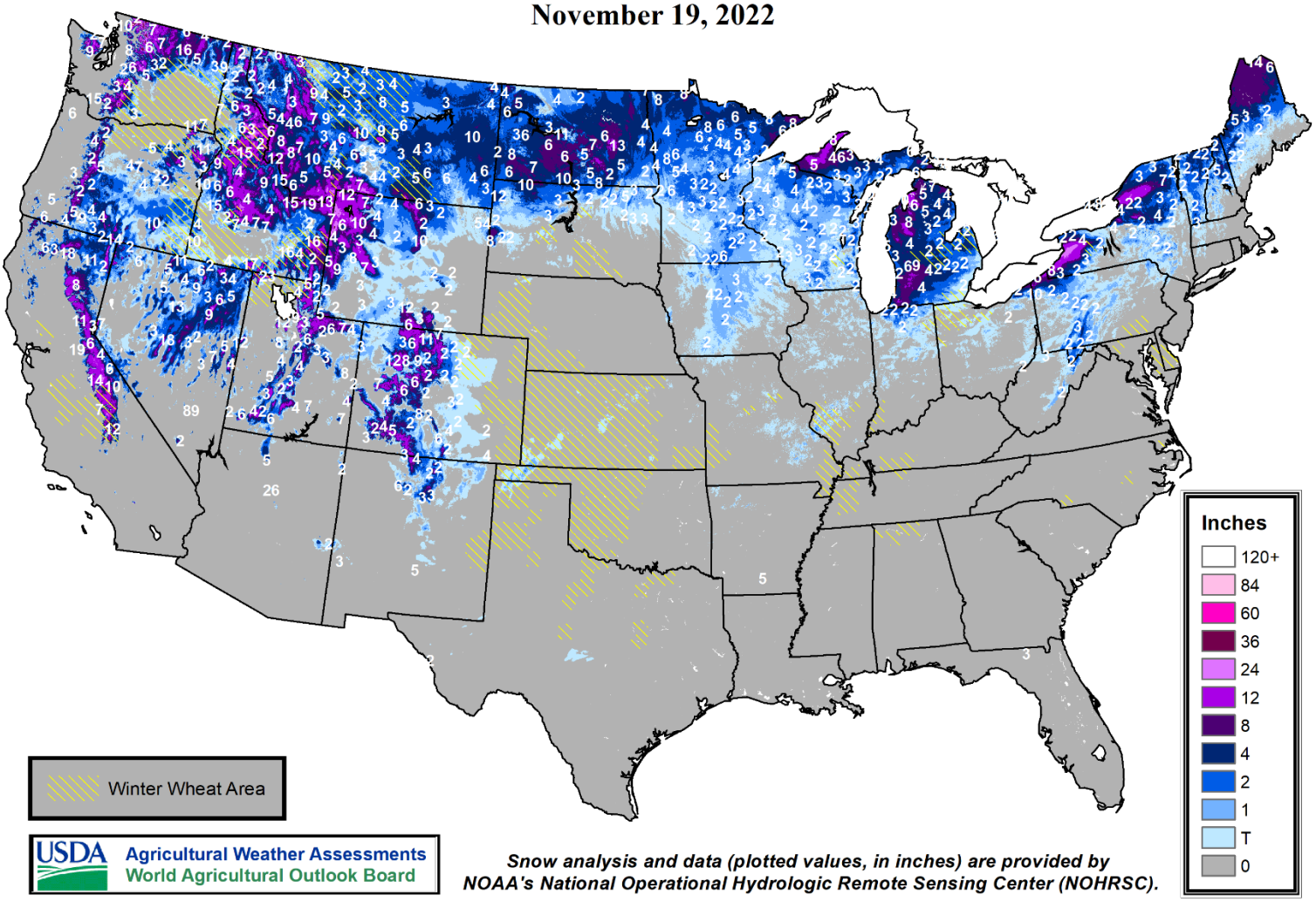
BRAZIL

Scattered showers maintained overall favorable conditions for soybeans and other main-season crops, despite a few notable pockets of dryness. In southern Brazil, light to moderate rainfall (10-50 mm) stretched from Mato Grosso do Sul southward to Santa Catarina, with higher amounts (locally exceeding 100 mm) continuing over eastern sections of Paraguay. Amounts were generally lighter and more variable in Rio Grande do Sul, with many locations receiving less than 10 mm; although the dryness favored wheat harvesting and summer crop planting, moisture remained limited for normal development of corn and soybeans in most of the state. Farther north, moderate to heavy rain (10-50 mm or more, locally exceeding 100 mm) spread from northern Mato Grosso eastward, ranging as far south as Minas Gerais. In contrast, mostly dry conditions continued from southern Mato Grosso southeastward through São Paulo, with daytime highs in the middle and upper 30s (degrees C) further reducing moisture for soybeans, sugarcane, and other summer crops. According to the government of Mato Grosso, soybean planting was 99 percent completed as of November 18, underscoring the need for a return to seasonal rainfall and temperatures.

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

Snow Depth

November 19, 2022



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