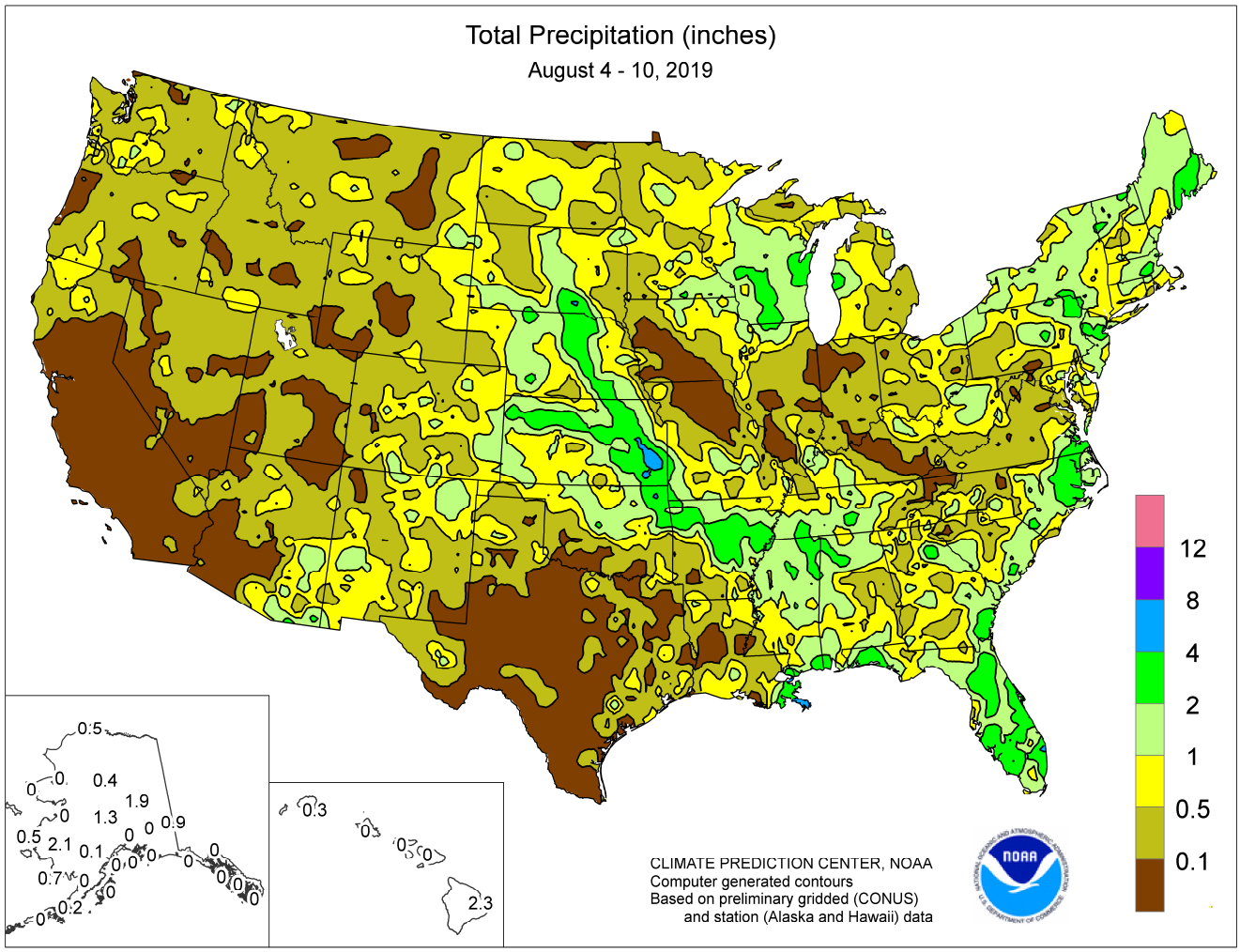
Volume 106, No. 33 http://www.usda.gov/oce/weather August 13, 2019

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
August 4 – 10, 2019

Highlights provided by USDA/WAOB

Locally heavy showers were limited to a few regions, including the **Great Lakes and Atlantic Coast States** and an area stretching from the **northern and central Plains southeastward into the Tennessee Valley**. Meanwhile, mostly dry weather covered the **southern Corn Belt** and the **south-central U.S.**, further reducing topsoil moisture. In the latter region, extreme heat exacerbated the effects of short-term dryness on rangeland, pastures, and immature summer crops. In fact, hotter-than-normal weather covered many other areas of the country, including **central**

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Weekly Value for Period Ending Aug 10, 2019
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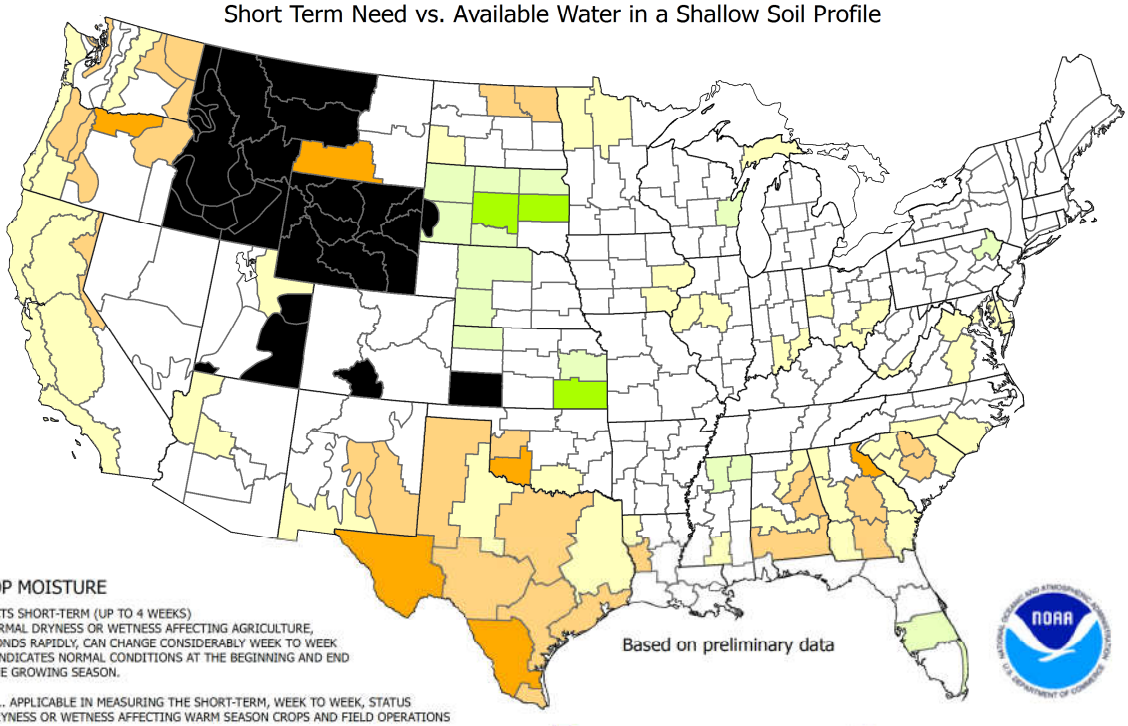


CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

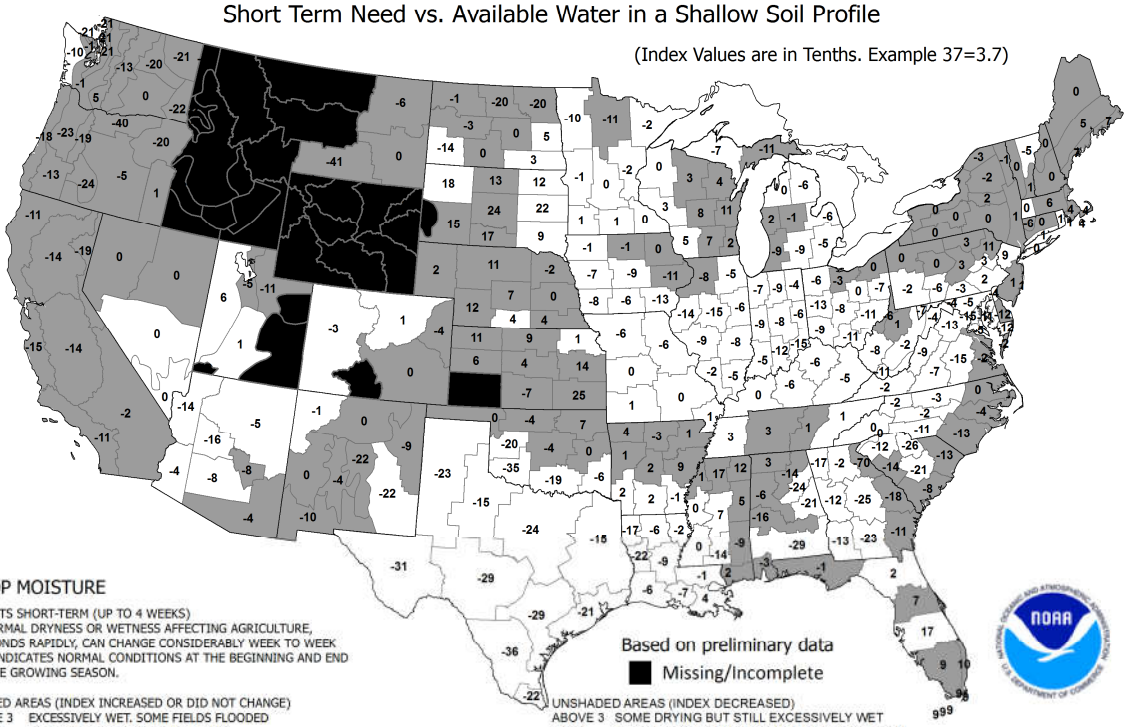
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE,OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F.IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

Based on preliminary data

- -3.0 or less (Severly Dry)
- -2.0 to -2.9 (Excessively Dry)
- -1.0 to -1.9 (Abnormally Dry)
- -0.9 to +0.9 (Slightly Dry/Favorably Moist)
- +1.0 to +1.9 (Abnormally Moist)
- +2.0 to +3.0 (Wet)
- 3.0 and above (Excessively Wet)
- Missing/Incomplete

Crop Moisture Index by Division
Weekly Value for Period Ending Aug 10, 2019
Short Term Need vs. Available Water in a Shallow Soil Profile

(Index Values are in Tenths. Example 37=3.7)



CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

Based on preliminary data

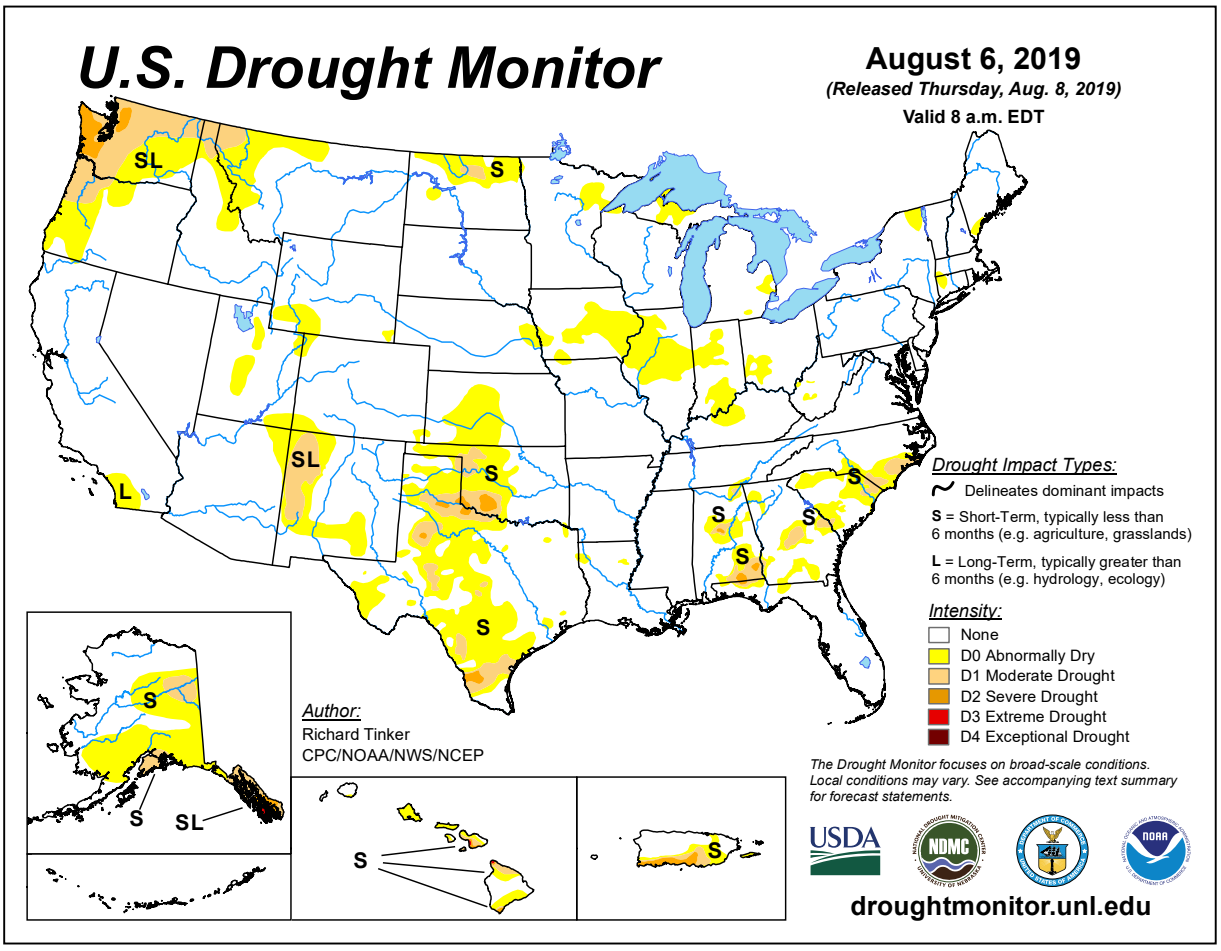
Missing/Incomplete

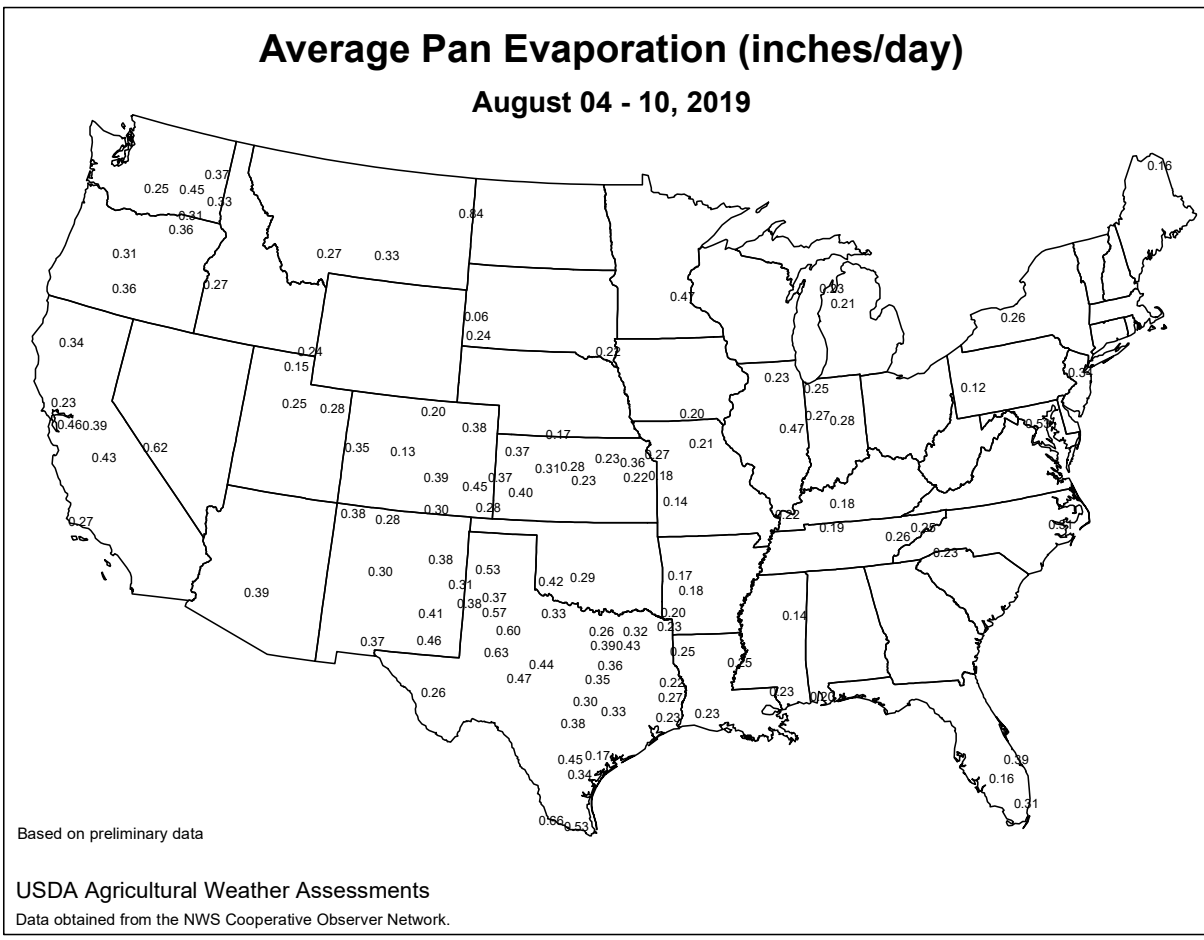
SHADED AREAS (INDEX INCREASED OR DID NOT CHANGE)

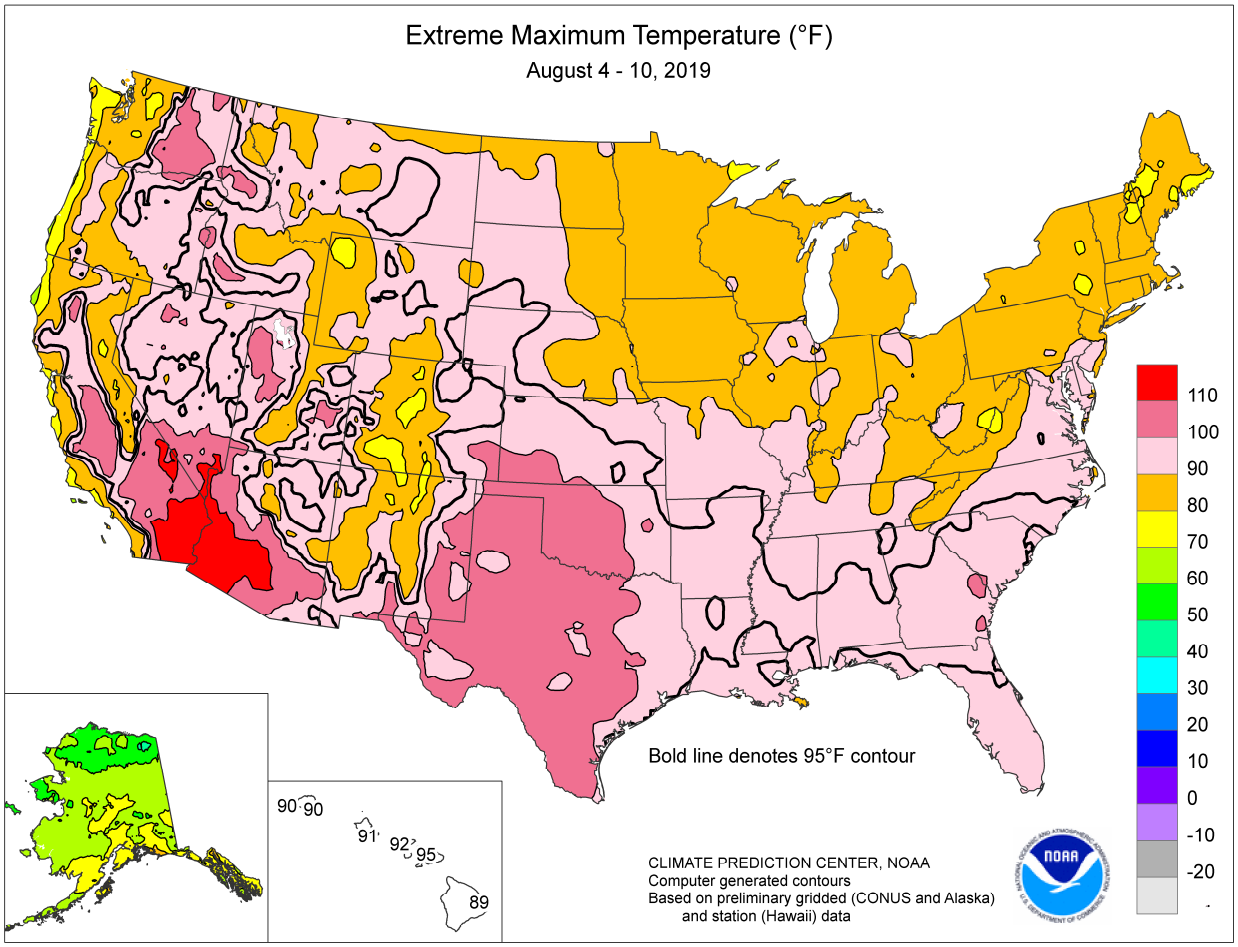
ABOVE 3	EXCESSIVELY WET. SOME FIELDS FLOODED
2 TO 3	TOO WET. SOME STANDING WATER
1 TO 2	SOME FIELDS TOO WET, PROSPECTS ABOVE NORMAL
0 TO 1	MOISTURE ADEQUATE FOR PRESENT CROP NEEDS
0 TO -1	PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2	SOME IMPROVEMENT BUT STILL ABNORMALLY DRY
-2 TO -3	DRYNESS EASED BUT FIELDS STILL EXCESSIVELY DRY
-3 TO -4	SEVERE DRYNESS CONTINUES, MORE RAIN URGENTLY NEEDED
BELOW -4	NOT ENOUGH RAIN. EXTREMELY DRY

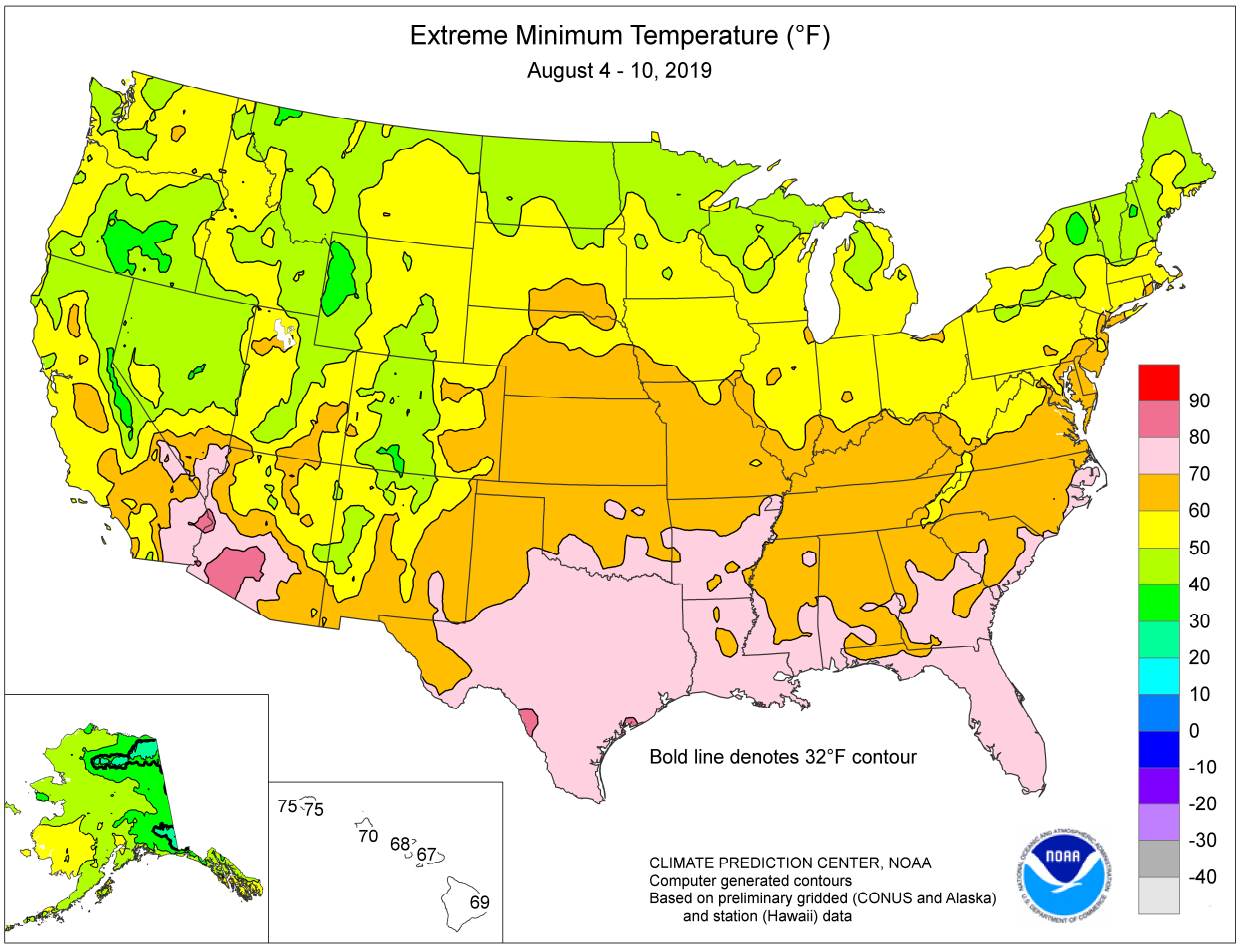
UNSHADED AREAS (INDEX DECREASED)

ABOVE 3	SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3	MORE DRY WEATHER NEEDED. WORK DELAYED
1 TO 2	FAVORABLE EXCEPT STILL TOO WET IN SPOTS
0 TO 1	FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1	TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2	ABNORMALLY DRY. PROSPECTS DETERIORATING
-2 TO -3	EXCESSIVELY DRY. YIELD PROSPECTS REDUCED
-3 TO -4	POTENTIAL YIELDS SEVERELY CUT BY DRYNESS
BELOW -4	EXTREMELY DRY. CROPS RUINED


U.S. Drought Monitor
August 6, 2019
(Released Thursday, Aug. 8, 2019)
Valid 8 a.m. EDT
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:
Richard Tinker
CPC/NOAA/NWS/NCEP
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
NDMC
droughtmonitor.unl.edu

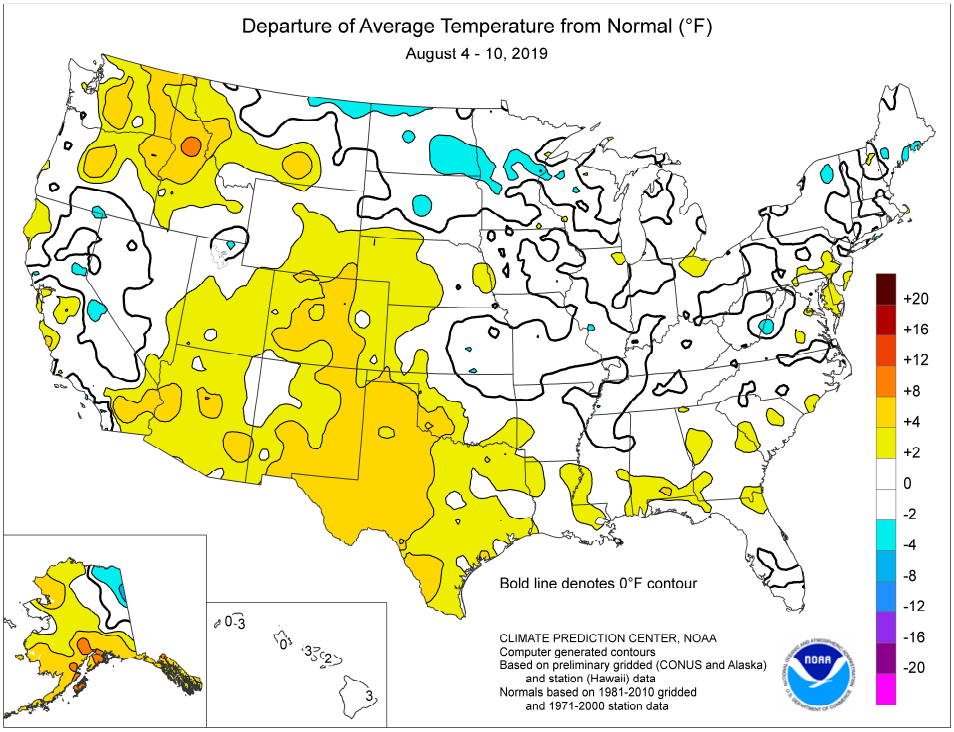

Average Pan Evaporation (inches/day)
August 04 - 10, 2019
Based on preliminary data
USDA Agricultural Weather Assessments
Data obtained from the NWS Cooperative Observer Network.


Extreme Maximum Temperature (°F)
August 4 - 10, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
90
90
91
92
95
89
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Extreme Minimum Temperature (°F)
August 4 - 10, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
75
75
70
68
67
69
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data

(Continued from front cover)

and southern sections of the Rockies and High Plains and portions of the **Northwest**, **Southwest**, and **Southeast**. Weekly temperatures averaged at least 5°F above normal across parts of the **Northwest**, **Desert Southwest**, and the **southern High Plains**. However, near- or below-normal temperatures prevailed for the third week in a row across the **Midwest**, benefiting corn and soybeans. Elsewhere, scattered **Western** showers caused minor fieldwork delays but provided only local relief in areas experiencing short-term dryness. Some of the heaviest showers, mostly related to the **Southwestern** monsoon circulation, stretched from **southeastern Arizona into the central and southern Rockies**.



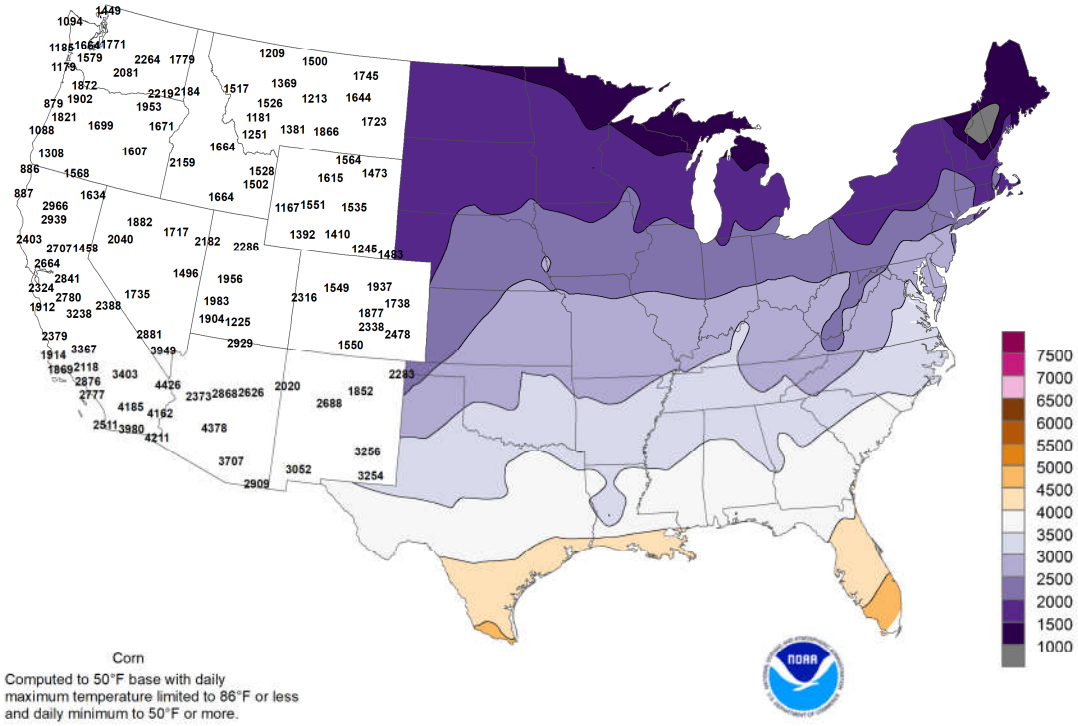
Early-week rainfall was heaviest in the **Great Lakes region**, where August 5 featured daily-record totals in **Green Bay, WI** (2.32 inches), and **Alpena, MI** (1.32 inches). Later, the focus for heavy showers shifted into the **East**. Record-setting rainfall totals for August 6 included 2.88 inches in **West Palm Beach, FL**, and 1.29 inches in **Florence, SC**. On August 7, daily-record amounts totaled 2.93 inches in **Norfolk, VA**, and 1.29 inches in **Plattsburgh, NY**. Mid-week showers also erupted across the **nation's mid-section**, where record-setting totals for August 7 reached 2.29 inches in **Goodland, KS**, and 1.92 inches in **Grand Island, NE**. On August 8, daily-record totals topped the 3-inch mark in locations such as **Salina, KS** (3.31 inches); **Bangor, ME** (3.11 inches); and **Miami, FL** (3.10 inches). Elsewhere in **Florida**, **Pensacola** netted a record-setting total (3.55 inches) for August 9. Late in the week, unusually heavy showers developed in the **Pacific Northwest**. **Eureka, CA**, closed the week on August 9-10 with consecutive daily-record totals (0.11 and 0.05 inch, respectively). Across the remainder of **northern California**, daily-record totals included 0.90 inch (on August 9) in **Redding** and 0.47 inch (on August 10) in **Crescent City**. **Western** daily-record amounts for August 10 totaled 0.91 inch in **Douglas, AZ**; 0.80 inch in **Portland, OR**; and 0.73 inch in **Butte, MT**. Farther east, **Little Rock, AR**, collected a record-setting rainfall amount (3.87 inches) for August 10. That marked **Little Rock's** wettest calendar day in August since August 29, 1978, when 4.15 inches fell.

Extreme heat baked the **Desert Southwest** early in the week. On August 4-5, consecutive daily-record highs (117 and 119°F, respectively) were set in **Needles, CA**. Other record-setting highs for August 5 included 121°F in **Palm Springs, CA**; 116°F in **Yuma, AZ**; and 113°F in **Las Vegas, NV**. Heat spread farther inland by August 6, when **Salt Lake City, UT**, posted a daily-record high of 102°F. In **eastern Washington**, **Omak** posted a pair of daily-record highs (103 and 104°F, respectively) on August 6-7. During the mid- to late-week period, heat intensified across the **south-central U.S. Borger, TX**, logged a daily-record high of 106°F on August 7. The following day, **Laredo, TX**, registered a daily-record high of 109°F. By week's end, heat and high humidity levels developed in the **Southeast**, where **St. Simons Island, GA** (98 and 99°F), and **Wilmington, NC** (99 and 98°F), concluded with week with consecutive daily-record highs on August 9-10. Other **Southeastern** daily records for August 10 included 100°F in **Savannah, GA**, and 99°F in **Jacksonville, FL**.

Cooler air overspread much of **northern Alaska**, but record-setting warmth persisted across the state's southern tier. **Juneau** achieved readings of 80°F on greater from August 7-9, including a daily-record high of 83°F on the 7th. **Kodiak** notched a daily-record high of 83°F on August 6, narrowly missing a monthly record (84°F on August 5, 1944). **Anchorage** reported no measurable rain during the first 10 days of the month, and recorded highs of 75°F or greater each day starting on August 6. Meanwhile, heavy precipitation lingered across parts of **interior Alaska** early in the week. For example, **McGrath** received a daily-record rainfall of 1.25 inches on August 4. Farther south, hot weather covered **Hawaii**, with showers mainly confined to windward locations. **Lihue, Kauai**, closed the week from August 6-10 with five consecutive daily-record highs (90, 89, 90, 89, and 89°F). The 90-degree readings also tied **Lihue's** monthly record high, most recently achieved on August 12, 2017. Elsewhere, a daily-record high was also established on August 9 in **Kahului, Maui**, with a reading of 95°F. On the **Big Island**, **Hilo** posted a daily record-tying high of 89°F on August 4. Hilo also netted 1.32 inches of rain on August 10, helping to boost its month-to-date total to 6.43 inches (189 percent of normal).

Total Growing Degree Days

Mar 1 - Aug 10, 2019

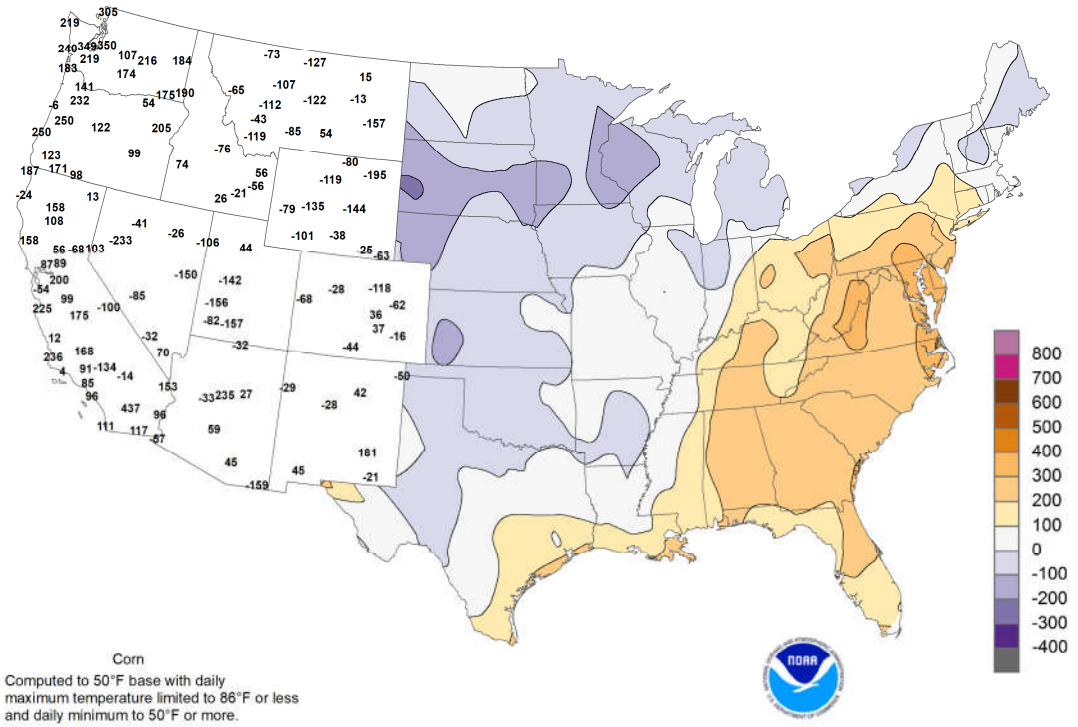


Corn

Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.

Departure from Normal Growing Degree Days

Mar 1 - Aug 10, 2019

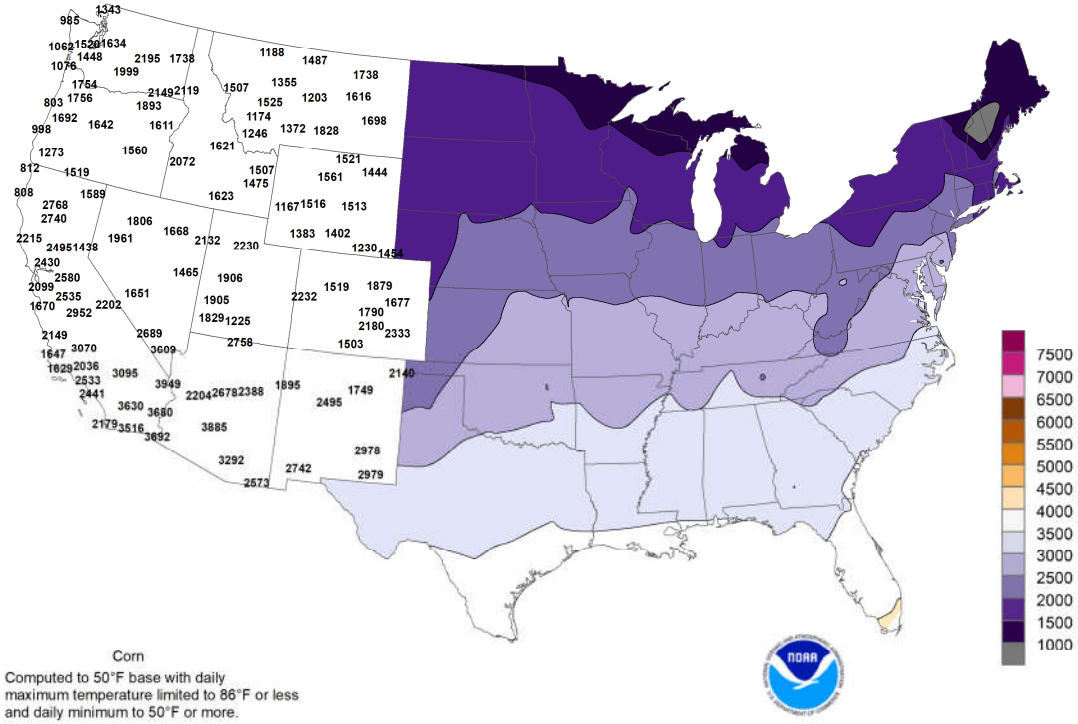


Corn

Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.

Total Growing Degree Days

Apr 1 - Aug 10, 2019



Corn

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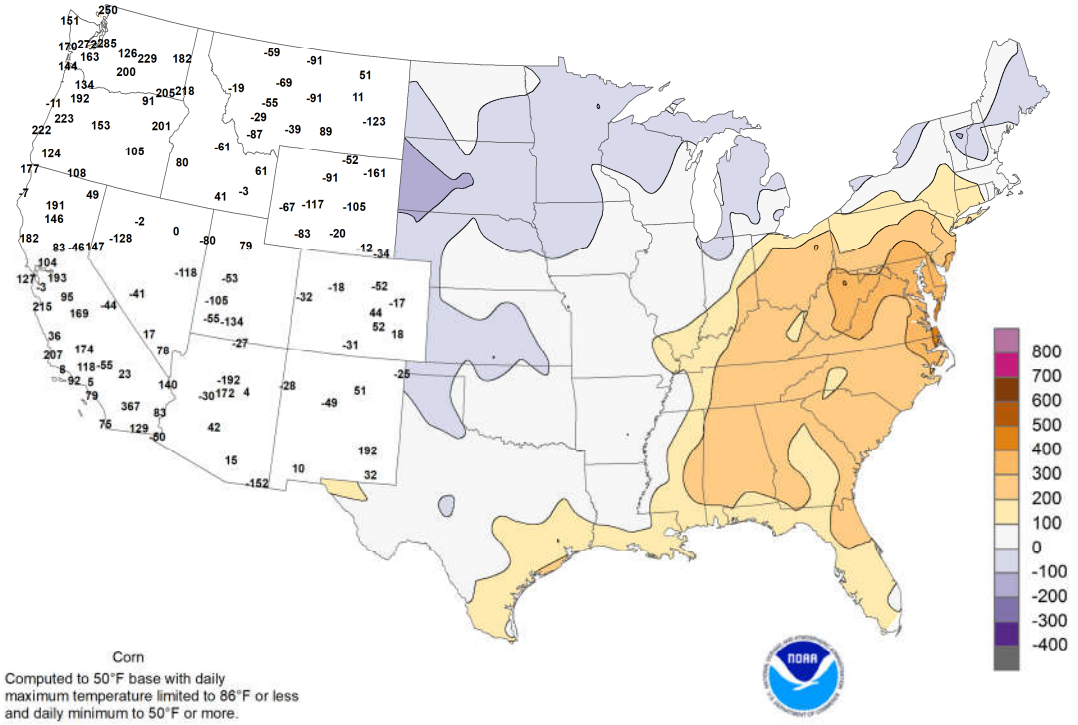
Departure from Normal Growing Degree Days

Apr 1 - Aug 10, 2019



Corn

Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.

National Weather Data for Selected Cities

Weather Data for the Week Ending August 10, 2019

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 JUN 1	PCT. NORMAL SINCE JUN 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	92	71	97	67	82	2	0.39	-0.47	0.20	8.06	79	32.25	91	94	48	5	0	3	0
	HUNTSVILLE	90	71	91	68	80	0	1.67	0.92	0.87	9.22	95	44.15	120	100	65	4	0	2	2
	MOBILE	93	75	96	72	84	2	2.16	0.79	1.50	15.40	114	36.68	86	96	62	6	0	4	2
	MONTGOMERY	95	73	98	70	84	2	0.57	-0.28	0.57	9.25	86	29.82	83	95	54	7	0	1	1
AK	ANCHORAGE	75	58	77	56	67	9	0.00	-0.57	0.00	0.91	26	5.94	87	80	65	0	0	0	0
	BARROW	47	41	52	39	44	4	0.52	0.30	0.49	3.79	253	6.75	328	91	76	0	0	3	0
	FAIRBANKS	67	54	70	48	60	1	0.84	0.43	0.55	5.57	150	9.05	158	90	74	0	0	6	1
	JUNEAU	77	50	83	44	63	6	0.00	-1.08	0.00	5.54	61	23.24	84	82	55	0	0	0	0
	KODIAK	76	58	83	52	67	11	0.00	-0.81	0.00	6.01	56	34.43	83	71	56	0	0	0	0
	NOME	57	46	60	38	52	0	0.05	-0.62	0.03	7.98	189	15.12	192	98	86	0	0	3	0
AZ	FLAGSTAFF	80	54	83	50	67	1	0.22	-0.47	0.11	1.02	27	16.20	122	87	32	0	0	4	0
	PHOENIX	107	87	115	83	97	5	0.00	-0.24	0.00	0.24	17	3.26	72	44	29	7	0	0	0
	PRESCOTT	91	64	97	59	77	4	0.14	-0.67	0.14	1.44	32	10.24	91	77	24	4	0	1	0
	TUCSON	100	77	109	72	89	4	1.14	0.55	0.90	2.26	72	7.30	115	60	32	6	0	2	1
AR	FORT SMITH	93	75	98	72	84	1	0.33	-0.20	0.33	12.77	155	39.34	149	98	61	5	0	1	0
	LITTLE ROCK	92	74	99	71	83	0	3.89	3.28	3.87	11.20	138	45.85	150	96	53	5	0	2	1
CA	BAKERSFIELD	99	72	103	66	85	2	0.00	0.00	0.00	0.23	192	6.50	141	46	32	7	0	0	0
	FRESNO	98	70	105	63	84	3	0.00	0.00	0.00	0.00	0	9.52	121	55	37	7	0	0	0
	LOS ANGELES	72	62	74	60	67	-3	0.00	0.00	0.00	0.05	45	12.86	136	94	77	0	0	0	0
	REDDING	94	66	102	60	80	-1	1.01	0.98	1.01	1.01	131	32.09	146	58	36	5	0	1	1
	SACRAMENTO	90	61	97	59	76	0	0.00	0.00	0.00	0.00	0	19.36	162	83	29	4	0	0	0
	SAN DIEGO	76	66	77	65	71	-1	0.00	0.00	0.00	0.01	8	8.42	110	87	72	0	0	0	0
	SAN FRANCISCO	74	60	77	58	67	4	0.00	0.00	0.00	0.00	0	18.42	137	83	65	0	0	0	0
	STOCKTON	94	64	101	61	79	2	0.00	0.00	0.00	0.00	0	12.48	138	68	41	5	0	0	0
CO	ALAMOSA	82	50	85	46	66	2	0.15	-0.10	0.13	0.68	36	5.36	132	88	41	0	0	3	0
	CO SPRINGS	88	61	91	58	75	5	0.39	-0.46	0.16	3.98	62	9.67	80	74	26	3	0	4	0
	DENVER INTL	90	63	97	61	77	4	0.51	0.01	0.46	5.24	113	12.58	129	76	28	4	0	2	0
	GRAND JUNCTION	94	65	100	57	80	3	0.05	-0.14	0.03	0.93	69	6.78	128	60	31	6	0	3	0
	PUEBLO	96	65	99	62	80	5	0.36	-0.21	0.27	5.65	135	10.08	119	79	34	7	0	3	0
CT	BRIDGEPORT	83	68	88	64	76	2	0.42	-0.41	0.41	11.42	134	33.31	122	80	55	0	0	2	0
	HARTFORD	86	62	90	57	74	1	1.51	0.68	1.51	6.88	79	31.68	115	83	52	1	0	1	1
DC	WASHINGTON	91	72	94	66	82	3	0.90	0.12	0.90	11.68	147	29.70	124	75	39	5	0	1	1
DE	WILMINGTON	88	69	91	63	79	3	0.51	-0.30	0.39	15.07	166	35.13	131	92	46	2	0	3	0
FL	DAYTONA BEACH	92	75	96	73	83	1	2.49	1.32	1.26	21.16	169	32.50	116	100	63	6	0	5	2
	JACKSONVILLE	95	75	99	74	85	4	0.51	-0.80	0.48	12.36	94	24.92	81	94	52	7	0	2	0
	KEY WEST	92	83	93	82	87	3	0.00	-0.99	0.00	4.23	46	15.00	74	77	64	6	0	0	0
	MIAMI	93	77	95	75	85	1	6.32	4.74	3.10	32.16	195	45.38	142	88	56	7	0	5	4
	ORLANDO	91	74	94	73	83	1	1.78	0.44	0.99	17.39	106	29.02	94	95	67	5	0	4	2
	PENSACOLA	93	76	97	73	85	3	3.95	2.33	3.55	17.38	104	32.29	78	98	71	5	0	3	1
	TALLAHASSEE	95	74	98	70	84	2	0.81	-0.88	0.39	14.54	84	26.85	63	98	55	7	0	3	0
	TAMPA	91	80	92	76	86	3	0.91	-0.65	0.57	22.01	155	38.46	144	85	61	7	0	3	1
	WEST PALM BEACH	91	75	92	72	83	0	6.64	5.45	2.88	17.78	117	38.80	114	91	72	6	0	6	3
GA	ATHENS	92	70	95	67	81	2	4.44	3.55	3.73	13.20	137	29.23	95	91	60	6	0	3	2
	ATLANTA	93	74	96	71	84	4	0.10	-0.79	0.09	8.97	89	30.12	92	84	50	6	0	2	0
	AUGUSTA	95	72	100	70	84	4	3.20	2.22	3.16	11.12	115	25.60	89	90	50	6	0	2	1
	COLUMBUS	95	74	97	71	85	3	0.81	-0.15	0.75	11.89	119	29.45	91	91	47	7	0	3	1
	MACON	94	73	98	71	84	3	1.47	0.60	0.93	11.98	131	25.39	86	93	50	7	0	3	1
	SAVANNAH	95	74	100	72	85	3	0.94	-0.62	0.66	16.77	122	27.44	88	94	54	7	0	2	1
HI	HILO	86	73	89	69	79	3	2.30	0.09	1.83	20.10	94	54.63	73	86	74	0	0	4	1
	HONOLULU	88	76	91	70	82	0	0.17	0.05	0.16	5.97	538	9.05	91	79	70	3	0	2	0
	KAHULUI	92	71	95	67	82	3	0.01	-0.10	0.01	0.37	42	9.65	82	78	65	6	0	1	0
	LIHUE	89	76	90	75	83	4	0.28	-0.16	0.12	8.23	180	16.69	76	87	77	2	0	6	0
ID	BOISE	95	68	101	61	81	5	0.08	0.05	0.06	0.15	13	12.22	160	54	34	5	0	2	0
	LEWISTON	97	67	104	64	82	7	0.05	-0.09	0.05	1.29	62	9.23	113	48	32	5	0	1	0
	POCATELLO	92	54	98	50	73	3	0.08	-0.06	0.07	0.80	44	9.34	116	75	35	5	0	2	0
IL	CHICAGO/O'HARE	87	67	90	62	77	4	0.02	-0.94	0.01	7.01	83	28.23	131	80	47	1	0	2	0
	MOLINE	88	63	92	58	76	1	0.62	-0.34	0.32	6.31	63	31.49	131	85	49	2	0	3	0
	PEORIA	87	64	90	61	76	1	0.29	-0.45	0.29	7.38	83	31.68	140	87	44	2	0	1	0
	ROCKFORD	86	62	91	55	74	1	0.72	-0.16	0.56	6.73	66	29.10	127	93	46	2	0	2	1
	SPRINGFIELD	87	62	89	57	75	-1	0.19	-0.58	0.19	7.85	93	30.96	138	97	46	0	0	1	0
IN	EVANSVILLE	89	67	91	65	78	0	0.03	-0.68	0.03	11.10	125	40.85	142	88	51	4	0	1	0
	FORT WAYNE	84	60	87	53	72	-1	0.10	-0.69	0.10	6.15	70	25.01	109	90	50	0	0	1	0
	INDIANAPOLIS	88	66	90	62	77	2	0.11	-0.81	0.11	11.48	116	34.60	132	83	40	1	0	1	0
	SOUTH BEND	82	59	88	56	70	-3	1.06	0.25	0.88	9.04	100	29.58	127	94	53	0	0	2	1
IA	BURLINGTON	86	63	90	60	75	-1	0.70	-0.19	0.70	6.44	63	29.13	121	91	49	1	0	1	1
	CEDAR RAPIDS	83	59	87	53	71	-3	0.89	-0.01	0.89	7.25	74	25.64	121	99	49	0	0	1	1
	DES MOINES	87	66	90	61	77	1	0.00	-1.00	0.00	10.24	101	28.29	126	80	53	1	0	0	0
	DUBUQUE	81	59	85	53	70	-2	0.79	-0.17	0.79	9.56	104	27.32	124	93	56	0	0	1	1
	SIOUX CITY	86	63	88	57	75	1	0.05	-0.62	0.03	8.98	114	23.36	133	93	63	0	0	3	0
	WATERLOO	86	61	90	55	74	1	0.73	-0.18	0.73	9.56	93	25.61	118	87	47	1	0	1	1
KS	CONCORDIA	87	70	91	68	79	0	0.19	-0.63	0.14	9.27	99	24.36	123	93	69	1	0	2	0
	DODGE CITY	95	69	103	65	82	2	1.16	0.49	0.77	5.52	76	17.32	111	90	45	5	0	4	1
	GOODLAND	91	64	96	60	78	3	4.21	3.51	1.76	8.38	106	16.20	109	93	57	5	0	4	3
	TOPEKA	88	68	91	65	78	0	0.85	0.05	0.85	12.32	125	31.48	140	92	63	2	0	1	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending August 10, 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 JUN 1	PCT. NORMAL SINCE JUN 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	89	71	97	68	80	-2	0.01	-0.63	0.01	8.93	105	28.62	145	89	66	3	0	1	0
KY	JACKSON	86	65	89	62	76	1	0.01	-0.94	0.01	15.00	141	38.23	123	98	52	0	0	1	0
	LEXINGTON	90	66	92	63	78	2	0.00	-0.94	0.00	10.98	102	34.35	114	80	44	5	0	0	0
	LOUISVILLE	92	71	95	69	82	4	0.00	-0.85	0.00	9.13	98	36.50	126	78	38	7	0	0	0
	PADUCAH	89	69	92	67	79	1	0.00	-0.70	0.00	13.55	136	52.09	166	93	61	4	0	0	0
LA	BATON ROUGE	94	77	95	74	86	4	0.17	-1.15	0.17	14.99	114	42.65	105	92	52	7	0	1	0
	LAKE CHARLES	93	78	94	75	86	3	1.12	0.17	1.12	15.56	124	44.03	127	92	57	7	0	1	1
	NEW ORLEANS	93	79	96	76	86	3	0.53	-0.69	0.39	17.67	120	44.70	109	89	66	6	0	2	0
	SHREVEPORT	97	77	98	74	87	3	0.03	-0.61	0.03	8.66	87	31.37	96	91	47	7	0	1	0
ME	CARIBOU	76	56	85	49	66	0	0.48	-0.46	0.27	6.00	70	24.61	112	88	54	0	0	3	0
	PORTLAND	79	59	84	52	69	0	0.70	0.01	0.45	9.08	120	30.54	113	90	54	0	0	2	0
MD	BALTIMORE	90	68	92	60	79	3	0.67	-0.16	0.50	7.77	92	26.47	103	87	50	5	0	2	1
MA	BOSTON	83	67	88	64	75	1	0.00	-0.70	0.00	10.97	151	31.16	124	80	50	0	0	0	0
	WORCESTER	79	61	82	56	70	0	1.83	0.92	1.80	10.11	106	33.36	114	92	51	0	0	2	1
MI	ALPENA	81	55	87	51	68	1	1.34	0.55	1.32	6.38	94	22.58	133	92	45	0	0	2	1
	GRAND RAPIDS	85	61	89	57	73	2	0.40	-0.32	0.20	8.69	105	28.52	134	89	42	0	0	4	0
	HOUGHTON LAKE	80	53	85	46	67	1	0.59	-0.15	0.37	8.04	120	23.54	143	95	53	0	0	3	0
	LANSING	84	60	88	54	72	2	0.22	-0.39	0.12	10.40	146	26.00	142	87	48	0	0	2	0
	MUSKEGON	82	60	85	58	71	1	0.71	0.01	0.49	6.69	114	28.87	161	86	55	0	0	4	0
	TRAVERSE CITY	82	58	89	53	70	0	0.78	0.12	0.74	7.26	98	24.59	128	91	43	0	0	3	1
MN	DULUTH	81	57	86	54	69	3	0.76	-0.10	0.40	7.82	81	20.45	111	81	57	0	0	2	0
	INT'L FALLS	79	49	87	42	64	-2	0.32	-0.32	0.32	8.06	98	16.98	116	89	44	0	0	1	0
	MINNEAPOLIS	83	65	88	58	74	1	0.64	-0.27	0.44	11.12	115	28.53	151	82	50	0	0	2	0
	ROCHESTER	80	60	85	52	70	0	0.63	-0.38	0.55	17.12	170	38.33	190	90	59	0	0	2	1
	ST. CLOUD	81	58	86	49	70	0	0.11	-0.69	0.10	10.05	112	25.12	149	94	45	0	0	2	0
MS	JACKSON	94	73	97	69	84	2	0.88	-0.02	0.33	9.77	99	39.01	107	92	55	7	0	5	0
	MERIDIAN	94	74	97	73	84	2	1.13	0.25	1.08	9.74	91	42.59	108	92	73	7	0	2	1
	TUPELO	91	73	94	71	82	1	1.37	0.77	0.59	17.18	184	55.16	152	92	64	5	0	4	1
MO	COLUMBIA	90	67	94	65	79	2	0.00	-0.83	0.00	7.86	87	30.55	121	87	49	4	0	0	0
	KANSAS CITY	89	68	92	65	78	0	0.36	-0.42	0.36	11.49	115	36.04	152	94	56	3	0	1	0
	SAINT LOUIS	89	70	92	67	80	0	0.31	-0.39	0.31	10.70	123	37.07	151	81	49	3	0	1	0
	SPRINGFIELD	87	70	94	67	78	-1	0.39	-0.17	0.18	9.77	104	37.05	140	90	72	3	0	3	0
MT	BILLINGS	93	67	99	61	80	7	0.37	0.19	0.25	5.16	150	13.97	138	59	24	5	0	3	0
	BUTTE	84	51	90	48	68	4	0.82	0.52	0.73	3.29	83	9.52	108	77	23	1	0	2	1
	CUT BANK	81	51	91	45	66	1	0.14	-0.20	0.13	3.15	69	8.04	91	83	28	2	0	2	0
	GLASGOW	87	60	92	57	74	2	0.01	-0.29	0.01	5.10	116	9.66	121	68	37	4	0	1	0
	GREAT FALLS	84	52	93	49	68	0	0.13	-0.22	0.13	3.29	79	12.81	124	78	26	3	0	1	0
	HAVRE	85	55	91	49	70	0	0.04	-0.24	0.02	3.72	98	8.43	105	75	43	3	0	3	0
	MISSOULA	91	57	96	53	74	6	0.07	-0.15	0.06	1.89	60	9.70	108	69	39	5	0	2	0
NE	GRAND ISLAND	86	67	88	65	77	1	1.09	0.40	0.85	12.90	165	28.74	162	90	65	0	0	2	1
	LINCOLN	89	68	91	66	78	1	0.34	-0.42	0.34	8.82	108	24.09	128	88	62	3	0	1	0
	NORFOLK	87	65	90	59	76	1	0.22	-0.45	0.16	6.78	76	22.24	118	91	60	1	0	3	0
	NORTH PLATTE	89	66	92	63	77	2	2.21	1.62	2.11	12.66	176	25.52	174	92	55	3	0	4	1
	OMAHA	88	71	90	66	80	4	0.02	-0.71	0.02	6.48	73	21.71	109	84	55	2	0	1	0
	SCOTTSBLUFF	93	62	100	58	78	5	0.17	-0.13	0.09	5.32	102	20.63	172	95	49	5	0	4	0
	VALENTINE	91	65	98	61	78	4	2.06	1.46	1.72	11.28	155	27.02	189	87	51	4	0	4	1
NV	ELY	88	51	93	42	69	1	0.05	-0.14	0.03	0.70	46	12.04	193	56	17	3	0	2	0
	LAS VEGAS	106	83	113	76	95	4	0.00	-0.11	0.00	0.04	6	4.64	158	26	13	7	0	0	0
	RENO	91	62	98	53	77	5	0.00	-0.03	0.00	0.25	33	8.76	187	47	23	4	0	0	0
	WINNEMUCCA	94	51	101	44	73	1	0.25	0.19	0.25	0.39	38	7.41	141	53	19	4	0	1	0
NH	CONCORD	83	54	86	47	69	-1	1.16	0.44	1.14	***	***	***	***	96	41	0	0	2	1
NJ	NEWARK	85	68	91	65	77	0	2.35	1.40	1.54	15.40	163	39.35	136	82	54	1	0	3	2
NM	ALBUQUERQUE	91	67	94	66	79	1	0.00	-0.39	0.00	2.35	95	5.80	114	73	31	5	0	0	0
NY	ALBANY	82	62	84	54	72	1	0.85	0.07	0.39	10.80	130	27.12	118	87	50	0	0	4	0
	BINGHAMTON	77	57	82	50	67	-1	1.67	0.98	1.11	10.46	126	28.58	123	94	53	0	0	3	1
	BUFFALO	80	63	85	58	71	0	0.35	-0.39	0.21	6.78	85	25.10	109	84	50	0	0	3	0
	ROCHESTER	82	60	90	54	71	0	0.47	-0.22	0.21	7.06	97	20.05	101	85	55	1	0	3	0
	SYRACUSE	82	60	89	52	71	0	1.12	0.38	0.46	9.41	107	27.86	120	86	42	0	0	5	0
NC	ASHEVILLE	86	65	88	62	75	2	1.20	0.29	0.86	12.28	129	39.42	132	89	51	0	0	3	1
	CHARLOTTE	91	69	96	67	80	0	0.05	-0.78	0.05	11.61	138	33.08	123	89	46	5	0	1	0
	GREENSBORO	89	70	91	68	79	2	0.04	-0.81	0.04	14.83	161	35.10	130	93	52	2	0	1	0
	HATTERAS	88	75	90	72	82	3	1.45	0.04	0.59	7.45	69	35.99	110	95	64	2	0	3	1
	RALEIGH	90	68	93	65	79	1	0.80	-0.05	0.26	9.55	107	29.97	111	95	56	5	0	4	0
	WILMINGTON	94	73	99	69	83	2	0.43	-1.22	0.38	7.64	50	19.03	54	97	47	6	0	2	0
ND	BISMARCK	82	59	94	52	70	-2	1.18	0.66	0.92	7.66	130	15.14	133	93	61	1	0	4	1
	DICKINSON	85	56	94	50	71	0	0.02	-0.28	0.02	5.35	91	14.16	124	91	35	2	0	1	0
	FARGO	80	57	87	49	68	-3	0.14	-0.42	0.14	9.07	126	19.08	139	93	50	0	0	1	0
	GRAND FORKS	83	54	89	46	68	-2	0.38	-0.26	0.21	6.55	93	14.56	115	88	40	0	0	3	0
	JAMESTOWN	78	56	86	48	67	-5	0.53	-0.06	0.51	8.99	126	17.19	135	96	57	0	0	2	1
	WILLISTON	84	56	91	47	70	-1	0.98	0.62	0.65	8.09	156	12.26	125	88	46	1	0	5	1
OH	AKRON-CANTON	84	63	88	59	74	2	0.36	-0.47	0.34	15.77	180	34.64	144	86	53	0	0	2	0
	CINCINNATI	88	65	91	62	77	1	1.30	0.45	1.30	11.91	127	39.82	145	85	45	2	0	1	1
	CLEVELAND	84	64	88	61	74	2	0.94	0.21	0.90	11.64	138	30.05	130	89	47	0	0	2	1
	COLUMBUS	87	64	90	59	75	0	0.84	-0.06	0.71	11.12	111	33.41	135	84	41	1	0	4	1
	DAYTON	87	65	90	57	76	2	0.00	-0.80	0.00	9.52	105	33.98	133	82	43	2	0	0	0
	MANSFIELD	84	62	88	58	73	2	0.09	-0.89	0.06	16.33	161	36.81	137	93	44	0	0	3	0

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Weather Data for the Week Ending August 10, 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 JUN 1	PCT. NORMAL SINCE JUN 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	87	64	92	59	76	4	0.48	-0.13	0.48	9.85	132	27.64	136	80	51	2	0	1	0
	YOUNGSTOWN	82	61	87	55	72	2	2.52	1.80	2.11	14.83	164	36.96	159	87	52	0	0	3	1
OK	OKLAHOMA CITY	96	73	102	69	84	1	0.65	0.15	0.57	7.70	93	31.59	141	97	45	6	0	2	1
	TULSA	92	74	99	70	83	-1	1.69	1.19	1.15	13.06	155	40.23	157	93	71	5	0	2	2
OR	ASTORIA	69	58	76	53	63	2	0.15	0.01	0.15	2.86	73	24.86	67	91	74	0	0	1	0
	BURNS	89	50	95	41	69	2	0.12	0.04	0.11	1.17	99	11.21	169	67	36	4	0	2	0
	EUGENE	81	58	94	55	70	3	0.07	-0.04	0.05	0.65	28	22.72	80	85	64	2	0	2	0
	MEDFORD	89	63	99	56	76	2	0.44	0.38	0.33	0.45	42	14.30	143	70	34	4	0	2	0
	PENDLETON	93	60	101	55	76	2	0.02	-0.07	0.01	0.35	27	9.63	127	59	32	4	0	2	0
	PORTLAND	81	63	94	61	72	3	0.91	0.79	0.90	2.21	89	15.13	74	75	62	2	0	2	1
	SALEM	81	58	92	55	70	2	0.08	0.02	0.08	0.94	45	19.49	88	83	62	2	0	1	0
PA	ALLENTOWN	86	66	90	60	76	3	1.78	0.84	1.72	17.09	178	43.47	159	84	49	1	0	2	1
	ERIE	82	65	88	61	73	1	0.89	0.13	0.69	8.33	97	24.95	107	75	58	0	0	3	1
	MIDDLETOWN	89	69	92	64	79	3	0.27	-0.45	0.16	8.66	102	30.99	124	81	38	3	0	3	0
	PHILADELPHIA	88	71	91	68	80	2	1.64	0.76	1.63	15.61	174	36.79	139	79	48	2	0	2	1
	PITTSBURGH	83	62	86	58	73	1	0.90	0.15	0.38	14.27	156	35.23	146	93	46	0	0	3	0
	WILKES-BARRE	83	62	88	57	73	1	3.33	2.69	1.71	16.83	195	36.23	159	93	47	0	0	4	3
	WILLIAMSPORT	84	61	87	56	73	1	1.13	0.43	0.96	14.61	153	35.11	138	89	45	0	0	2	1
RI	PROVIDENCE	84	65	89	61	75	2	0.56	-0.23	0.44	8.75	114	32.55	117	90	52	0	0	3	0
SC	CHARLESTON	94	74	98	71	84	3	1.86	0.43	1.85	18.84	134	26.55	84	93	50	6	0	2	1
	COLUMBIA	94	73	99	71	83	2	0.09	-1.15	0.09	12.65	103	24.56	78	87	50	5	0	1	0
	FLORENCE	93	73	97	70	83	2	2.58	1.31	1.29	13.03	115	26.37	92	93	45	6	0	2	2
	GREENVILLE	90	69	94	66	79	0	0.26	-0.73	0.26	12.36	124	33.41	104	89	49	5	0	1	0
SD	ABERDEEN	82	59	88	50	70	-3	0.63	0.06	0.53	9.71	134	20.55	146	91	60	0	0	3	1
	HURON	81	63	86	57	72	-2	0.94	0.44	0.92	14.26	208	28.94	195	92	60	0	0	2	1
	RAPID CITY	84	60	91	57	72	-1	0.59	0.20	0.32	10.11	186	27.36	226	92	54	1	0	3	0
	SIOUX FALLS	85	63	90	57	74	1	0.30	-0.34	0.28	10.32	141	28.38	175	90	60	1	0	2	0
TN	BRISTOL	89	63	91	61	76	2	0.03	-0.70	0.03	11.07	121	37.48	136	96	43	2	0	1	0
	CHATTANOOGA	92	72	96	70	82	3	0.04	-0.77	0.02	7.95	80	42.52	122	88	52	7	0	2	0
	KNOXVILLE	89	69	92	67	79	1	0.01	-0.75	0.01	12.92	131	45.12	140	90	47	2	0	1	0
	MEMPHIS	90	73	95	71	82	0	1.78	1.09	0.82	18.85	198	49.56	143	97	64	4	0	4	2
	NASHVILLE	91	71	93	67	81	2	0.83	0.11	0.60	14.80	166	44.82	147	87	50	6	0	2	1
TX	ABILENE	101	77	103	73	89	5	0.00	-0.48	0.00	4.46	82	18.80	140	71	37	7	0	0	0
	AMARILLO	99	69	104	65	84	6	1.39	0.74	1.31	7.14	104	14.91	115	79	28	7	0	2	1
	AUSTIN	98	75	100	72	87	2	0.08	-0.40	0.08	5.68	88	24.86	124	84	43	7	0	1	0
	BEAUMONT	94	77	95	76	86	3	0.03	-0.92	0.02	22.36	170	46.12	129	92	61	6	0	2	0
	BROWNSVILLE	96	81	97	78	89	5	0.01	-0.38	0.01	7.97	152	13.65	104	95	57	7	0	1	0
	CORPUS CHRISTI	97	78	98	75	88	4	0.08	-0.48	0.08	3.25	52	12.90	76	92	53	7	0	1	0
	DEL RIO	104	80	106	79	92	6	0.00	-0.35	0.00	7.85	162	13.26	117	73	44	7	0	0	0
	EL PASO	99	76	103	68	88	6	0.45	0.09	0.34	1.76	61	2.47	54	58	25	7	0	2	0
	FORT WORTH	98	80	101	77	89	3	0.02	-0.48	0.02	5.13	85	24.91	115	79	40	7	0	1	0
	GALVESTON	93	84	96	79	88	3	0.07	-0.65	0.04	8.62	101	25.74	106	81	61	6	0	2	0
	HOUSTON	98	79	101	77	89	5	0.13	-0.58	0.13	9.82	103	26.94	95	87	50	7	0	1	0
	LUBBOCK	98	74	101	68	86	6	0.10	-0.35	0.10	2.35	41	9.25	82	67	39	7	0	1	0
	MIDLAND	100	75	102	72	88	6	0.00	-0.39	0.00	3.03	73	11.08	135	65	38	7	0	0	0
	SAN ANGELO	103	76	104	71	89	6	0.00	-0.32	0.00	4.75	117	14.38	123	75	43	7	0	0	0
	SAN ANTONIO	99	78	102	77	89	4	0.00	-0.48	0.00	5.66	81	14.99	76	84	37	7	0	0	0
	VICTORIA	98	76	101	75	87	2	0.10	-0.41	0.09	4.69	55	14.73	63	90	55	7	0	2	0
	WACO	99	78	100	74	89	3	0.01	-0.41	0.01	8.44	143	27.75	138	85	51	7	0	1	0
	WICHITA FALLS	100	76	104	72	88	3	0.00	-0.39	0.00	4.68	81	19.70	114	84	44	7	0	0	0
UT	SALT LAKE CITY	93	70	102	60	82	4	0.49	0.34	0.35	1.42	83	15.63	150	54	25	6	0	2	0
VT	BURLINGTON	82	60	89	52	71	1	1.33	0.45	1.07	8.27	95	24.89	118	86	42	0	0	5	1
VA	LYNCHBURG	88	65	90	63	77	2	0.06	-0.75	0.04	9.54	102	26.84	98	93	47	3	0	2	0
	NORFOLK	88	71	92	69	80	2	5.16	4.01	2.93	14.47	137	33.22	114	88	55	4	0	3	2
	RICHMOND	90	69	94	66	79	2	0.29	-0.72	0.25	12.39	128	32.77	120	86	52	4	0	4	0
	ROANOKE	89	68	90	66	78	2	0.00	-0.83	0.00	10.49	118	28.23	105	82	49	4	0	0	0
	WASH/DULLES	91	64	93	58	77	1	0.39	-0.41	0.39	5.56	63	25.45	99	80	49	5	0	1	0
WA	OLYMPIA	79	54	89	49	67	3	0.35	0.23	0.35	1.91	69	16.93	61	90	68	0	0	1	0
	QUILLAYUTE	69	55	80	48	62	2	0.05	-0.48	0.04	4.88	74	36.53	65	96	76	0	0	2	0
	SEATTLE-TACOMA	79	60	88	58	70	4	0.38	0.24	0.38	2.81	114	16.77	84	79	62	0	0	1	0
	SPOKANE	90	64	98	57	77	7	0.10	-0.04	0.10	1.06	50	8.74	88	54	24	5	0	1	0
	YAKIMA	95	61	102	53	78	8	0.62	0.58	0.61	0.76	85	6.65	145	66	38	5	0	2	1
WV	BECKLEY	81	61	84	59	71	1	1.52	0.64	1.32	10.57	106	33.81	122	89	52	0	0	2	1
	CHARLESTON	88	63	92	60	76	2	0.84	-0.14	0.58	7.27	70	29.86	106	94	41	3	0	2	1
	ELKINS	82	59	86	54	71	1	0.52	-0.46	0.19	14.21	131	34.88	117	92	52	0	0	4	0
	HUNTINGTON	88	64	90	62	76	1	0.75	-0.22	0.67	10.23	105	31.29	113	96	47	1	0	3	1
WI	EAU CLAIRE	82	59	86	50	70	-1	0.98	0.02	0.83	9.73	102	28.09	141	93	47	0	0	3	1
	GREEN BAY	82	61	86	56	72	2	3.38	2.59	2.32	12.26	153	28.19	160	94	49	0	0	3	2
	LA CROSSE	86	65	92	55	76	2	0.71	-0.22	0.42	12.60	132	29.51	144	86	40	3	0	2	0
	MADISON	82	61	86	54	72	1	1.35	0.42	1.20	12.39	133	30.10	145	91	52	0	0	2	1
	MILWAUKEE	83	66	90	63	75	3	1.18	0.34	0.61	8.79	106	26.61	125	81	50	1	0	3	1
WY	CASPER	93	55	97	51	74	3	0.05	-0.15	0.03	3.66	121	13.88	154	81	25	7	0	3	0
	CHEYENNE	87	59	92	56	73	5	0.15	-0.29	0.09	5.66	113	18.23	166	73	28	3	0	3	0
	LANDER	89	57	94	52	73	1	0.08	-0.04	0.04	1.15	53	14.53	163	66	20	3	0	3	0
	SHERIDAN	89	56	92	53	73	3	0.16	0.02	0.13	3.94	118	14.79	150	80	33	3	0	2	0

Based on 1971-2000 normals

***** Not Available**

July Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: Significant rain continued through July in several areas, including the northern Plains and upper Midwest, but precipitation tapered to light showers across the southern half of the Plains and portions of the central and eastern Corn Belt. The southern Plains' dry spell, accompanied by building heat late in the month, led to an increase in stress on rangeland, pastures, and summer crops. By July 28, topsoil moisture was rated 60 percent very short to short in Texas, along with 55 percent in Oklahoma and 40 percent in Kansas.

Short-term dryness also adversely affected summer crops in parts of the Corn Belt, especially in areas where corn and soybeans were planted very late and have poorly established root systems. By July 28, topsoil moisture was rated 51 percent very short to short in Michigan, along with 40 percent in Illinois and 39 percent in Indiana. Developmental delays compounded problems for those summer crops; by July 28, for example, only 20 to 40 percent of the corn was silking in Indiana, Michigan, Ohio, and South Dakota, with each of those values more than 40 percentage points behind the respective state 5-year averages.

Farther south, Hurricane Barry reached the Louisiana coast on July 13. Following landfall, the minimal hurricane rapidly weakened and drifted northward, delivering locally heavy mid-month showers in the lower Mississippi Valley and environs. Highly localized flooding struck several areas, including parts of Arkansas and Louisiana.

Meanwhile, a late-developing and weaker-than-normal monsoon circulation led to sub-par rainfall in much of the Southwest. The dryness, in combination with above-normal temperatures, stressed some rangeland and pastures.

Elsewhere, pockets of drought lingered in the Southeast, mainly from Alabama to the Carolinas, while seasonably dry weather prevailed in much of the Far West. Across the interior Northwest, mostly dry weather favored winter wheat harvesting and maturation of spring-sown small grains. By July 28, the Northwestern winter wheat harvest ranged from 6 percent complete in Idaho to 33 percent complete in Oregon.

Historical Perspective: According to preliminary data provided by the National Centers for Environmental Information, the contiguous U.S. experienced its 27th-warmest, 44th-driest July during the 125-year period of record. The nation's average temperature of 74.6°F was 1.0°F above the 20th century mean, while precipitation averaged 2.69 inches—97 percent of normal.

State temperature rankings ranged from the 29th-coolest July on record in Arkansas to the third-hottest July in Connecticut and Rhode Island (figure 1). In fact, top-ten values for July warmth were noted in New Mexico, Florida, Maryland, Delaware, New Jersey, and all of New England. Meanwhile, state temperature rankings ranged from the 11th-driest July in Arizona to the third-wettest July in South Dakota (figure 2).

Figure 1 Statewide Average Temperature Ranks
July 2019
Period: 1895–2019

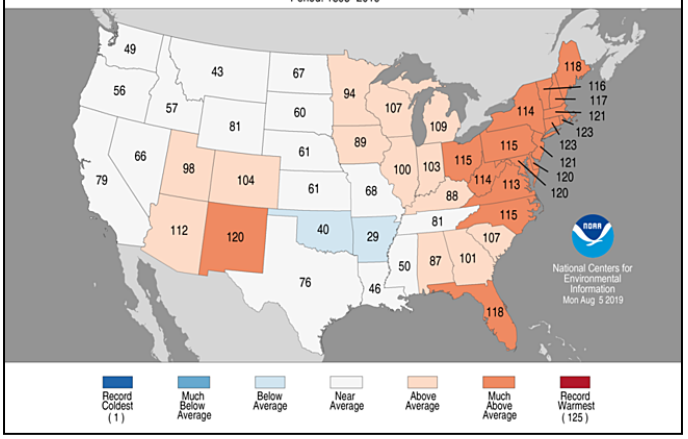
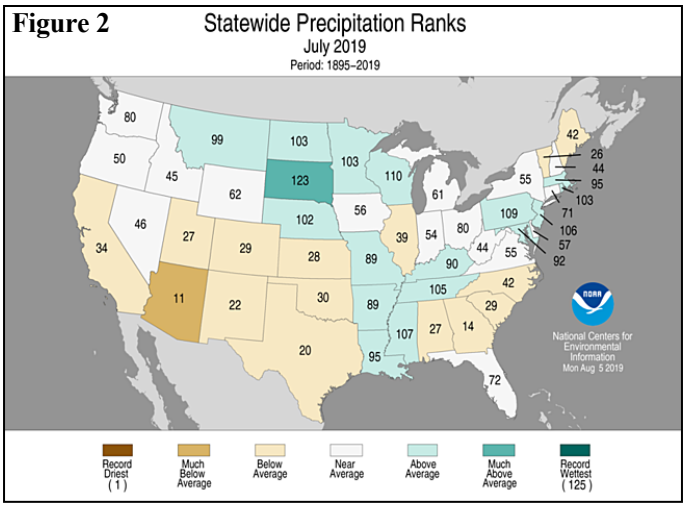


Figure 2 Statewide Precipitation Ranks
July 2019
Period: 1895–2019



Summary: July opened on a wet note across the upper Midwest, where record-setting rainfall totals for July 1 reached 2.90 inches in Sioux City, IA, and 1.80 inches in Watertown, SD. A few days later, additional heavy rain fell in both the northeastern and north-central U.S. Concord, NH, received a daily-record sum of 1.17 inches on July 3. In South Dakota, it was the wettest Independence Day on record in locations such as Rapid City (1.92 inches) and Sisseton (1.87 inches). Buffalo, WY, also netted a record-setting rainfall total (1.22 inches) for July 4. Locally heavy showers also dotted other parts of the central and eastern U.S., resulting in daily-record amounts such as 2.88 inches (on July 5) in Charleston, SC; 2.80 inches (on July 4) in Fayetteville, NC; and 2.27 inches (on July 6) in Philadelphia, PA. Showers also developed in the southern Rockies and environs, where Albuquerque, NM, netted a daily-record total of 0.69 inch on July 6.

Meanwhile, a rare heat wave struck northern New England, where Bangor, ME, tallied a trio of highs of 91°F from July 4-6. Very hot weather also engulfed the Southeast. On July 2-3, consecutive daily-record highs (99 and 101°F, respectively) occurred in Alma, GA. Other triple-digit, daily-record highs on July 3 included 102°F in Florence, SC, and Fayetteville, NC. With a high of 101°F on the 3rd, Savannah, GA, notched its highest July reading since July 26, 2010, when it was 102°F. In Florida, Pensacola collected four consecutive daily-record highs (97, 101, 102, and 100°F) from July 4-7. Elsewhere in the Gulf Coast region, record-setting highs for July 6 soared to 100°F in Mobile, AL, and 99°F in New Orleans, LA. Later, extreme heat shifted into parts of the south-central and southwestern U.S. In Texas, Midland collected a daily-record high (106°F) for July 9. Record-setting highs for July 10 included 109°F in Tucson, AZ, and 104°F in Del Rio, TX. July 11 featured daily-record highs in locations such as Safford, AZ (110°F), and Brownsville, TX (100°F). Elsewhere in Texas, Corpus Christi collected three consecutive daily-record highs (101, 101, and 103°F) from July 11-13. Brownsville posted another daily-record high, 102°F, on July 13. In contrast, cool weather prevailed across much of the West. Big Piney, WY, collected a daily-record low of 33°F on July 9. On the same date in Colorado, daily-record lows dipped to 37°F in Alamosa and 52°F in Grand Junction.

Prior to the arrival of Hurricane Barry along the central Gulf Coast, locally heavy showers occurred in the middle and southern Atlantic States, as well as several other regions. For example, daily-record totals for July 8 reached 3.44 inches in Washington, DC, and 2.79 inches in Scranton, PA. Most (3.30 inches) of Washington's rain fell in less than an hour, sparking flash flooding. Heavy showers also dotted the mid-South, where Pine Bluff, AR, received a record-setting sum (3.46 inches) for July 8. The following day, heavy rain swept across the northern Plains. In the Dakotas, daily-record amounts for July 9 totaled 3.12 inches in Williston, ND, and 1.29 inches in Watertown, SD. Showers also affected the Pacific Northwest on the 9th, when daily-record totals in Oregon totaled 0.85 inch in North Bend and 0.29 inch in Salem. Locally heavy showers peppered Florida and the mid-South; daily-record amounts for July 9 included 3.66 inches in Tampa, FL, and 2.37 inches in Monroe, LA. Farther north, another round of heavy rain swept across the Mid-Atlantic region on July 11, when daily-record amounts reached 2.75 inches in Allentown, PA, and 2.55 inches in Atlantic City, NJ.

Minimal Hurricane Barry moved inland across Marsh Island, LA, around mid-day on July 13, briefly bearing maximum sustained winds near 75 mph in a small area near the center. Peak wind gusts in Louisiana associated with Hurricane Barry were clocked at 62 mph at Port Fourchon and 61 mph in New Iberia. Barry also produced a modest storm surge and heavy showers, but largely spared crops and communities in the path of the disorganized storm. Once inland, Barry drifted northward and was quickly downgraded to a tropical storm and—by July 14—a tropical depression. For most inland areas, the heaviest rain fell after the storm moved ashore; record-setting rainfall totals for July 14 included 4.21 inches in Beaumont-Port Arthur, TX; 4.08 inches in Hattiesburg, MS; and 3.67 inches in Monticello, AR. Local downpours across the mid-South persisted through July 16, when daily-record amounts reached 4.09 inches in Pine Bluff, AR, and 2.28 inches in Memphis, TN. From July 14-16, Pine Bluff received 7.02 inches. Other July 14-16 totals included 5.35 inches in Greenwood, MS, and 5.12 inches in Memphis. Storm totals topped 10 inches in parts of Arkansas and Louisiana. A state 24-hour rainfall record was established in Arkansas, where 16.17 inches fell at Dierks, in Howard County, on July 15-16. Arkansas' previous record of 14.06 inches had been established on December 3, 1982, at a weather station near Big Fork, in Polk County. An Arkansas state record was also broken for rainfall received during a tropical event; the 16.59-inch sum in Dierks eclipsed the previous standard of 13.91 inches set in Portland, Ashley County, during Tropical Storm Allison from June 28 – July 2, 1989. Farther north, frequent thunderstorms—not associated with Barry—swept across the northern Plains and the upper Great Lakes region. On July 17, Sioux Falls, SD, measured a daily-record rainfall total of 2.49 inches. In Wisconsin, daily-records totals exceeded 2 inches in La Crosse (2.05 inches on July 18) and Milwaukee (2.01 inches on July 20). Locally heavy showers also dotted the East, where daily-record totals included 2.74 inches (on July 18) in Bridgeport, CT, and 2.67 inches (on July 19) in Tallahassee, FL.

Mid-month heat in the Desert Southwest resulted in a daily-record high of 118°F (on July 15) in Thermal, CA. The following day in Arizona, Tucson (110°F) posted a record-setting high for July 16. Heat also began to intensify across the East, where triple-digit, daily-record highs included 101°F (on July 17) in Florence, SC, and 100°F (on July 16) in Georgetown, DE. On the southern High Plains, Dalhart, TX, tallied a trio of daily-record highs (105, 108, and 107°F) from July 18-20. Similarly, Roswell, NM, noted three consecutive daily-record highs of 108°F from July 19-21. In Colorado, daily-record highs for July 19 were set in locations such as Pueblo (105°F) and Burlington (104°F). Later, heat expanded across the remainder of the central and eastern U.S. In the Midwest, record-setting highs for July 19 rose to 97°F in La Crosse, WI, and 95°F in Alpena, MI. Northeastern daily-record highs for July 20 soared to 99°F in Atlantic City, NJ, and at New York's JFK Airport. In Rockford, IL, the minimum temperature on July 19 fell only to 80°F, tying an all-time record originally set on August 6, 1918. On July 21, the final day of an Eastern heat wave, temperatures soared to 100°F—setting or tying daily records—in Atlantic City, NJ, and at New York's LaGuardia Airport. In contrast, Great Falls, MT, reported a daily-record low of 38°F on July 21. It was the lowest July reading in Great Falls since July 16, 1999, when the temperature fell to 36°F. Eventually, cool air settled across the eastern half of the country. Crossville, TN, notched four consecutive daily-record lows (56, 52, 54, and 56°F) from July 23-26. In the Midwest, record-setting lows for July 23 included 54°F in Springfield, IL, and 57°F in Kansas City, MO. On July 24, daily-record lows fell to 57°F in Joplin, MO; Knoxville, TN; and San Angelo, TX. In fact, San Angelo collected a trio of daily-record lows (57,

59, and 60°F) from July 24-26. Farther north, a new surge of cool air resulted in daily-record lows of 40°F on July 25 in Montana locations such as Dunkirk and Stanford. In Oregon, Meacham registered a daily-record low of 32°F on July 25. Elsewhere, heat (and monsoon-related moisture) overspread coastal southern California. In Long Beach, CA, three consecutive daily-record highs (96, 99, and 97°F) occurred from July 23-25. Long Beach also received measurable rain, totaling 0.01 inch, on July 25.

Late in the month, periods of heavy showers were noted from the eastern Plains into the East. In Nebraska, record-setting rainfall totals for July 21 reached 3.26 inches in Lincoln and 1.87 inches in Grand Island. Meanwhile in the East, daily-record totals topped the 2-inch mark in locations such as Roanoke, VA (2.76 inches on July 21); Allentown, PA (2.50 inches on July 22); and Bridgeport, CT (2.28 inches on July 22). On July 22, heavy rain also soaked parts of the mid-South and lower Midwest, with daily-record amounts totaling 3.32 inches in Knoxville, TN, and 3.30 inches in St. Louis, MO. By July 23, another burst of heavy rain in the East led to daily-record totals in Elizabeth City, NC (2.94 inches); Norfolk, VA (2.39 inches); Apalachicola, FL (2.12 inches); and New York's JFK Airport (2.07 inches). Lakeland, FL, received measurable rain each day from July 21-27, totaling 6.11 inches. Farther west, an increase in Southwestern shower activity led to a record-setting total for July 26 in Clayton, NM, where 1.10 inches fell. In contrast, July rainfall in central Illinois totaled just 1.22 inches (24 percent of normal) in Lincoln and 0.52 inch (13 percent) in Springfield.

Toward month's end, multiple surges of cool air into the Midwest and Southeast resulted in several daily-record lows. In the latter region, New Bern, NC, noted consecutive daily-record lows of 63°F on July 29-30. Elsewhere in the Southeast, daily-record lows included 66°F (on July 29) in Florence, SC, and 68°F (on July 30) in Jacksonville, FL. Meanwhile in Minnesota, Hibbing posted consecutive daily-record lows (37 and 39°F, respectively) on July 30-31. Rhinelander, WI, also registered a daily-record low on July 31, dipping to 40°F. In contrast, a Northeastern heat wave led to record-setting highs for July 30 in Baltimore, MD (98°F), and Houlton, ME (92°F). Farther west, building heat on the southern High Plains resulted in consecutive daily-record highs (102 and 103°F, respectively) in Dalhart, TX, on July 31 – August 1. At the same time, late-month rainfall was heavy across parts of the upper Midwest, where daily-record totals for July 28 reached 1.72 inches in Mitchell, SD, and 1.16 inches in Brainerd, MN. Meanwhile, scattered but locally heavy monsoon-related showers affected the Four Corners States. On July 29, Safford, AZ, netted a record-setting rainfall total of 1.14 inches. Two days later, on July 31, Kingman, AZ, tallied a daily-record sum of 1.21 inches. Still, the monsoon did not perform well overall during July in much of the Southwest, with Arizona monthly rainfall totaling just 0.20 inch (19 percent of normal) in Winslow and 0.17 inch (16 percent) in Phoenix. Elsewhere, heavy rain drenched parts of eastern Kansas and neighboring areas as the month ended. On July 31 – August 1, Lawrence, KS, received 4.33 inches.

At times during July, large sections of Alaska were shrouded by wildfire smoke. Through early August, more than 80 active Alaskan wildfires had charred more than 2.4 million acres of vegetation. The largest wildfire, the 505,000-acre Chalkyitsik Complex in the Yukon Flats east of the community of Chalkyitsik, was 80 percent contained by August 12. In late July, a substantial increase in Alaskan precipitation aided wildfire containment efforts and helped to lower temperatures from record-high levels. Despite the late-month precipitation, Alaska experienced its hottest month on record, with a July average temperature of 58.1°F (previously, 57.3°F in July 2004). It was also the hottest month on record at a vast array of individual locations, from Barrow (48.3°F; previously, 46.8°F in August 1989) to Kodiak (60.4°F; previously, 60.3°F in July 1936). With a monthly average temperature of 59.6°F, Yakutat edged a record that had been set with a reading of 58.9°F in July 1930. Anchorage (65.2°F), McGrath (64.0°F), Kotzebue (63.8°F), and King Salmon (61.2°F) also endured a record-warm month. Some of the most impressive Alaskan heat occurred early in the month, when Anchorage set an all-time record with a high of 90°F on July 4. (Previously, the highest temperature recorded in Anchorage had been 85°F on June 14, 1969.) From July 3-8, Anchorage collected six consecutive daily-record highs (80, 90, 81, 81, 85, and 85°F). Similarly, King Salmon logged six consecutive daily-record highs (89, 88, 83, 84, 83, and 82°F) from July 4-9. Meanwhile, a monthly record was broken in Kodiak with a high of 83°F on July 4; the previous mark of 82°F was set most recently on July 10, 2004. Later, McGrath tallied a trio of daily-record highs (89, 84, and 85°F) from July 8-10. On July 9, daily-record highs were also set in locations such as Fairbanks (87°F) and Nome (83°F). For Nome, it was the highest reading since July 7, 2014, when the temperature reached 84°F. During the second half of the month, however, there was an increase in Alaskan rainfall. During a thunderstorm outbreak on July 18, hail up to one-half inch in diameter was reported in the community of North Pole. By July 23-24, McGrath received 1.66 inches of rain, topping its total during the preceding 8 weeks. McGrath had reported 1.64 inches of rain from May 28 – July 22. Selected Alaskan weekly (July 21-27) rainfall totals included 2.52 inches in McGrath; 1.44 inches in Yakutat; and 1.13 inches in Nome. Heavy rain continued in Yakutat through July 28, when 3.36 inches fell. Much-needed precipitation continued through month's end and into early August. In fact, the month ended with consecutive daily-record rainfall totals in Kotzebue (0.67 and 0.72 inch, respectively, on July 30-31)

July was another hot month across Hawaii, with rainfall increasing at month's end in some windward locations. High temperatures reached or exceeded the 90-degree mark on 30 July days in Kahului, Maui, and 25 days in Honolulu, Oahu. On July 29, Kahului attained 97°F, tying an all-time record most recently achieved on August 22, 2015. Kahului also reported 26 days in a row with a high of 90°F or greater from June 21 – July 16. Meanwhile, rainfall at the state's major airport observation sites ranged from 0.12 inch (24 percent of normal) in Honolulu to 9.56 inches (88 percent) in Hilo, on the Big Island. Hilo received 1 to 3 inches of rain each day from July 31 – August 2.

Fieldwork

Fieldwork summary provided by USDA/NASS

July was cooler than average in parts of the Great Plains, Mississippi Valley, northern Rocky Mountains, and Pacific Northwest, with temperatures averaging as much as 2°F below normal. However, temperatures averaged more than 4°F above normal in parts of the Great Lakes region, New England, and the Southwest. Meanwhile, portions of the Delta received more than 8 inches of rain during July. However, parts of California, the Pacific Northwest, the Southwest, the southern Plains, and the Southeast were drier than normal.

By July 7, ninety-eight percent of the nation's corn acreage had emerged, 2 percentage points behind both the previous year and the 5-year average. Eight percent of the corn had reached the silking stage by July 7, twenty-six percentage points behind the previous year and 14 points behind average. Corn silking advanced to 35 percent complete by July 21, forty-three percentage points behind the previous year and 31 points behind average. By July 21, five percent of the corn was at or beyond the dough stage, 11 percentage points behind the previous year and 5 points behind average. Seventy-eight percent of the corn was at or beyond the silking stage by August 4, seventeen percentage points behind the previous year and 15 points behind average. By August 4, twenty-three percent of the corn was at or beyond the dough stage, 31 percentage points behind the previous year and 19 points behind average. By August 4, fifty-seven percent of the nation's corn was rated in good to excellent condition, 14 percentage points below the same time last year.

Ninety-six percent of the nation's soybean acreage was planted by July 7, four percentage points behind the previous year and 3 points behind the 5-year average. Ninety percent of the soybeans had emerged by July 7, ten percentage points behind the previous year and 8 points behind average. By July 7, ten percent of the soybeans had reached the blooming stage, 34 percentage points behind the previous year and 22 points behind average. By July 21, forty percent of the soybeans had reached the blooming stage, 36 percentage points behind the previous year and 26 points behind average. Nationally, 7 percent of the nation's soybeans were setting pods by July 21, thirty-four percentage points behind the previous year and 21 points behind average. By August 4, seventy-two percent of the soybeans had reached the blooming stage, 19 percentage points behind the previous year and 15 points behind average. Nationally, 37 percent of the nation's soybean acreage was setting pods by August 4, thirty-six percentage points behind the previous year and 26 points behind average. By August 4, fifty-four percent of the nation's soybeans were rated in good to excellent condition, 13 percentage points below the same time last year.

Forty-seven percent of the 2019 winter wheat acreage was harvested by July 7, fourteen percentage points behind both the previous year and the 5-year average. In Kansas, 61 percent of the winter wheat acreage was harvested at that time, 28 percentage points behind the previous year and 23 points behind average. On July 7, sixty-four percent of the winter wheat was reported in good to excellent condition, 27 percentage points above the same time last year. Sixty-nine percent of the winter wheat was harvested by July 21, ten percentage points behind both the previous year and the 5-year average. By August 4, eighty-two percent of the winter wheat was harvested, 7 percentage points behind the previous year and 10 points behind average. During the week ending August 4, harvest progress advanced 16 percentage points or more in Michigan, Montana, Nebraska, Oregon, South Dakota, and Washington.

Forty-seven percent of the nation's cotton acreage had reached the squaring stage by July 7, ten percentage points behind the previous year and 7 points behind the 5-year average. In Texas, 37 percent of the cotton had reached the squaring stage by that time, 11 percentage points behind last year and 6 points behind average. By July 7, thirteen percent of the nation's cotton had begun setting bolls, 7 percentage points behind the previous year and 3 points behind average. Seventy-eight percent of the cotton had reached the squaring stage by July 21, one percentage point ahead of the previous year but 2 points behind average. In Texas, 74 percent of the 2019 cotton acreage had reached the squaring stage by July 21, four percentage points ahead of last year but identical to the 5-year average. By July 21, thirty-three percent of the nation's cotton had begun setting bolls, 7 percentage points behind the previous year and 4 points behind average. Ninety-five percent of the cotton had reached the squaring stage by August 4, four percentage points ahead of the previous year and 2 points ahead of average. By August 4, fifty-nine percent of the cotton had begun setting bolls, 1 percentage point ahead of the previous year but 2 points behind average. On August 4, fifty-four percent of the cotton was rated in good to excellent condition, 14 percentage points above the same time last year.

By July 7, ninety-seven percent of the nation's sorghum acreage was planted, 3 percentage points behind the previous year and 2 points behind the 5-year average. Twenty-two percent of the sorghum had headed by July 7, three percentage points behind the previous year and 4 points behind average. Sixty-two percent of Texas' sorghum acreage had headed by July 7, identical to the same time last year but 1 percentage point ahead of average. Thirteen percent of nation's sorghum was at or beyond the coloring stage by July 7, three percentage points behind both the previous year and the average. By July 21, twenty-seven percent of the sorghum had headed, 13 percentage points behind both the previous year and the average. Seventy-three percent of Texas' sorghum acreage had headed by July 21, one percentage point behind the previous year and 5 points behind average. Sixteen percent of the nation's sorghum was at or beyond the coloring stage by July 21, six percentage points behind both the previous year and the average. By August 4, forty-five percent of the Sorghum had reached the headed stage, 22 percentage points behind the previous year and 17 points behind average. Eighty-two percent of Texas' sorghum acreage had headed by August 4, three percentage points behind the

previous year and 4 points behind average. Twenty-three percent of the nation's sorghum was at or beyond the coloring stage by August 4, seven percentage points behind both the previous year and the 5-year average. On August 4, seventy-one percent of Texas' sorghum acreage had reached the coloring stage, 4 percentage points behind the previous year but 1 point ahead of average. On August 4, sixty-eight percent of the nation's sorghum was rated in good to excellent condition, 19 percentage points above the same time last year.

By July 7, sixteen percent of the nation's rice acreage had headed, 4 percentage points behind the previous year and 6 points behind the 5-year average. Three percent of Arkansas' rice acreage had headed by July 7, six percentage points behind the previous year and 8 points behind average. By July 21, thirty-one percent of the nation's rice had headed, 13 percentage points behind the previous year and 12 points behind average. Heading in Louisiana and Texas was the most advanced, at 78 percent. By August 4, sixty percent of the nation's rice had headed, 19 percentage points behind the previous year and 13 points behind average. Heading was nearing completion in Texas. On August 4, sixty-eight percent of the nation's rice was rated in good to excellent condition, 1 percentage point below the same time last year.

Seventy-four percent of the nation's oats had headed by July 7, sixteen percentage points behind both the previous year and the 5-year average. Heading was behind the 5-year average pace by 17 percentage points or more in four of the nine estimating states. Heading was complete in Texas. By July 21, ninety-four percent of the oats had headed, 5 percentage points behind the previous year and 4 points behind average. Twelve percent of the nation's oats had been harvested by July 21, eleven percentage points behind the previous year and 10 points behind average. By July 28, ninety-seven percent of the nation's oats had headed, 3 percentage points behind both the previous year and the average. By August 4, thirty-two percent of the oats had been harvested, 17 percentage points behind both the previous year and the 5-year average. On August 4, sixty-five percent of the nation's oats were rated in good to excellent condition, 6 percentage points below the same time last year.

Fifty-five percent of the nation's barley acreage had headed by July 7, nineteen percentage points behind the previous year and 20 points behind the 5-year average. Ninety percent of the barley had headed by July 21, three percentage points behind the previous year and 5 points behind average. Three percent of the barley was harvested by August 4, eleven percentage points behind the previous year and 15 points behind average. Harvest progress was behind the 5-year average in all five estimating states. On August 4, seventy-six percent of the barley was rated in good to excellent condition, 3 percentage points below the same time last year.

By July 7, fifty-six percent of the nation's spring wheat had headed, 22 percentage points behind the previous year and 17 points behind the 5-year average. By July 21, ninety-two percent of the spring wheat had headed, 4 percentage points behind the previous year and 2 points behind the 5-year average. By July 28, ninety-seven percent of the spring wheat had headed, 2 percentage points behind the previous year and 1 point behind average. By August 4, two percent of the spring wheat was harvested, 10 percentage points behind the previous year and 12 points behind average. Harvest progress was behind the 5-year average in all six estimating states. On August 4, seventy-three percent of the spring wheat acreage was rated in good to excellent condition, 1 percentage point below the same time last year.

By July 7, fifty-eight percent of the nation's peanut acreage had reached the pegging stage, 2 percentage points ahead of the previous year and 5 points ahead of the 5-year average. By July 21, seventy-eight percent of the peanuts had reached the pegging stage, identical to the previous year but 1 percentage point ahead of average. By August 4, ninety-two percent of the peanuts had reached the pegging stage, 1 percentage point ahead of average. On August 4, sixty-nine percent of the nation's peanuts were rated in good to excellent condition, 2 percentage points below the same time last year.

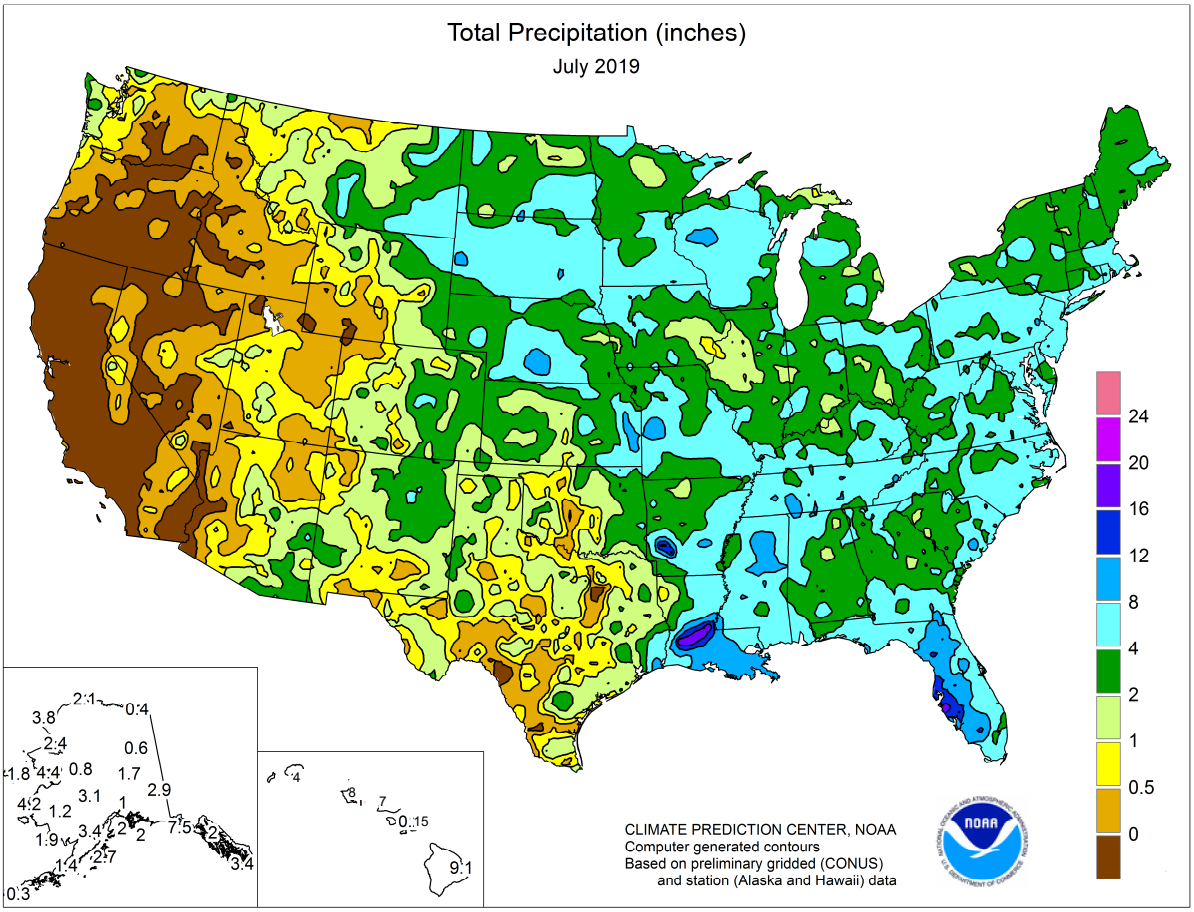
U.S. Crop Production Highlights

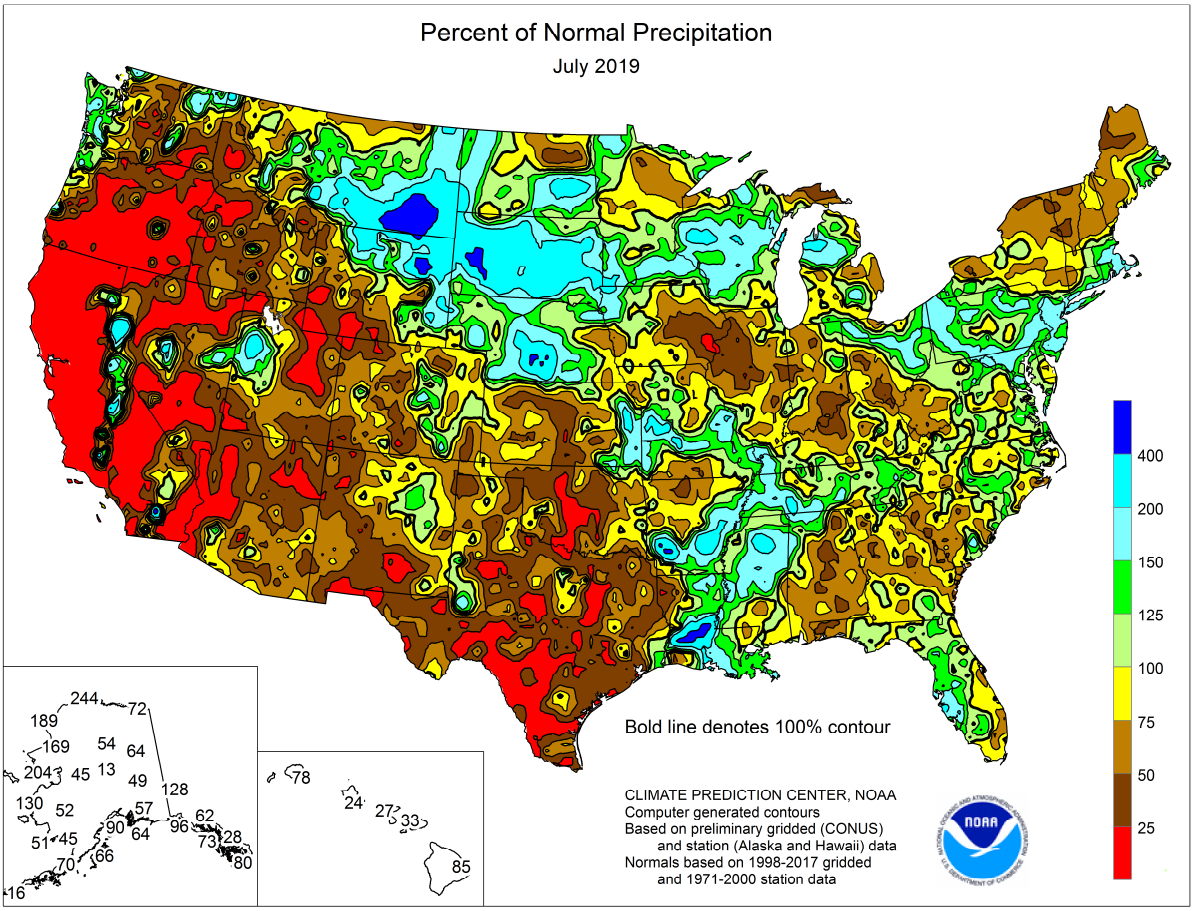
The following information was released by USDA's Agricultural Statistics Board on August 12, 2019. Forecasts refer to August 1.

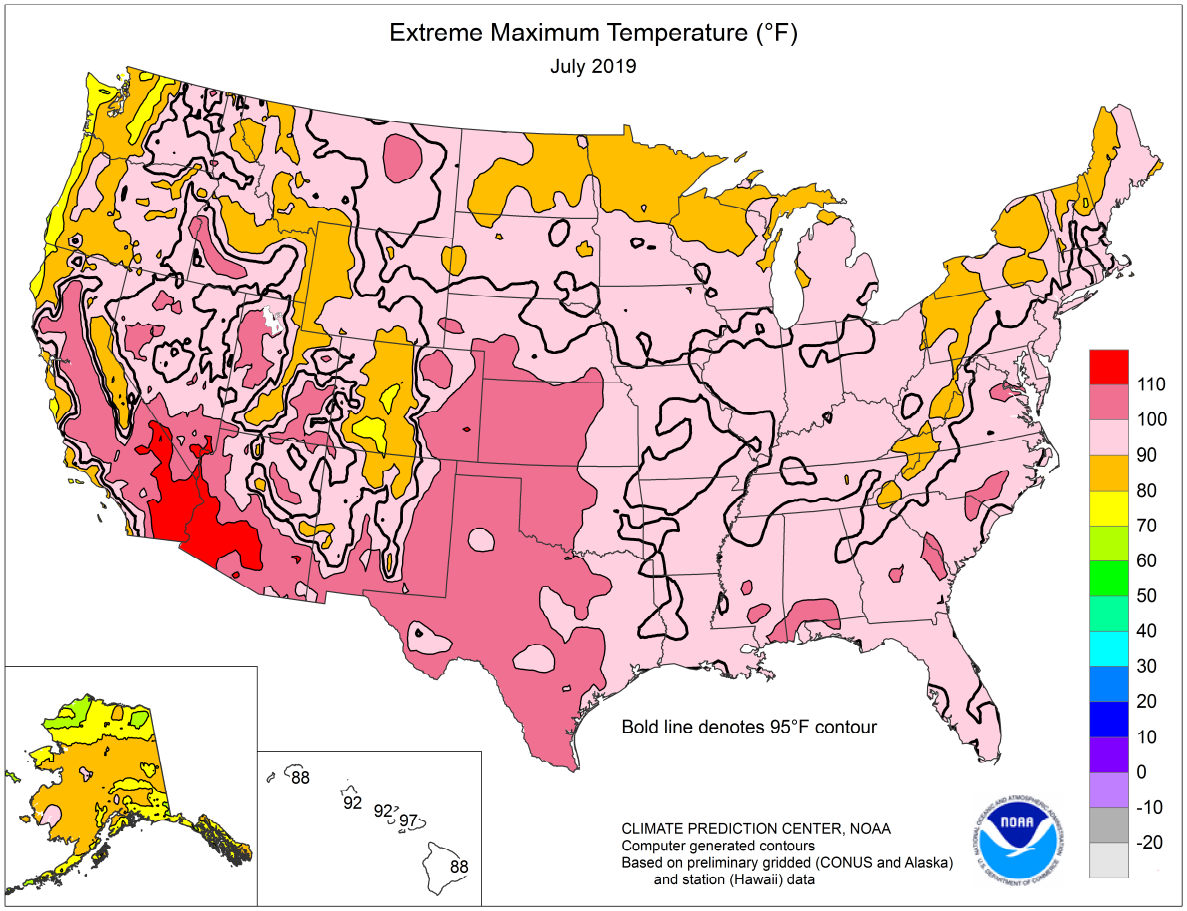
Corn production for grain is forecast at 13.9 billion bushels, down 4 percent from 2018. Yields are expected to average 169.5 bushels per harvested acre, down 6.9 bushels from 2018. Area harvested for grain is forecast at 82.0 million acres, down 2 percent from the previous forecast, but up less than 1 percent from 2018. Area planted for all purposes totaled 90.0 million acres, down 2 percent from the previous estimate but up 1 percent from 2018.

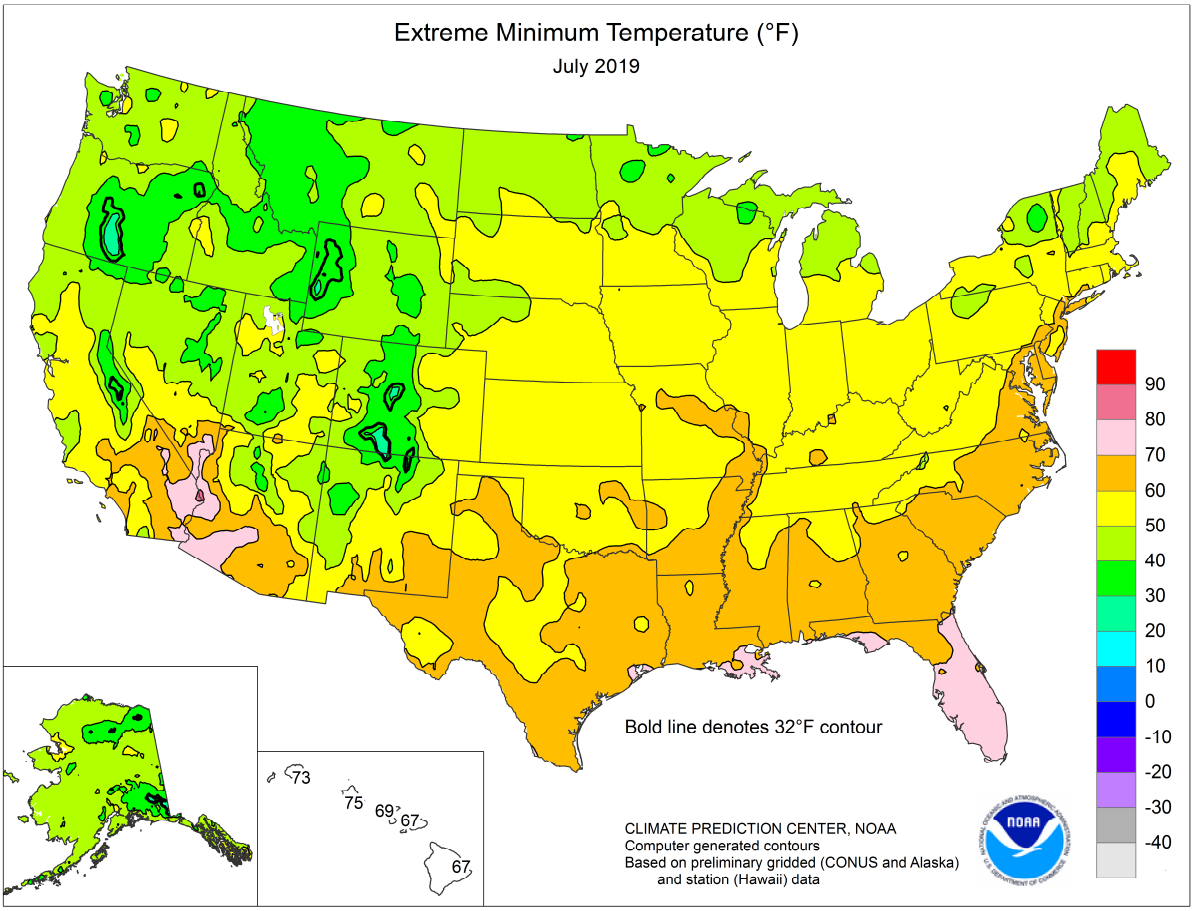
Soybean production for beans is forecast at 3.68 billion bushels, down 19 percent from 2018. Yields are expected to average 48.5 bushels per harvested acre, down 3.1 bushels from 2018. Area harvested for beans is forecast at 75.9 million acres, down 4 percent from the previous forecast, and down 14 percent from 2018. Area planted for all purposes totaled 76.7 million acres, down 4 percent from the previous estimate, and down 14 percent from 2018.

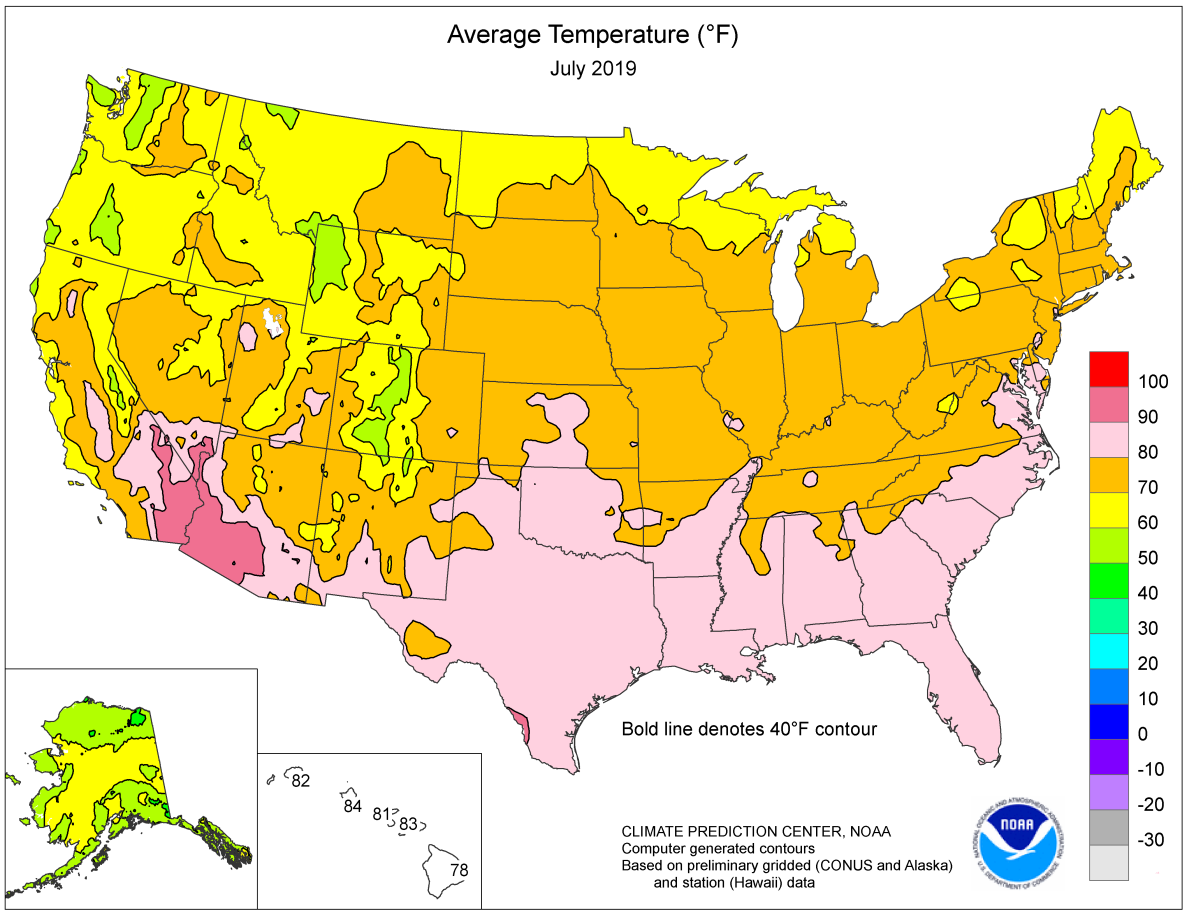
All cotton production is forecast at 22.5 million 480-pound bales, up 23 percent from 2018. Yields are expected to average 855 pounds per harvested acre, down 9 pounds from 2018. Upland cotton production is forecast at 21.7 million 480-pound bales, up 24 percent from 2018. Pima cotton production is forecast at 790,000 bales, down 1 percent from 2018. All cotton area harvested is forecast at 12.6 million acres, up 24 percent from 2018. All cotton planted area totaled 13.9 million acres, up 1 percent from the previous estimate but down 1 percent from 2018.

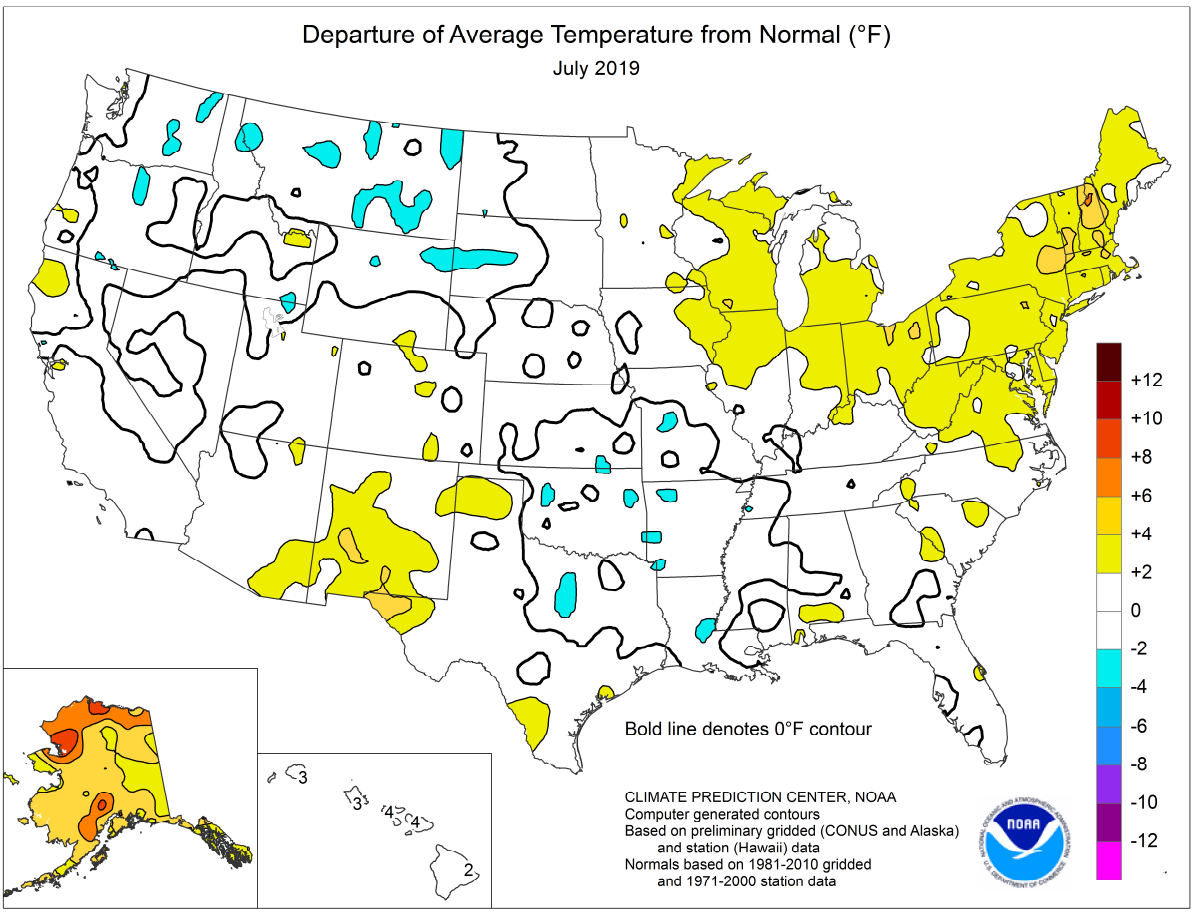

Total Precipitation (inches)
July 2019
24
20
16
12
8
4
2
1
0.5
0
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
NOAA


Percent of Normal Precipitation
July 2019
400
200
150
125
100
75
50
25
Bold line denotes 100% contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
Normals based on 1998-2017 gridded
and 1971-2000 station data
NOAA


Extreme Maximum Temperature (°F)
July 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
88
92
92
97
88
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
July 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
73
75
69
67
67
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Average Temperature (°F)
July 2019
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
82
84
81
83
78
Bold line denotes 40°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Departure of Average Temperature from Normal (°F)
July 2019
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
3
3
4
4
2
Bold line denotes 0°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
Normals based on 1981-2010 gridded
and 1971-2000 station data
NOAA

National Weather Data for Selected Cities

July 2019

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMP, °F AVERAGE	TEMP, °F DEPARTURE	PRECIP. TOTAL	PRECIP. DEPARTURE
AL BIRMINGHAM	82	2	2.75	-2.34
HUNTSVILLE	81	1	3.88	-0.52
MOBILE	83	1	6.24	-0.30
MONTGOMERY	83	1	4.15	-1.16
AK ANCHORAGE	65	7	0.85	-0.85
BARROW	49	9	2.13	1.26
COLD BAY	55	4	1.41	-1.12
FAIRBANKS	66	4	0.88	-0.85
JUNEAU	61	4	2.00	-2.14
KING SALMON	61	5	1.84	-0.31
KODIAK	61	7	2.72	-1.40
NOME	55	2	4.38	2.23
AZ FLAGSTAFF	67	1	0.72	-1.68
PHOENIX	97	4	0.14	-0.85
TUCSON	90	3	1.11	-0.96
AR FORT SMITH	82	0	3.33	0.14
LITTLE ROCK	80	-2	2.83	-0.48
CA BAKERSFIELD	85	2	0.00	0.00
EUREKA	60	2	0.02	-0.14
FRESNO	84	3	0.00	-0.01
LOS ANGELES	69	0	0.05	0.02
REDDING	82	1	0.00	-0.05
SACRAMENTO	76	1	0.00	-0.05
SAN DIEGO	70	-1	0.00	-0.03
SAN FRANCISCO	65	2	0.00	-0.03
STOCKTON	79	2	0.00	-0.05
CO ALAMOSA	65	1	0.09	-0.85
CO SPRINGS	73	3	1.41	-1.44
DENVER	76	4	2.42	0.17
GRAND JUNCTION	80	3	0.09	-0.57
PUEBLO	78	3	2.35	0.31
CT BRIDGEPORT	78	4	7.57	3.80
HARTFORD	78	4	3.13	-0.54
DC WASHINGTON	82	3	6.51	2.85
DE WILMINGTON	80	3	5.62	1.34
FL DAYTONA BEACH	82	0	6.56	1.39
FT LAUDERDALE	85	2	2.94	-3.76
FT MYERS	83	0	10.50	1.52
JACKSONVILLE	83	1	5.30	-0.67
KEY WEST	85	0	2.85	-0.42
MELBOURNE	84	3	4.22	-1.16
MIAMI	85	1	10.26	4.47
ORLANDO	83	1	6.01	-1.14
PENSACOLA	84	1	4.70	-3.32
ST PETERSBURG	82	-1	16.42	9.70
TALLAHASSEE	83	1	8.30	0.26
TAMPA	83	0	11.01	4.52
WEST PALM BEACH	84	1	3.12	-2.85
GA ATHENS	82	2	1.37	-3.04
ATLANTA	82	2	2.06	-3.06
AUGUSTA	84	3	1.40	-2.67
COLUMBUS	83	1	3.93	-1.11
MACON	83	2	3.40	-0.92
SAVANNAH	84	2	3.69	-2.35
HI HILO	78	2	9.11	-1.60
HONOLULU	84	3	0.12	-0.38
KAHULUI	83	4	0.16	-0.33
LIHUE	82	3	1.64	-0.48
ID BOISE	77	2	0.02	-0.37
LEWISTON	75	1	0.25	-0.47
POCATELLO	71	2	0.37	-0.33
IL CHICAGO/O'HARE	77	4	3.94	0.43
MOLINE	80	5	1.16	-2.87
PEORIA	78	3	1.92	-2.10
ROCKFORD	78	5	2.80	-1.30
SPRINGFIELD	78	2	0.52	-3.01
IN EVANSVILLE	79	0	3.54	-0.21
FORT WAYNE	77	4	3.31	-0.27
INDIANAPOLIS	78	3	3.85	-0.57
SOUTH BEND	75	2	3.04	-0.69
IA BURLINGTON	78	2	1.49	-2.99
CEDAR RAPIDS	75	1	2.21	-1.85
DES MOINES	78	2	5.63	1.45
DUBUQUE	75	3	3.28	-0.45
SIOUX CITY	75	0	6.99	3.69
WATERLOO	77	3	2.68	-1.52
KS CONCORDIA	80	1	3.16	-1.04
DODGE CITY	80	0	0.54	-2.63
GOODLAND	78	3	1.72	-1.82
HILL CITY	80	1	1.27	-1.85
TOPEKA	79	1	4.22	0.39
WICHITA	82	1	1.38	-1.93
KY JACKSON	76	1	6.98	2.39
LEXINGTON	79	3	3.54	-1.26
LONDON-CORBIN	76	0	3.74	-0.65
LOUISVILLE	82	4	1.31	-2.99
PADUCAH	80	2	7.40	2.95
LA BATON ROUGE	83	1	7.17	1.21
LAKE CHARLES	83	0	4.84	-0.28
NEW ORLEANS	84	1	11.55	5.35
SHREVEPORT	83	0	0.55	-3.44
ME BANGOR	71	2	3.41	0.17
CARIBOU	69	3	2.49	-1.40
PORTLAND	73	4	2.53	-0.79
MD BALTIMORE	81	5	3.85	0.00
MA BOSTON	79	5	5.82	2.76
WORCESTER	74	4	4.89	0.70
MI ALPENA	70	3	1.78	-1.39
DETROIT	77	3	2.65	-0.51
FLINT	75	4	1.96	-1.21
GRAND RAPIDS	75	4	3.93	0.37
HOUGHTON LAKE	69	2	2.93	0.18
LANSING	75	5	2.73	0.05
MUSKEGON	74	4	2.88	0.56
TRAVERSE CITY	72	2	2.65	-0.49
MN DULUTH	71	6	2.65	-1.55
INT'L FALLS	66	0	5.21	1.84
MINNEAPOLIS	75	2	6.52	2.48
ROCHESTER	72	2	7.41	2.80
ST. CLOUD	71	1	5.32	1.98
MS JACKSON	82	1	5.30	0.61
MERIDIAN	82	0	2.32	-3.13
TUPELO	82	1	10.26	6.61
MO COLUMBIA	79	2	2.11	-1.69
JOPLIN	78	-2	6.28	2.73
KANSAS CITY	78	0	3.47	-0.95
SPRINGFIELD	78	0	2.79	-0.77
ST JOSEPH	79	0	0.74	-3.15
ST LOUIS	81	1	5.73	1.83
MT BILLINGS	74	2	2.08	0.80
BUTTE	64	1	1.55	0.08
GLASGOW	72	2	1.24	-0.54
GREAT FALLS	66	0	1.17	-0.28
HELENA	69	1	1.76	0.42
KALISPELL	64	0	1.02	-0.39
MILES CITY	72	-2	2.45	0.84
MISSOULA	68	1	0.98	-0.11
NE GRAND ISLAND	77	1	5.20	2.06
HASTINGS	77	1	4.12	0.31
LINCOLN	78	0	4.07	0.53
MCCOOK	78	1	3.81	0.51
NORFOLK	75	0	2.87	-0.87
NORTH PLATTE	76	2	5.84	2.67
OMAHA/EPPLEY	79	2	2.66	-1.20
SCOTTSBLUFF	75	2	0.29	-1.84
VALENTINE	76	2	4.27	0.90
NV ELKO	72	3	0.01	-0.29
ELY	69	2	0.43	-0.17
LAS VEGAS	94	3	0.04	-0.40
RENO	77	6	0.25	0.01
WINNEMUCCA	73	1	0.05	-0.22
NH CONCORD	73	3	3.47	-0.27
NJ ATLANTIC CITY	80	5	5.04	1.18
NEWARK	81	4	6.82	2.14
NM ALBUQUERQUE	81	3	1.95	0.68
NY ALBANY	76	5	3.99	0.53
BINGHAMTON	72	3	3.38	-0.11
BUFFALO	74	3	1.83	-1.31
ROCHESTER	74	3	2.65	-0.28
SYRACUSE	75	4	3.40	-0.62
NC ASHEVILLE	76	3	3.70	-0.17
CHARLOTTE	82	2	3.53	-0.26
GREENSBORO	80	2	5.28	0.84
HATTERAS	82	3	2.42	-2.53
RALEIGH	82	3	3.65	-0.64
WILMINGTON	82	1	3.55	-4.07
ND BISMARCK	73	3	3.56	0.98
DICKINSON	69	0	2.84	0.73
FARGO	72	1	4.73	1.85
GRAND FORKS	70	1	3.50	0.44
JAMESTOWN	71	0	4.54	1.32
MINOT	71	1	2.69	-0.01
WILLISTON	70	1	3.23	0.95
OH AKRON-CANTON	77	5	7.10	3.08
CINCINNATI	78	2	2.41	-1.34
CLEVELAND	77	5	2.62	-0.90
COLUMBUS	78	3	3.24	-1.37
DAYTON	78	4	5.72	1.97
MANSFIELD	76	5	7.20	2.98
TOLEDO	78	5	5.31	2.51
YOUNGSTOWN	74	4	4.17	0.07
OK OKLAHOMA CITY	81	-1	0.06	-2.88
TULSA	82	-1	4.10	1.14
OR ASTORIA	62	2	1.43	0.27
BURNS	68	2	0.60	0.20
EUGENE	68	2	0.23	-0.41
MEDFORD	74	1	0.00	-0.31
PENDLETON	72	-1	0.04	-0.37
PORTLAND	70	2	0.81	0.09
SALEM	68	1	0.42	-0.15
PA ALLENTOWN	78	5	9.55	5.28
ERIE	75	3	2.54	-0.74
MIDDLETOWN	80	4	3.22	-0.37
PHILADELPHIA	81	3	6.03	1.64
PITTSBURGH	75	2	6.93	2.97
WILKES-BARRE	76	4	7.39	3.65
WILLIAMSPORT	76	4	6.80	2.72
PR SAN JUAN	84	2	4.77	0.61
RI PROVIDENCE	77	4	3.48	0.31
SC CHARLESTON	82	0	9.44	3.31
COLUMBIA	83	1	4.50	-1.04
FLORENCE	85	4	5.71	0.43
GREENVILLE	80	1	3.73	-0.92
MYRTLE BEACH	81	0	5.29	0.10
SD ABERDEEN	73	1	4.25	1.33
HURON	74	1	6.22	3.36
RAPID CITY	71	-1	6.37	4.34
SIOUX FALLS	75	2	6.85	3.92
TN BRISTOL	77	3	3.34	-0.87
CHATTANOOGA	81	1	3.44	-1.29
JACKSON	79	-1	8.43	3.69
KNOXVILLE	79	1	5.89	1.18
MEMPHIS	82	-1	7.53	3.31
NASHVILLE	82	3	4.70	0.93
TX ABILENE	84	1	0.54	-1.15
AMARILLO	80	2	2.92	0.24
AUSTIN	84	0	0.01	-1.96
BEAUMONT	84	1	9.27	4.04
BROWNSVILLE	87	3	2.56	0.79
COLLEGE STATION	85	0	0.03	-1.89
CORPUS CHRISTI	86	2	0.57	-1.43
DALLAS/FT WORTH	85	0	0.78	-1.34
DEL RIO	88	3	0.00	-2.02
EL PASO	87	4	0.19	-1.30
GALVESTON	86	2	1.08	-2.37
HOUSTON	85	1	2.80	-0.38
LUBBOCK	82	2	0.16	-1.97
MIDLAND	84	2	2.75	0.86
SAN ANGELO	84	2	1.35	0.25
SAN ANTONIO	85	1	0.15	-1.88
VICTORIA	85	1	0.33	-2.57
WACO	85	0	1.03	-1.20
WICHITA FALLS	83	-2	0.59	-0.99
UT SALT LAKE CITY	82	5	0.78	0.06
VT BURLINGTON	75	4	1.96	-2.01
VA LYNCHBURG	78	3	3.29	-1.10
NORFOLK	82	3	5.46	0.29
RICHMOND	82	4	6.22	1.55
ROANOKE	80	4	4.70	0.70
WASH/DULLES	79	3	2.73	-0.84
WA OLYMPIA	65	2	1.23	0.41
QUILLAYUTE	61	2	2.98	0.64
SEATTLE-TACOMA	67	2	1.15	0.36
SPOKANE	69	0	0.52	-0.24
YAKIMA	71	2	0.12	-0.10
WV BECKLEY	73	2	5.23	0.45
CHARLESTON	78	4	2.32	-2.54
ELKINS	73	3	5.41	0.58
HUNTINGTON	78	3	4.13	-0.33
WI EAU CLAIRE	72	1	5.19	1.25
GREEN BAY	73	3	3.49	0.05
LA CROSSE	77	3	6.56	2.31
MADISON	75	3	5.77	1.84
MILWAUKEE	75	3	3.17	-0.41
WAUSAU	71	1	6.48	2.36
WY CASPER	71	1	0.75	-0.54
CHEYENNE	70	2	0.76	-1.50
LANDER	71	0	0.44	-0.40
SHERIDAN	70	1	1.43	0.32

Based on 1971-2000 normals

***** Not Available**

National Agricultural Summary

August 5 – 11, 2019

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Rain fell most heavily in parts of the Great Plains, Maine, and the southern Atlantic region, with some areas receiving 4 inches or more. Temperatures were at least 6°F above normal in parts of Idaho, New Mexico, the Pacific Northwest, and Texas. In contrast, temperatures were slightly below normal in parts of the Midwest and Northeast.

Corn: Ninety percent of the nation's corn acreage was at or beyond the silking stage by August 11, six percentage points behind last year and 7 points behind the 5-year average. By August 11, thirty-nine percent of the corn was at or beyond the dough stage, 32 percentage points behind last year and 22 points behind average. Advances of 15 percentage points or more were made in eight of the 18 estimating states. By August 11, seven percent of this year's crop acreage was denting, 17 percentage points behind last year and 9 points behind average. All of the estimating states, except Tennessee and Texas, were at or behind their 5-year average pace in denting progress. Overall, 57 percent of the nation's corn was rated in good to excellent condition, identical to the previous week but 13 percentage points below the same time last year.

Soybean: By August 11, eighty-two percent of the nation's soybean acreage had reached the blooming stage, 13 percentage points behind last year and 11 points behind the 5-year average. Nationally, 54 percent of the soybeans were setting pods, 29 percentage points behind last year and 22 points behind average. The pod-setting stage was nearing completion in the Delta by week's end. On August 11, fifty-four percent of the nation's soybeans were rated in good to excellent condition, identical to the previous week but 12 percentage points below the same time last year.

Winter Wheat: Eighty-nine percent of the 2019 winter wheat acreage was harvested by August 11, four percentage points behind last year and 7 points behind the 5-year average. Winter wheat harvest progress was complete or nearing completion in all estimating states except Idaho, Montana, Oregon, South Dakota, and Washington.

Cotton: By August 11, seventy-seven percent of the nation's cotton acreage had set bolls, 2 percentage points ahead of last year and 1 point ahead of the 5-year average. Advances of 12 percentage points or more were estimated in eight of the 15 estimating states. By August 11, twenty percent of the nation's cotton had open bolls, 8 percentage points ahead of last year and 10 points ahead of average. On August 11, fifty-six percent of the 2019 cotton acreage was rated in good to excellent condition, 2 percentage points above the previous week and 16 points above the same time last year.

Sorghum: By August 11, sixty-one percent of the nation's sorghum acreage had reached the heading stage, 16 percentage points behind last year and 13 points behind the 5-year average. Twenty-six percent of sorghum was at or beyond the coloring stage by August 11, ten percentage points behind last year and 9 points behind average. On August 11, seventy-two percent of Texas' sorghum acreage had reached the coloring stage, 5 percentage points behind last year and 1 point behind average. By August 11, nineteen percent of the nation's sorghum was mature, 2 percentage points behind last year and 4 points behind average. Sixty-five percent of Texas' sorghum acreage had matured by August 11, four percentage points ahead of last year and 3 points ahead of average. On August 11, sixty-six percent of the nation's sorghum was rated in good to excellent condition, 2 percentage points below the previous week but 17 points above the same time last year.

Rice: By August 11, seventy-six percent of the nation's rice acreage had reached the heading stage, 14 percentage points behind last year and 9 points behind the 5-year average. Heading was nearing completion in Louisiana, Mississippi, and Texas. Nationally, 7 percent of the rice was harvested by August 11, three percentage points behind last year and 2 points behind average. On August 11, seventy percent of the rice was rated in good to excellent condition, 2 percentage points above the previous week and 1 point above the same time last year.

Small Grains: By August 11, forty-eight percent of the nation's oats had been harvested, 17 percentage points behind last year and 16 points behind the 5-year average. Harvest progress continued with advances of 20 percentage points or more in Iowa, Minnesota, Ohio, Pennsylvania, and South Dakota. On August 11, sixty-four percent of the nation's oats were rated in good to excellent condition, 1 percentage point below the previous week and 7 points below the same time last year.

Fifteen percent of the nation's barley was harvested by August 11, twenty-two percentage points behind last year and 24 points behind the 5-year average. Harvest advanced 12 percentage points or more during the week in Idaho, Minnesota, North Dakota, and Washington. On August 11, seventy-four percent of the nation's barley was rated in good to excellent condition, 2 percentage points below the previous week and 7 points below the same time last year.

By August 11, eight percent of the spring wheat was harvested, 24 percentage points behind last year and 22 points behind the 5-year average. Harvest progress was behind the average pace in all six estimating states. On August 11, sixty-nine percent of the spring wheat was rated in good to excellent condition, 4 percentage points below the previous week and 6 points below the same time last year.

Other Crops: By August 11, ninety-six percent of the nation's peanut acreage had reached the pegging stage, 3 percentage points ahead of the previous week and 1 point ahead of the 5-year average. On August 11, sixty-seven percent of the peanuts were rated in good to excellent condition, 2 percentage points below the previous week and 6 points below the same time last year.

Crop Progress and Condition

Week Ending August 11, 2019

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

Corn Percent Silking

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	92	77	91	91
IL	100	81	93	99
IN	100	60	79	98
IA	100	84	92	98
KS	98	85	93	97
KY	96	86	92	95
MI	89	44	65	92
MN	100	83	96	97
MO	100	87	95	99
NE	99	85	95	99
NC	100	99	100	99
ND	98	70	89	92
OH	97	53	71	94
PA	92	78	81	91
SD	98	64	85	96
TN	100	97	98	99
TX	96	95	100	98
WI	93	53	72	91
18 Sts	96	78	90	97

These 18 States planted 92% of last year's corn acreage.

Corn Percent Dough

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	39	5	15	27
IL	89	29	42	76
IN	73	16	28	60
IA	70	20	41	63
KS	75	39	55	68
KY	68	43	56	62
MI	37	2	17	36
MN	62	15	30	57
MO	87	38	61	81
NE	74	27	41	62
NC	90	87	91	92
ND	59	1	7	35
OH	63	9	25	51
PA	53	8	33	38
SD	69	7	25	51
TN	93	79	89	89
TX	90	74	83	85
WI	43	4	14	34
18 Sts	71	23	39	61

These 18 States planted 92% of last year's corn acreage.

Corn Percent Dented

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	3	1	2	2
IL	42	NA	1	24
IN	23	NA	1	16
IA	20	NA	1	11
KS	39	9	21	23
KY	46	20	31	39
MI	6	NA	0	2
MN	11	NA	0	5
MO	55	NA	6	39
NE	16	NA	3	11
NC	67	58	70	73
ND	5	NA	0	2
OH	14	NA	0	8
PA	7	0	1	5
SD	10	NA	1	5
TN	51	22	45	44
TX	78	62	74	66
WI	3	NA	0	2
18 Sts	24	NA	7	16

These 18 States planted 92% of last year's corn acreage.

Corn Condition by Percent

	VP	P	F	G	EX
CO	0	4	19	64	13
IL	5	16	39	36	4
IN	9	20	38	29	4
IA	2	7	26	54	11
KS	4	10	32	45	9
KY	3	6	20	50	21
MI	6	17	37	32	8
MN	3	8	33	46	10
MO	5	18	38	34	5
NE	1	4	20	60	15
NC	10	21	30	29	10
ND	1	8	20	59	12
OH	6	17	43	31	3
PA	0	3	16	63	18
SD	2	6	28	45	19
TN	0	1	11	60	28
TX	1	6	37	43	13
WI	3	9	25	45	18
18 Sts	3	10	30	47	10
Prev Wk	3	10	30	47	10
Prev Yr	3	7	20	50	20

Peanuts Percent Pegging

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AL	96	97	99	91
FL	92	94	96	96
GA	98	99	100	98
NC	97	96	98	97
OK	78	72	76	81
SC	87	94	96	95
TX	79	63	83	84
VA	93	91	100	91
8 Sts	93	92	96	95

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

Peanut Condition by Percent

	VP	P	F	G	EX
AL	0	3	47	45	5
FL	0	15	24	58	3
GA	1	6	26	58	9
NC	2	5	40	44	9
OK	0	0	14	75	11
SC	0	2	25	63	10
TX	1	1	17	75	6
VA	0	0	6	79	15
8 Sts	1	5	27	59	8
Prev Wk	1	5	25	61	8
Prev Yr	1	3	23	58	15

Crop Progress and Condition

Week Ending August 11, 2019

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

Soybeans Percent Blooming

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AR	100	88	92	96
IL	99	72	80	95
IN	94	54	70	93
IA	96	78	87	95
KS	93	56	73	86
KY	85	62	73	78
LA	100	99	100	99
MI	89	57	71	92
MN	98	90	97	97
MS	97	91	94	95
MO	89	50	71	80
NE	96	78	87	96
NC	81	62	75	78
ND	99	85	94	97
OH	94	55	69	92
SD	96	75	83	94
TN	92	78	85	89
WI	92	66	75	92
18 Sts	95	72	82	93

These 18 States planted 95% of last year's soybean acreage.

Soybeans Percent Setting Pods

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AR	94	74	80	87
IL	89	30	49	79
IN	84	19	34	78
IA	88	33	56	81
KS	72	22	39	58
KY	65	37	47	58
LA	100	91	96	95
MI	67	20	31	72
MN	90	53	74	84
MS	93	76	81	87
MO	65	16	38	52
NE	78	51	66	76
NC	53	38	51	52
ND	88	43	62	82
OH	82	20	35	72
SD	79	33	47	76
TN	77	54	66	71
WI	78	29	50	76
18 Sts	83	37	54	76

These 18 States planted 95% of last year's soybean acreage.

Soybean Condition by Percent

	VP	P	F	G	EX
AR	2	11	28	41	18
IL	6	17	38	35	4
IN	8	20	38	30	4
IA	2	6	29	54	9
KS	4	8	38	45	5
KY	1	7	21	59	12
LA	2	7	25	57	9
MI	4	13	38	38	7
MN	2	6	33	51	8
MS	1	6	29	52	12
MO	3	13	37	42	5
NE	1	4	22	62	11
NC	2	8	35	47	8
ND	2	8	28	53	9
OH	6	16	49	26	3
SD	2	8	37	40	13
TN	1	1	17	65	16
WI	1	7	26	46	20
18 Sts	3	10	33	46	8
Prev Wk	3	10	33	45	9
Prev Yr	3	7	24	50	16

Cotton Percent Setting Bolls

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AL	87	78	87	88
AZ	91	82	90	89
AR	100	91	96	99
CA	55	70	85	78
GA	83	79	88	88
KS	51	26	38	39
LA	100	91	97	97
MS	95	68	82	88
MO	100	48	55	75
NC	77	83	91	84
OK	67	40	69	62
SC	73	63	86	84
TN	92	65	80	85
TX	68	50	72	69
VA	73	62	78	80
15 Sts	75	59	77	76

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

Cotton Percent Bolls Opening

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AL	9	NA	2	4
AZ	25	11	23	28
AR	6	0	3	6
CA	0	NA	0	3
GA	3	2	9	3
KS	1	0	1	1
LA	27	13	18	19
MS	12	1	3	8
MO	23	NA	0	5
NC	1	0	1	3
OK	3	NA	0	1
SC	1	NA	1	1
TN	7	0	3	4
TX	17	14	31	13
VA	1	NA	0	1
15 Sts	12	NA	20	10

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

Cotton Condition by Percent

	VP	P	F	G	EX
AL	0	8	34	46	12
AZ	0	5	16	61	18
AR	0	3	14	46	37
CA	0	0	65	25	10
GA	2	9	32	51	6
KS	5	18	40	34	3
LA	0	3	25	63	9
MS	1	5	39	47	8
MO	7	8	55	30	0
NC	4	10	27	48	11
OK	0	8	40	48	4
SC	0	6	34	52	8
TN	0	3	17	63	17
TX	1	11	36	44	8
VA	0	1	11	83	5
15 Sts	1	9	34	47	9
Prev Wk	1	12	33	44	10
Prev Yr	14	20	26	32	8

Crop Progress and Condition

Week Ending August 11, 2019

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

Sorghum Percent Headed

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	74	40	64	62
KS	70	26	47	63
NE	90	43	68	82
OK	66	30	53	66
SD	73	37	59	77
TX	87	82	85	88
6 Sts	77	45	61	74

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Percent Coloring

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	9	1	3	12
KS	14	3	6	8
NE	20	4	9	16
OK	30	6	10	31
SD	11	1	5	12
TX	77	71	72	73
6 Sts	36	23	26	35

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Percent Mature

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
CO	0	NA	0	0
KS	0	NA	0	0
NE	0	NA	0	0
OK	5	NA	0	2
SD	0	NA	0	0
TX	61	63	65	62
6 Sts	21	NA	19	23

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Condition by Percent

	VP	P	F	G	EX
CO	1	1	24	64	10
KS	2	7	29	53	9
NE	0	1	16	70	13
OK	0	2	38	56	4
SD	1	1	34	57	7
TX	1	5	27	39	28
6 Sts	1	5	28	52	14
Prev Wk	1	5	26	54	14
Prev Yr	5	12	34	42	7

Spring Wheat Percent Harvested

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
ID	21	1	15	32
MN	42	1	8	33
MT	23	1	10	26
ND	26	1	5	23
SD	76	5	16	61
WA	32	10	18	48
6 Sts	32	2	8	30

These 6 States harvested 99% of last year's spring wheat acreage.

Spring Wheat Condition by Percent

	VP	P	F	G	EX
ID	5	4	21	55	15
MN	0	2	15	65	18
MT	1	15	23	50	11
ND	1	5	23	60	11
SD	2	4	32	47	15
WA	2	4	28	58	8
6 Sts	1	7	23	57	12
Prev Wk	0	5	22	63	10
Prev Yr	1	4	20	62	13

Rice Percent Headed

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AR	93	55	73	85
CA	70	40	70	72
LA	100	87	91	97
MS	92	82	91	90
MO	89	37	55	80
TX	100	94	96	98
6 Sts	90	60	76	85

These 6 States planted 100% of last year's rice acreage.

Rice Percent Harvested

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AR	0	0	0	0
CA	0	NA	0	0
LA	53	21	38	44
MS	0	NA	0	0
MO	0	NA	0	0
TX	41	8	21	36
6 Sts	10	NA	7	9

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

Rice Condition by Percent

	VP	P	F	G	EX
AR	1	7	28	44	20
CA	0	0	0	45	55
LA	1	3	33	53	10
MS	1	3	21	69	6
MO	3	5	37	40	15
TX	0	4	32	55	9
6 Sts	1	5	24	47	23
Prev Wk	1	6	25	45	23
Prev Yr	1	6	24	57	12

Barley Percent Harvested

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
ID	31	5	27	37
MN	67	4	23	51
MT	29	2	5	39
ND	47	1	11	36
WA	36	9	21	46
5 Sts	37	3	15	39

These 5 States harvested 83% of last year's barley acreage.

Barley Condition by Percent

	VP	P	F	G	EX
ID	0	3	12	55	30
MN	1	1	19	68	11
MT	0	8	24	53	15
ND	1	6	21	63	9
WA	1	2	24	68	5
5 Sts	0	6	20	57	17
Prev Wk	0	5	19	64	12
Prev Yr	0	3	16	67	14

Crop Progress and Condition

Week Ending August 11, 2019

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

Winter Wheat Percent Harvested

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
AR	100	100	100	100
CA	98	100	100	98
CO	100	92	96	99
ID	67	15	36	70
IL	100	100	100	100
IN	100	100	100	100
KS	100	99	100	100
MI	96	74	89	97
MO	100	100	100	100
MT	64	26	50	80
NE	97	75	90	99
NC	100	100	100	100
OH	100	97	100	99
OK	100	100	100	100
OR	88	52	73	87
SD	96	49	68	90
TX	100	100	100	100
WA	67	35	56	76
18 Sts	93	82	89	96

These 18 States harvested 91% of last year's winter wheat acreage.

Oats Percent Harvested

	Prev Year	Prev Week	Aug 11 2019	5-Yr Avg
IA	91	64	89	92
MN	52	12	32	56
NE	98	75	89	92
ND	37	1	5	35
OH	90	67	87	85
PA	53	32	60	59
SD	86	18	44	80
TX	100	100	100	100
WI	48	24	40	51
9 Sts	65	32	48	64

These 9 States harvested 65% of last year's oat acreage.

Oat Condition by Percent

	VP	P	F	G	EX
IA	1	4	30	56	9
MN	1	4	28	58	9
NE	2	4	23	62	9
ND	0	2	16	63	19
OH	1	10	50	36	3
PA	0	6	24	61	9
SD	0	3	36	46	15
TX	5	12	32	43	8
WI	2	6	21	51	20
9 Sts	2	6	28	52	12
Prev Wk	2	6	27	54	11
Prev Yr	4	3	22	58	13

Pasture and Range Condition by Percent
Week Ending Aug 11, 2019

	VP	P	F	G	EX			VP	P	F	G	EX
AL	1	11	39	44	5		NH	0	33	38	29	0
AZ	6	21	43	29	1		NJ	0	1	24	75	0
AR	1	5	28	49	17		NM	10	35	37	16	2
CA	5	40	10	45	0		NY	2	9	30	38	21
CO	1	3	15	71	10		NC	1	12	43	39	5
CT	0	0	68	32	0		ND	3	8	19	52	18
DE	3	39	26	19	13		OH	1	14	37	45	3
FL	1	4	20	59	16		OK	1	7	37	49	6
GA	4	14	36	42	4		OR	11	28	38	23	0
ID	2	15	22	46	15		PA	0	5	48	42	5
IL	8	20	38	30	4		RI	0	20	50	30	0
IN	6	17	41	31	5		SC	0	15	49	31	5
IA	5	14	35	43	3		SD	1	3	20	45	31
KS	2	6	27	58	7		TN	1	6	29	54	10
KY	3	13	31	48	5		TX	11	22	37	27	3
LA	1	4	39	50	6		UT	0	3	19	56	22
ME	0	0	8	49	43		VT	0	27	18	46	9
MD	1	9	47	39	4		VA	3	19	41	33	4
MA	0	10	20	70	0		WA	7	26	32	33	2
MI	5	19	35	34	7		WV	0	13	27	54	6
MN	1	6	25	59	9		WI	2	7	28	46	17
MS	1	8	32	48	11		WY	0	11	31	48	10
MO	1	8	25	56	10		48 Sts	4	12	30	45	9
MT	1	5	27	57	10							
NE	1	3	15	66	15		Prev Wk	3	10	29	48	10
NV	10	10	40	40	0		Prev Yr	12	18	30	34	6

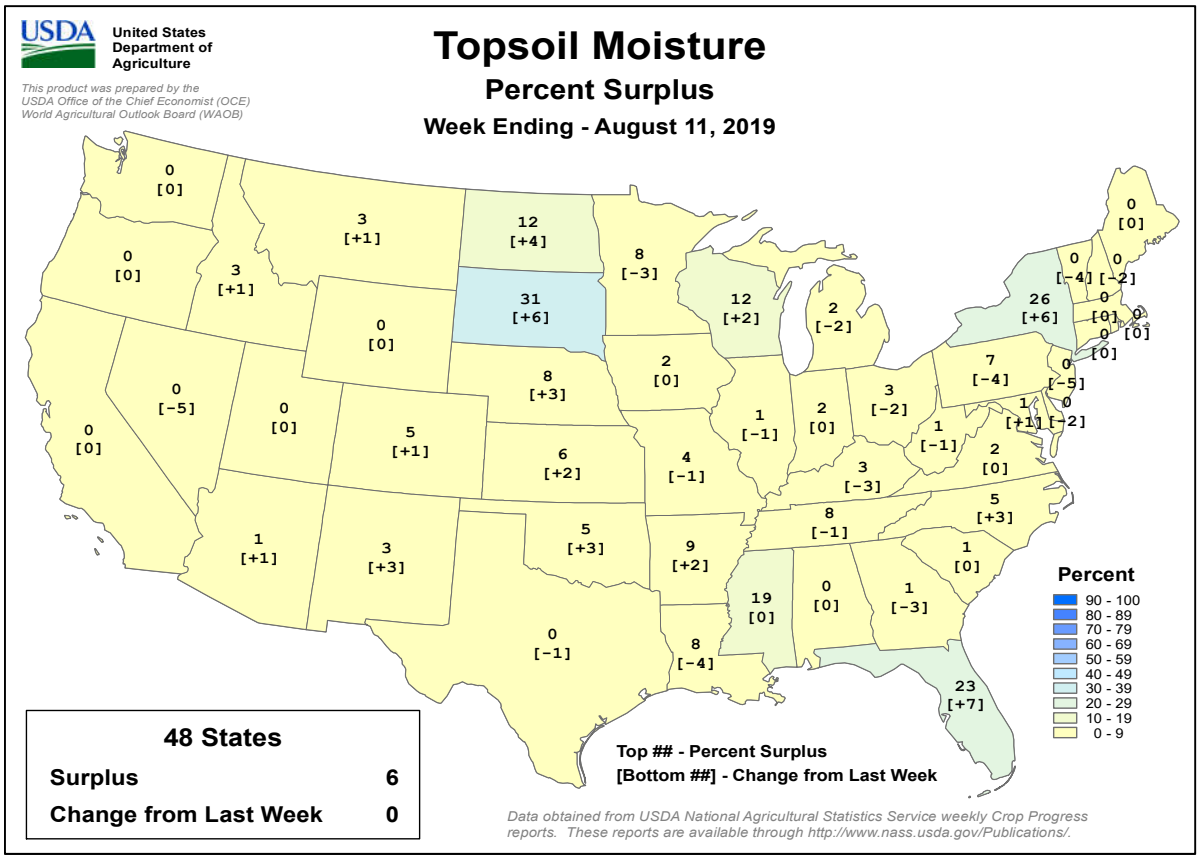
VP - Very Poor; P - Poor;
F - Fair;
G - Good; EX - Excellent

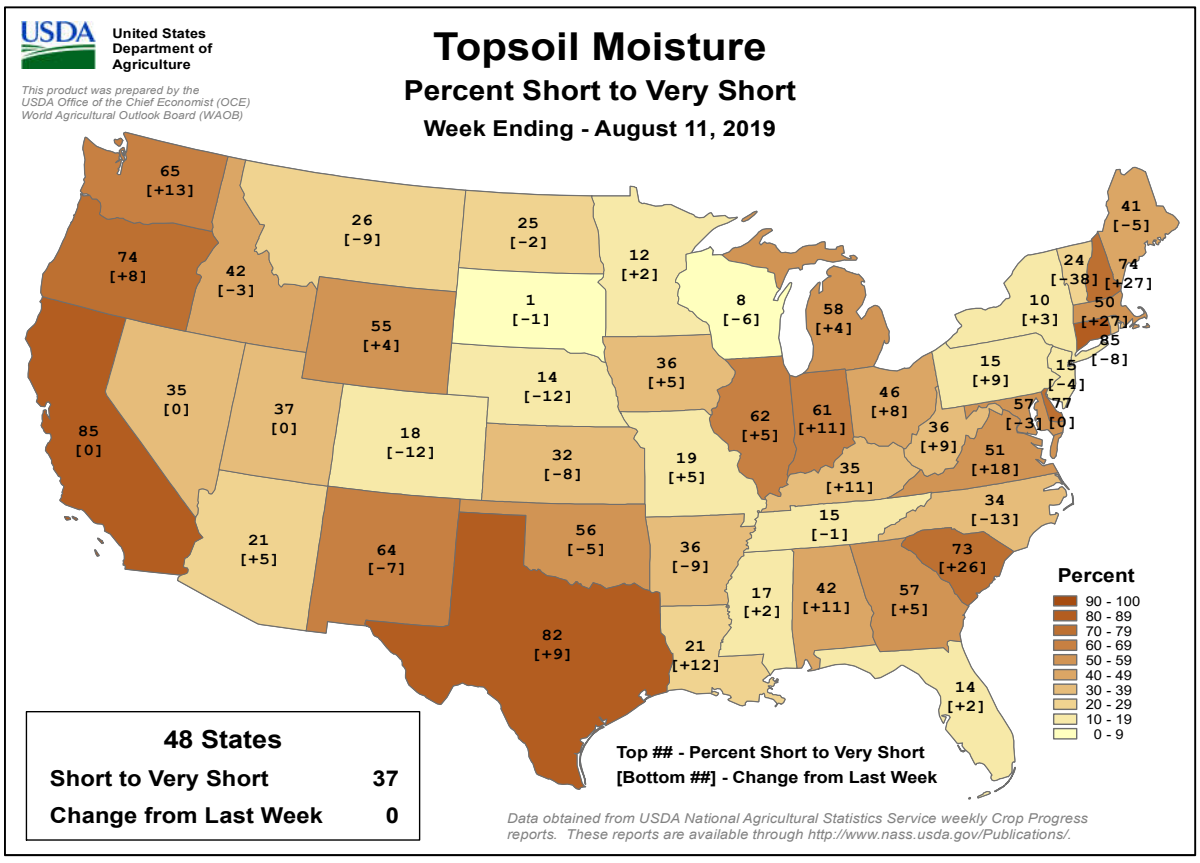
NA - Not Available
*** Revised**

Crop Progress and Condition

Week Ending August 11, 2019

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

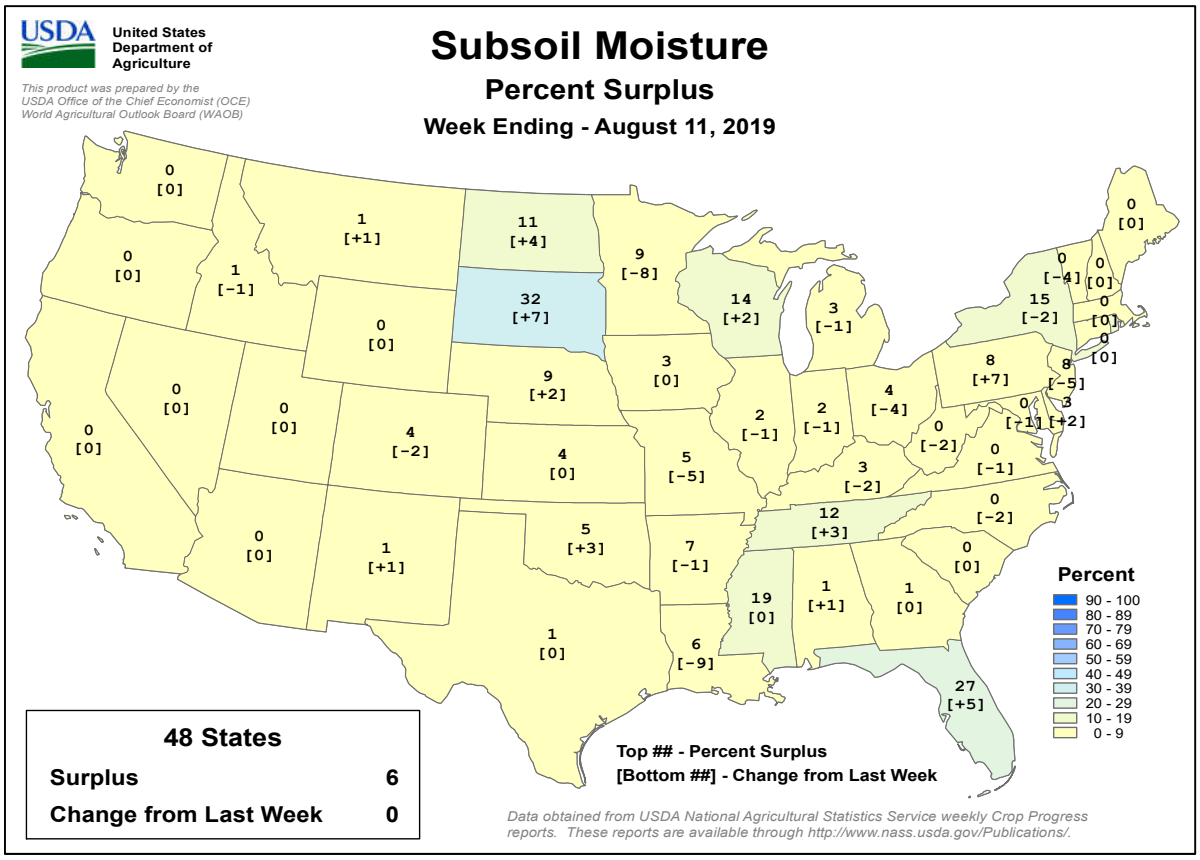


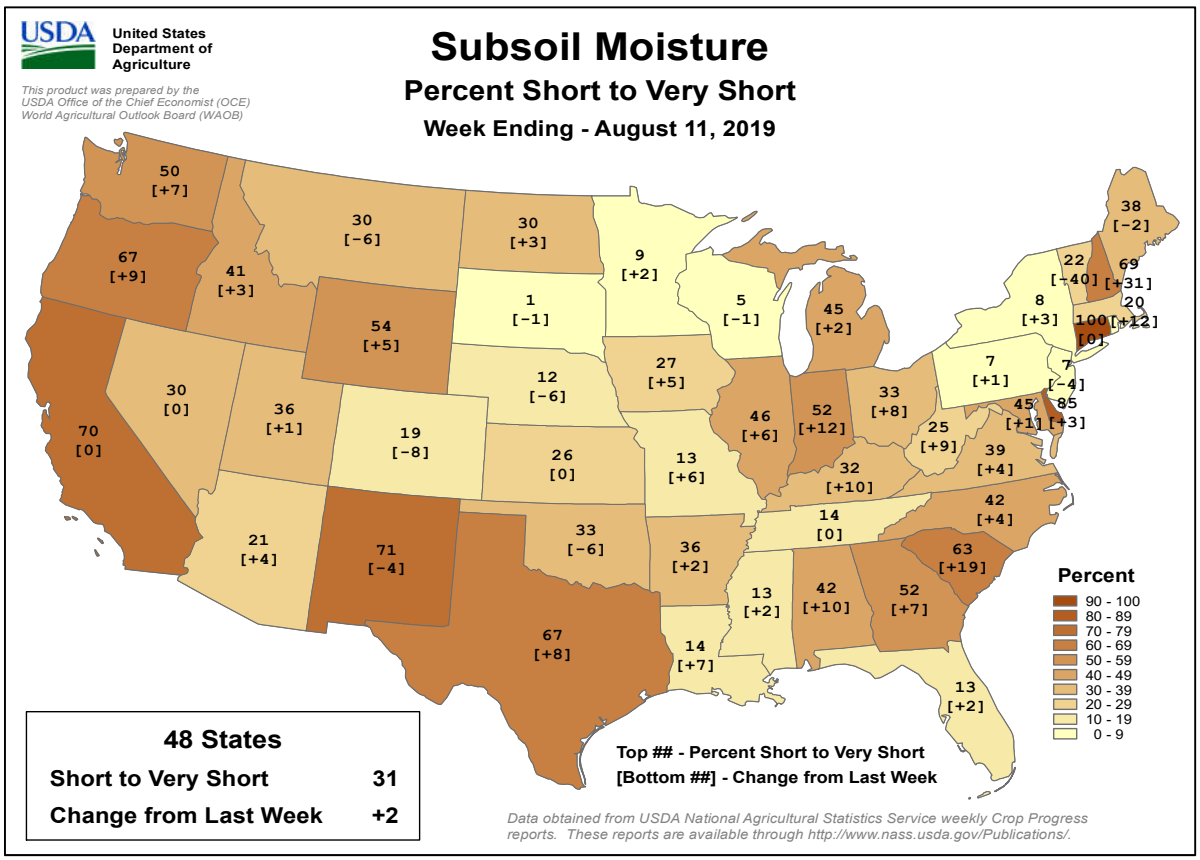


Crop Progress and Condition

Week Ending August 11, 2019

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





August 8 ENSO Diagnostic Discussion

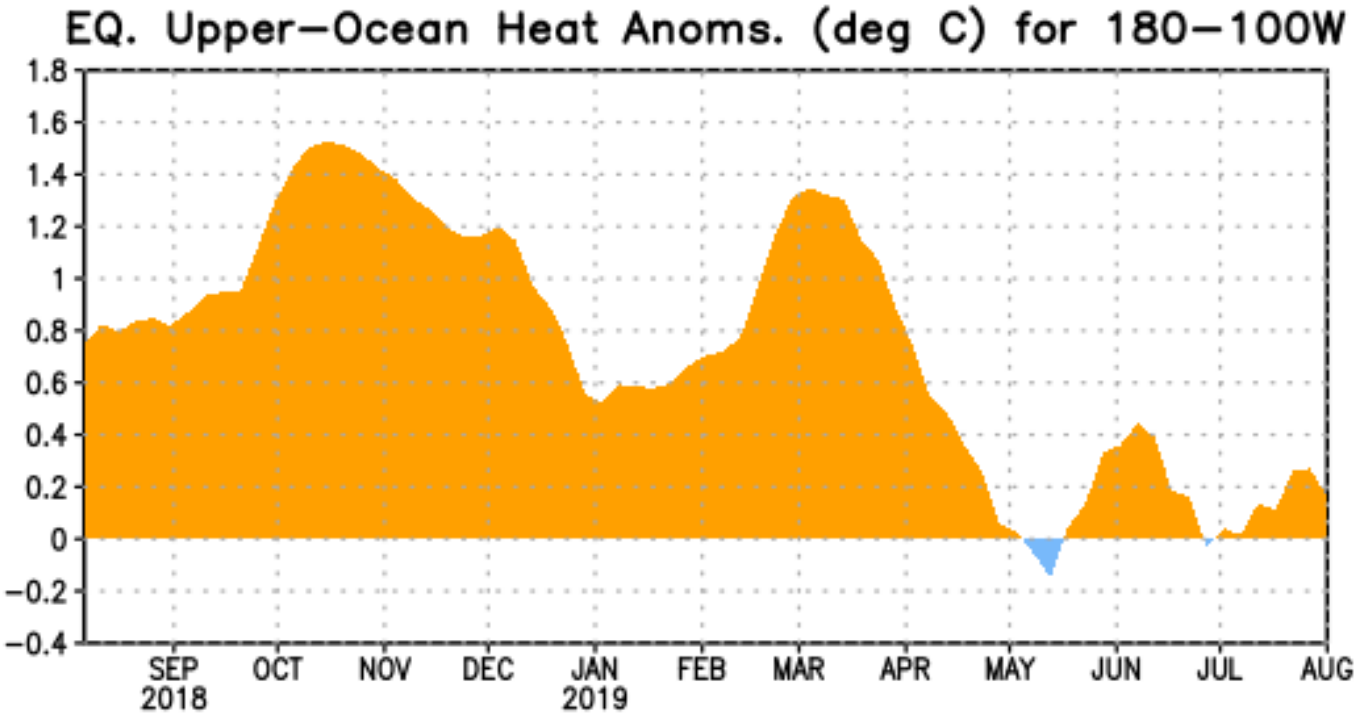


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180º-100ºW). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

ENSO Alert System Status: Final El Niño Advisory

Synopsis: El Niño has transitioned to ENSO-neutral, which is most likely to continue through Northern Hemisphere winter 2019-20 (50-55% chance).

During July, ENSO-neutral conditions were reflected by the combination of below-average sea surface temperatures (SSTs) in the eastern equatorial Pacific Ocean and above-average SSTs in the central Pacific. The latest weekly ENSO indices were +1.0°C, +0.5°C, -0.2°C and -0.5°C in the Niño-4, Niño-3.4, Niño-3 and Niño-1+2 regions, respectively. Upper-ocean subsurface temperatures (averaged across 180°-100°W) were near average throughout the month (Fig. 1), as anomalously cool waters prevailed in the eastern Pacific and anomalously warm waters continued in the central Pacific. Suppressed tropical convection continued over Indonesia, while near-average convection was observed near the Date Line. Low-level wind anomalies were near average over the tropical Pacific Ocean, and upper-level winds were easterly over the east-central Pacific. The traditional and equatorial Southern Oscillation Indices remained slightly negative. Overall, oceanic and atmospheric conditions were consistent with a transition to ENSO-neutral.

The latest IRI/CPC plume of forecasts of the Niño-3.4 index favors ENSO-neutral (Niño-3.4 index between -0.5°C and +0.5°C), with index values greater than zero from late Northern Hemisphere summer into fall, warming closer to the El Niño threshold (+0.5°C) by winter. Atypically, dynamical models forecast weaker positive SST anomalies than statistical models throughout most of the forecast period. As a result, while forecasters favor ENSO-neutral conditions, the odds of El Niño (~30%) are roughly twice that of La Niña for next winter. In summary, El Niño has transitioned to ENSO-neutral, which is most likely to continue through Northern Hemisphere winter 2019-20 (50-55% chance; click CPC/IRI consensus forecast for the chance of each outcome for each 3-month period).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Forecasts are also updated monthly in the Forecast Forum of CPC's Climate Diagnostics Bulletin. Additional perspectives and analysis are also available in an ENSO blog. The next ENSO Diagnostics Discussion is scheduled for **12 September 2019**. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

International Weather and Crop Summary

August 4-10, 2019

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

HIGHLIGHTS

EUROPE: Additional rain in central and northern Europe improved soil moisture supplies for winter crop planting.

WESTERN FSU: Cool, wet weather maintained favorable prospects for filling summer crops.

EASTERN FSU: Varying degrees of dryness and drought reduced spring grain yield prospects in northern growing areas, while seasonably sunny, hot weather accelerated cotton development in the south.

MIDDLE EAST: Sunny skies benefited summer crop maturation in Turkey.

SOUTH ASIA: Heavy monsoon showers in India improved moisture conditions for kharif crop establishment and development.

EASTERN ASIA: Typhoon Lekima caused localized flooding in eastern China.

SOUTHEAST ASIA: Increased rainfall in Thailand improved short-term moisture supplies for rice, but seasonal deficits persisted.

AUSTRALIA: Showers benefited winter crops in the west and southeast, while drought continued to grip the northeast.

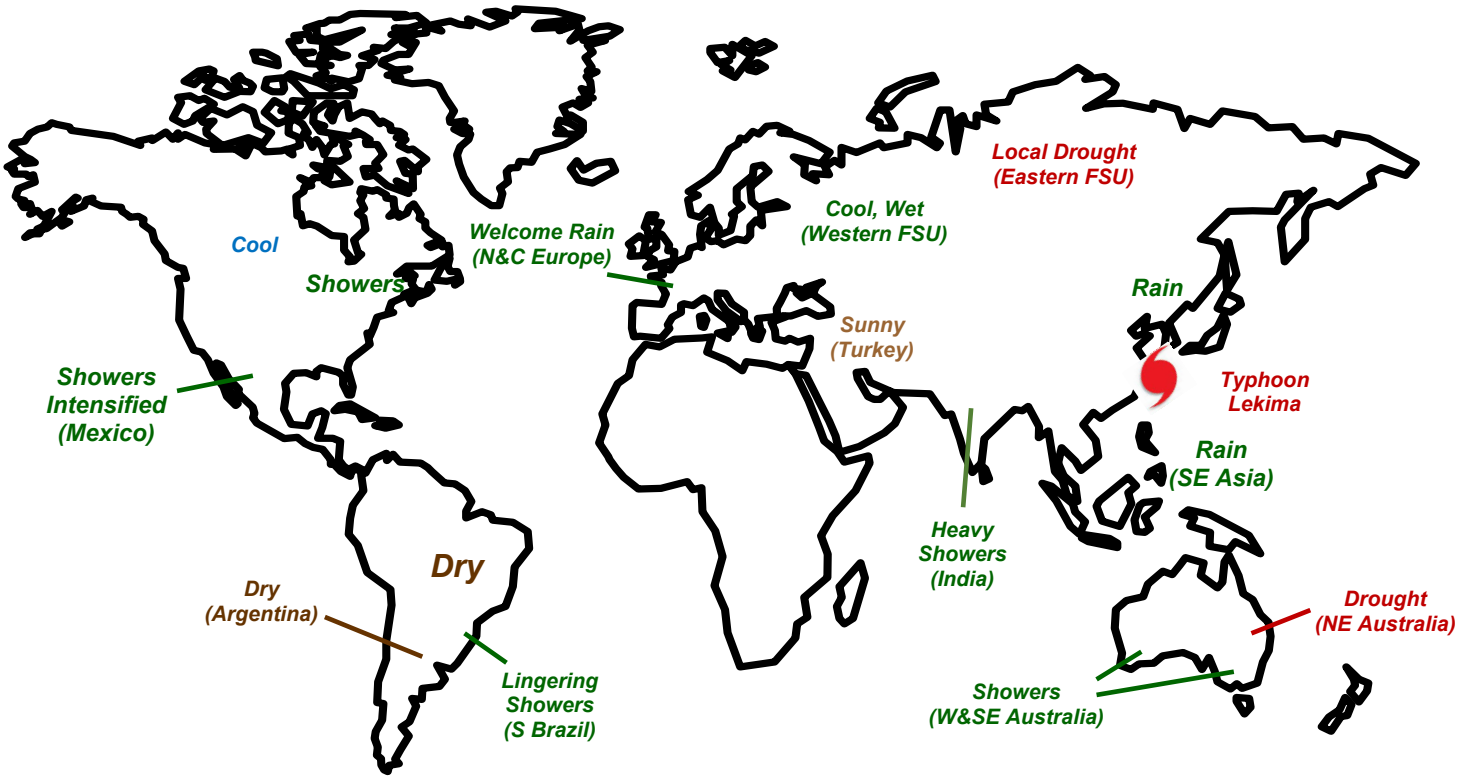
ARGENTINA: Mostly dry weather allowed seasonal fieldwork to progress toward completion.

BRAZIL: Dry weather supported corn and cotton harvesting, while showers lingered in some southern farming areas.

MEXICO: Widespread showers were recorded in northwestern watersheds and across the southern plateau corn belt.

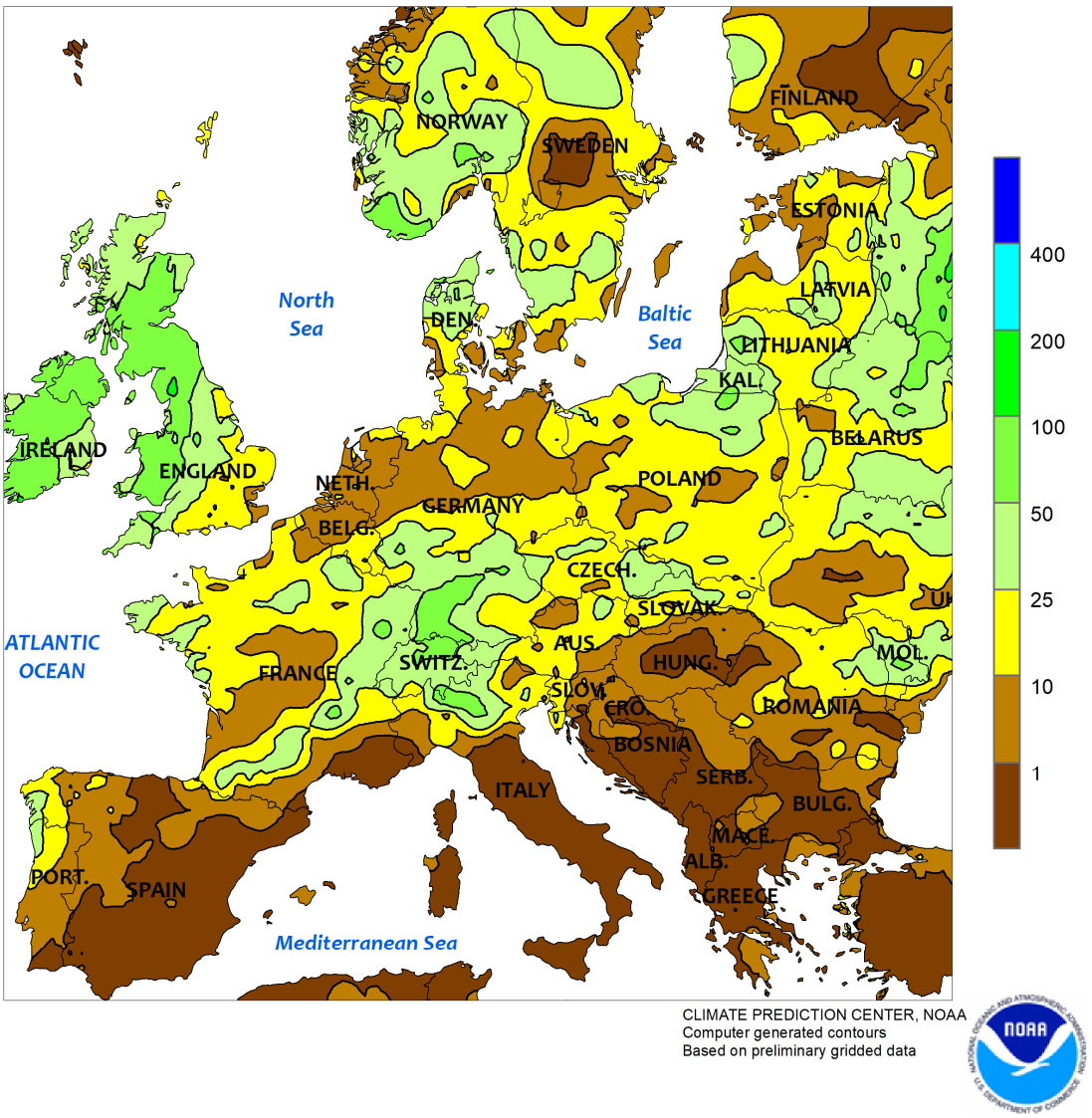
CANADIAN PRAIRIES: Cool, showery weather slowed development of filling to maturing spring crops.

SOUTHEASTERN CANADA: Showers and seasonal warmth stimulated corn and soybean growth.



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

EUROPE
Total Precipitation (mm)
August 4 - 10, 2019



EUROPE

Additional widespread showers over central and northern Europe maintained or improved moisture supplies for early winter crop sowing. A series of fast-moving disturbances generated moderate to heavy showers throughout the week, with totals ranging from 5 to 75 mm across much of central and northern Europe. The moisture eased drought from France into southwestern Poland and improved soil moisture supplies for winter rapeseed planting and establishment; rapeseed is typically the first winter crop sown in Europe. Conversely, drought persisted on the Iberian Peninsula, maintaining high irrigation demands for later-developing summer crops. However, corn and sunflowers in northern Spain (Castilla y Léon) have benefited from timely rain over the past 30 days (100-200 percent of normal). Farther east, sunny skies promoted summer crop maturation from central Italy into the Balkans, where yield prospects for corn, soybeans, and sunflowers remained favorable due to well-timed rain during June and July. Warmer-than-normal weather (up to 4°C above normal) returned to the continent, with later-developing corn and soybeans stressed by daytime highs in the middle and upper 30s (degrees C) in central and southern France.

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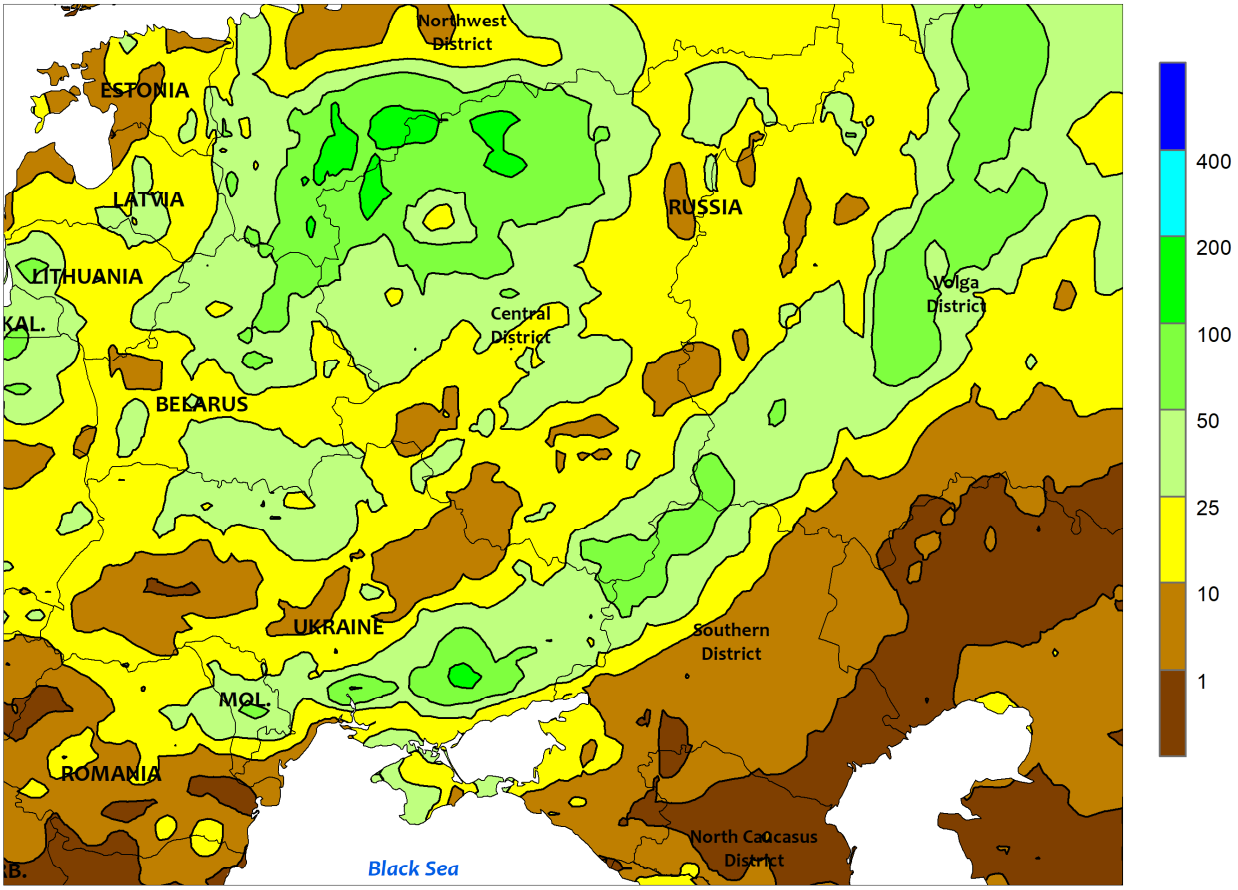
WESTERN FSU
Total Precipitation (mm)
August 4 - 10, 2019



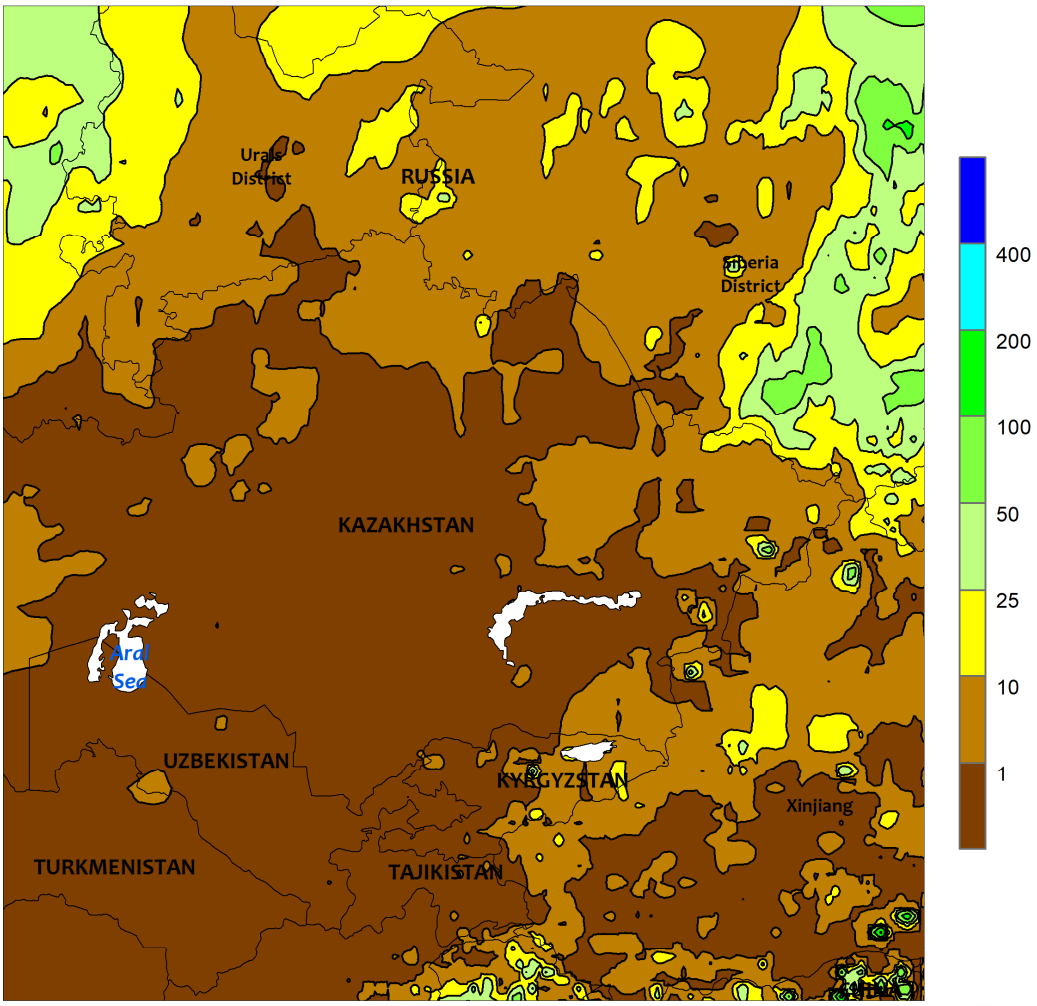
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

WESTERN FSU

Cool, mostly wet weather favored reproductive to filling summer crops across the region. Moderate to heavy rain (10-125 mm) was reported from the Black Sea region northeastward into Ukraine and much of western Russia. The moisture was favorable for filling (south) to reproductive (north) corn, sunflowers, and soybeans but slowed seasonal fieldwork. Furthermore, temperatures for the week averaged 2 to 4°C below normal over many of these same locales, eliminating the risk of any potential adverse late-season heat. Consequently, yield prospects for summer crops remained good to excellent across the region, though drier weather would be welcome for maturation, drydown, and harvesting over the upcoming weeks.

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

EASTERN FSU
Total Precipitation (mm)
August 4 - 10, 2019



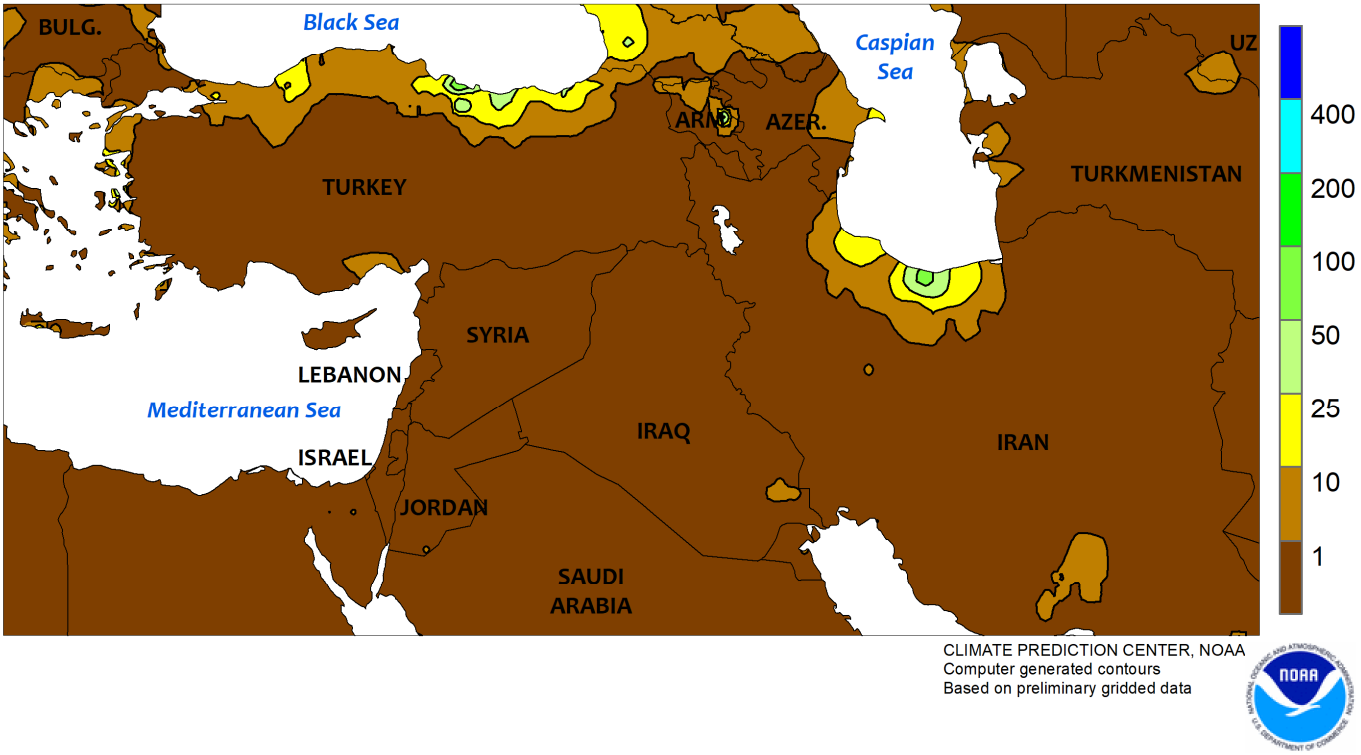
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN FSU

Varying degrees of dryness and drought lingered in northern growing areas, with below-normal temperatures in the west contrasting with late-season heat in eastern and southern portions of the region. Dry weather renewed drought impacts on reproductive to filling spring grains in northwestern Kazakhstan and neighboring portions of central Russia, though late-season heat was not a concern (temperatures averaged up to 2°C below normal). While rain returned to these western growing areas after the week ended, yield losses for wheat and barley from this year's drought are largely irreversible at this point. Farther east, the favorable start to the growing season in northeastern Kazakhstan and Russia's Siberia District has given way to another round of untimely heat (32-35°C) and intensifying short-term drought (30-day rainfall less than 50 percent of normal, locally less than 25 percent). Spring grains in these areas are in the late-reproductive to filling stages of development, and yield losses have occurred due to the timing of this season's heat and dryness. Farther south, sunny skies and above-normal temperatures (up to 5°C above normal) accelerated the development of open-boll to maturing cotton in Uzbekistan and environs.

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

MIDDLE EAST
Total Precipitation (mm)
August 4 - 10, 2019



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

MIDDLE EAST

Seasonably dry, warm weather in Turkey promoted summer crop maturation and drydown. After early July supplemental rainfall, sunny skies in Turkey were beneficial for filling to maturing corn, sunflowers, and cotton. Summer crop prospects remained good to excellent, as indicated by satellite-derived vegetation health data.

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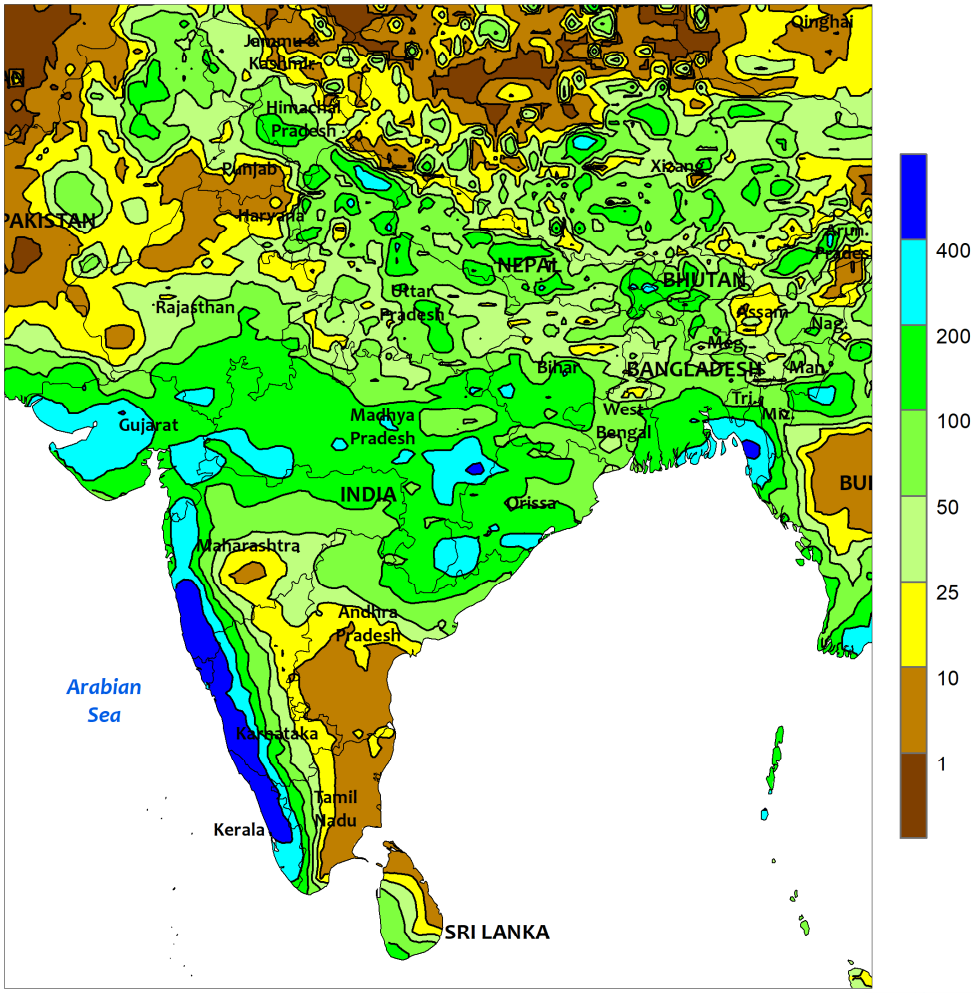
SOUTH ASIA
Total Precipitation (mm)
August 4 - 10, 2019



SOUTH ASIA

Monsoon showers flared in the first half of the week across central India, producing over 100 mm in a swath stretching from eastern rice areas to western cotton and oilseed areas. In fact, multiple locales reported over 300 mm of rain. The moisture reversed deficits incurred from poor July rainfall and all but eradicated seasonal deficits. With the exception of localized field ponding, the rain aided crop establishment and improved overall growing conditions. Elsewhere, torrential downpours (over 400 mm) along the seasonally wet southwestern seaboard caused flooding but maintained abundant moisture supplies for the water-intensive sugarcane grown in the area. In other parts of the region, heavy showers (50-300 mm or more) in Bangladesh caused some flooding in the south where amounts were the highest but maintained abundant moisture for rice elsewhere.

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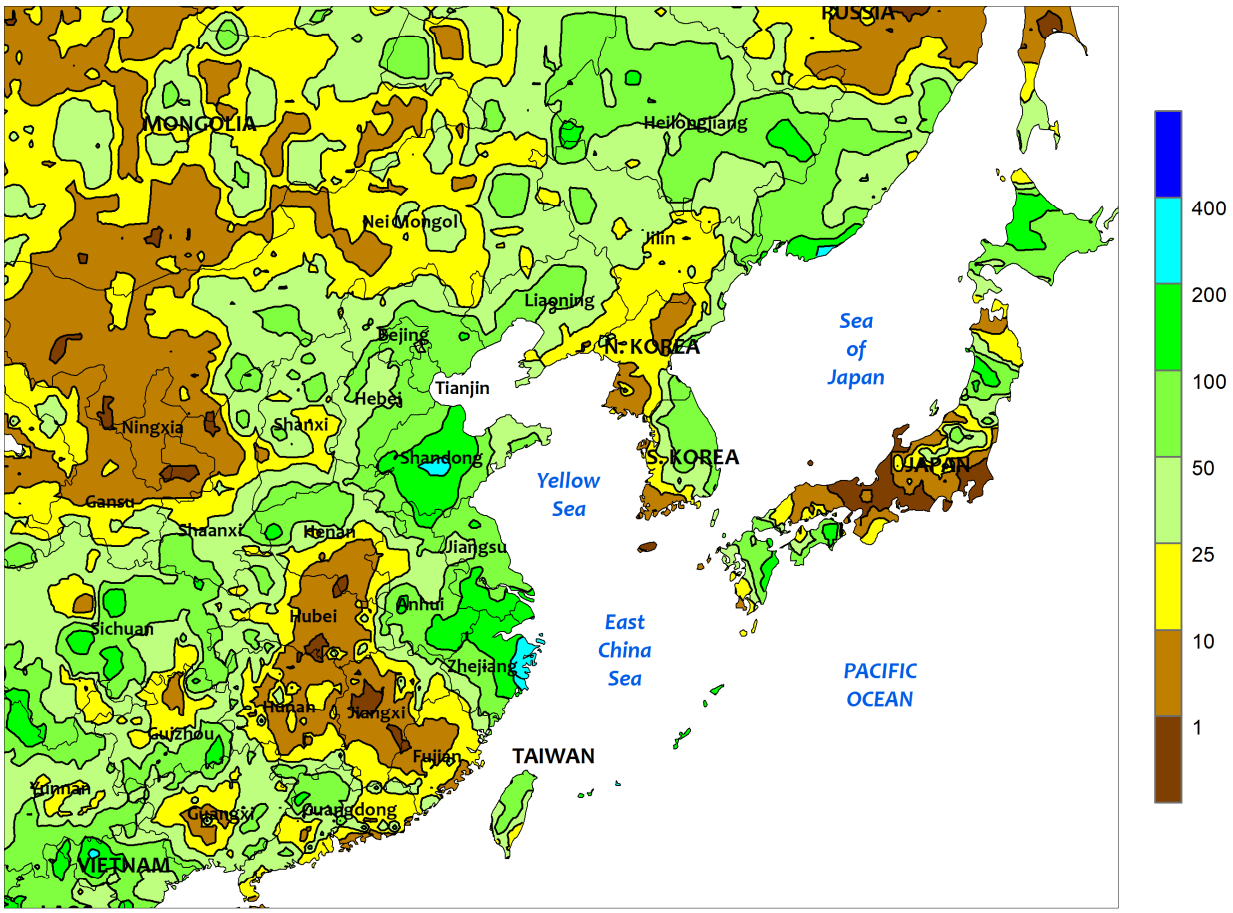
EASTERN ASIA
Total Precipitation (mm)
August 4 - 10, 2019



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

EASTERN ASIA

Typhoon Lekima moved into southeastern China late in the week, delivering heavy showers to provinces along the eastern seaboard. Rainfall totals surpassed 100 mm along the path of the storm, with some locations reporting over 400 mm. Flooding occurred in the areas with the highest totals, while the majority of crop areas benefited from the boost in moisture supplies. In fact, the rainfall nearly eradicated seasonal moisture deficits in eastern provinces from the Yangtze to the Yellow River. Meanwhile in the northeast, showers (25-100 mm, locally more) maintained adequate to abundant soil moisture for corn, soybeans, and rice; seasonal (since June 1) rainfall totals in Heilongjiang are near record. Elsewhere, showers (25-100 mm) in western portions of the Yangtze Valley and southwest maintained good moisture conditions for rice and other summer crops, but heat and dryness persisted in much of the south, causing stress to crops. In other parts of the region, a weakening Typhoon Francisco made landfall in southern Japan mid-week, producing locally heavy showers (50-100 mm or more) in the southern islands and along eastern sections of the Korean Peninsula.

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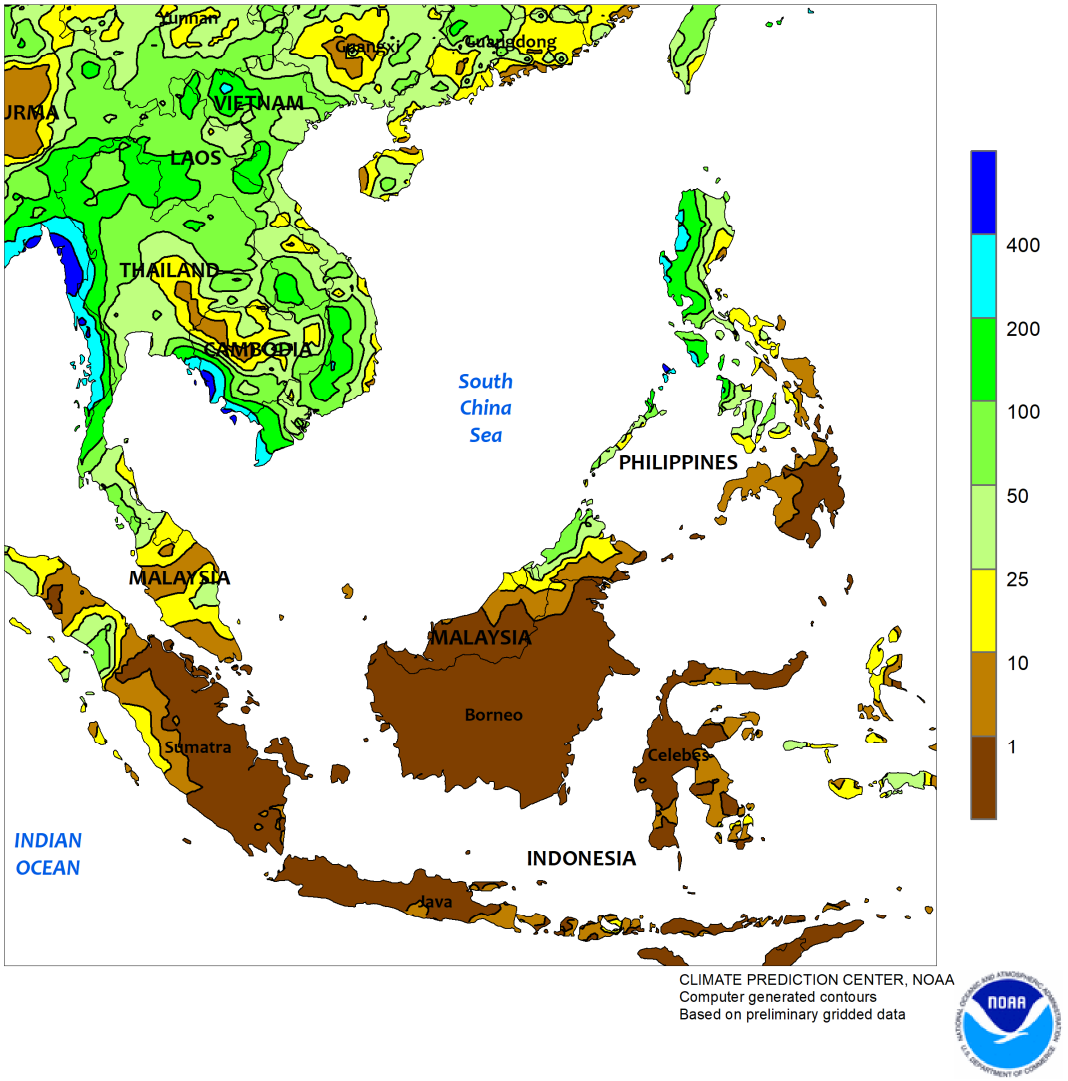
SOUTHEAST ASIA
Total Precipitation (mm)
August 4 - 10, 2019



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

SOUTHEAST ASIA

Heavy monsoon showers (25-100 mm, locally over 150 mm) throughout Indochina maintained or improved moisture supplies for rice. In particular, showers extended into drought areas of Thailand, improving short-term moisture conditions, although seasonal drought persisted. In the Philippines, Typhoon Lekima passed northeast of Luzon wrapping heavy showers (over 200 mm) into northwestern districts and causing localized flooding in key rice-producing areas. Meanwhile, unseasonable dryness occurred in southern sections of the region, extending from the southern Philippines into large portions of Malaysia and Indonesia. In Malaysia and Indonesia, the dry conditions supported oil palm harvesting but reduced soil moisture for oil palm harvested in the winter months.

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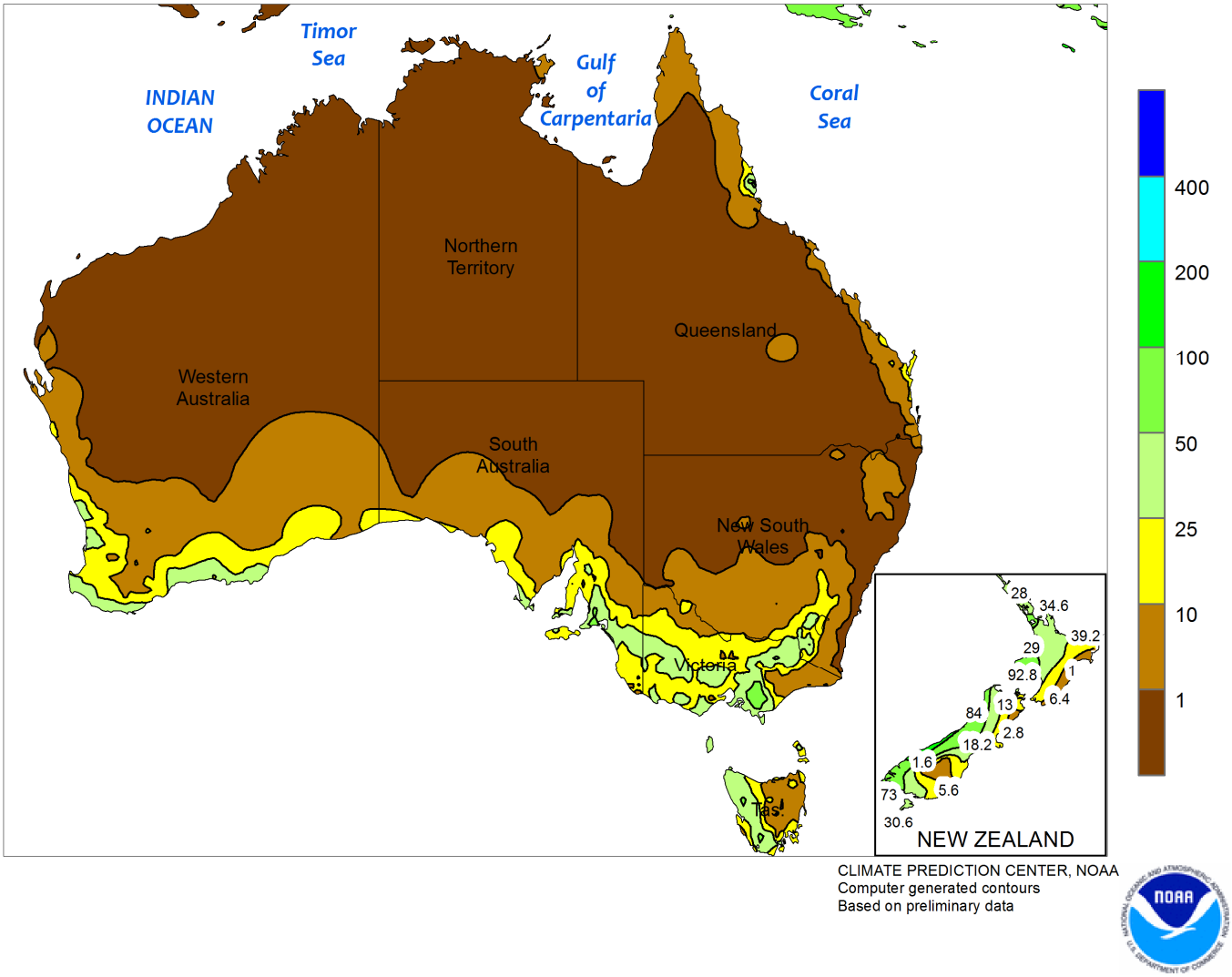
AUSTRALIA
Total Precipitation (mm)
AUG 4 - 10, 2019



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

AUSTRALIA

Unfavorably dry weather continued to grip southern Queensland and northern New South Wales. Rain is desperately needed to salvage drought-impacted wheat, which is rapidly approaching reproduction, and to help refill reservoirs and recharge soil moisture in advance of summer crop sowing. In contrast, widespread showers (5-25 mm, locally near 50 mm) in southern New South Wales helped stabilize winter crop conditions in the wake of recent dryness. Similarly, widespread showers (10-40 mm, locally more) in Victoria and South Australia helped maintain generally good yield prospects for vegetative winter grains and oilseeds. Elsewhere in the wheat belt, scattered showers (5-15 mm, locally more) in Western Australia benefited wheat, barley, and canola, but more rain would be welcome to help maintain current crop prospects. Temperatures averaged near normal in the west and southeast and about 1°C above normal in the northeast.

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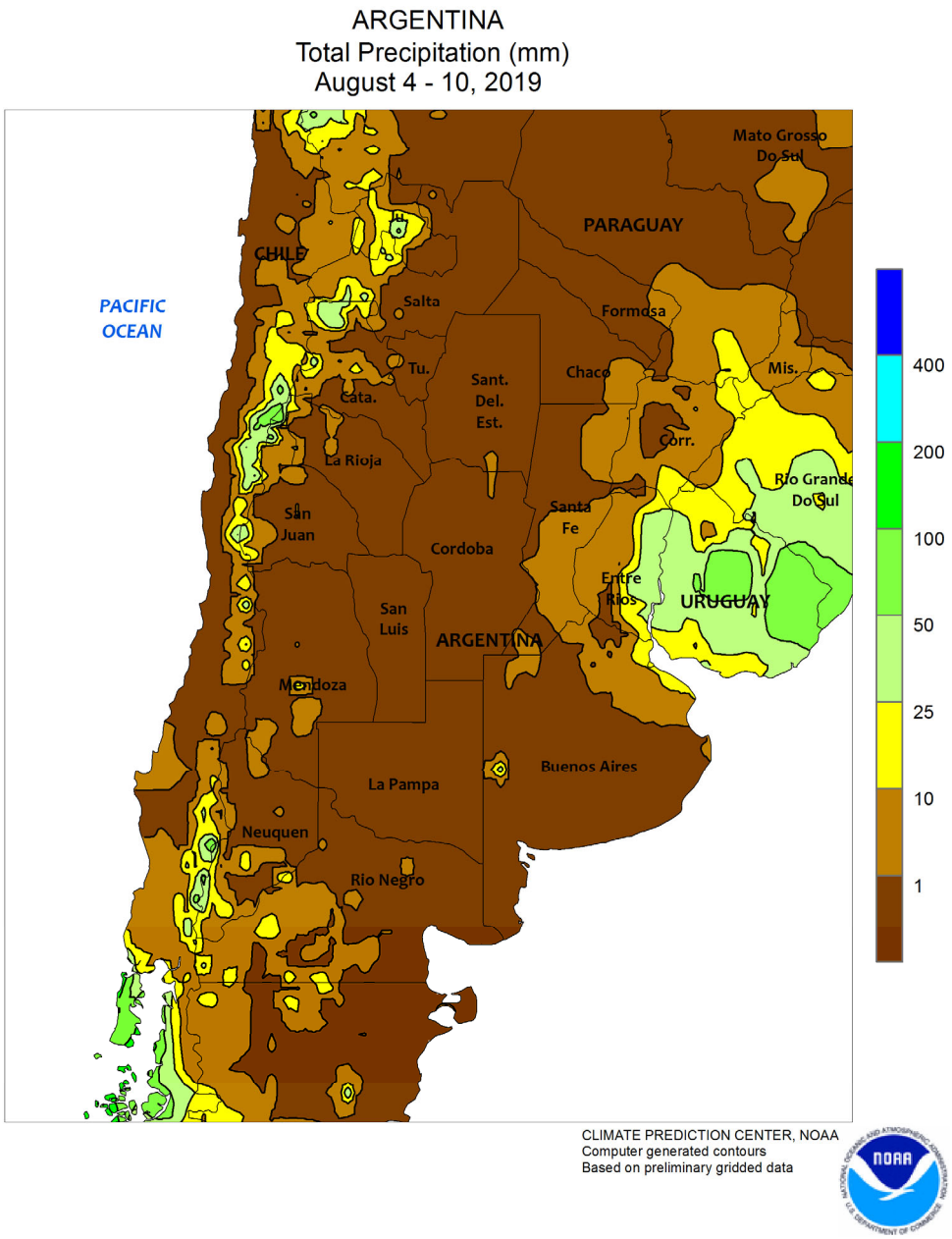

ARGENTINA

Continuing dryness supported the final stages of autumn fieldwork throughout much of the country. No rain fell from La Pampa and southern Buenos Aires north and westward through Salta and environs; light to moderate showers (greater than 10 mm) were generally confined to Entre Rios and Corrientes, with heavier rainfall (25-50 mm or more) reaching eastward into Uruguay. Weekly temperatures averaged near to slightly above normal in southern farming areas but up to 2°C below normal in the far north, with nighttime lows dipping below 0°C in Santiago del Estero and Chaco on several occasions. Daytime highs reached the lower 30s (degrees C) between the periods of cold weather. According to the government of Argentina, cotton was 96 percent harvested as of August 8, with the only fieldwork remaining in Cordoba and Santiago del Estero; corn was 93 percent harvested, lagging last year's pace by 3 points. Meanwhile, wheat planting was nearing 100 percent completion.

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BRAZIL
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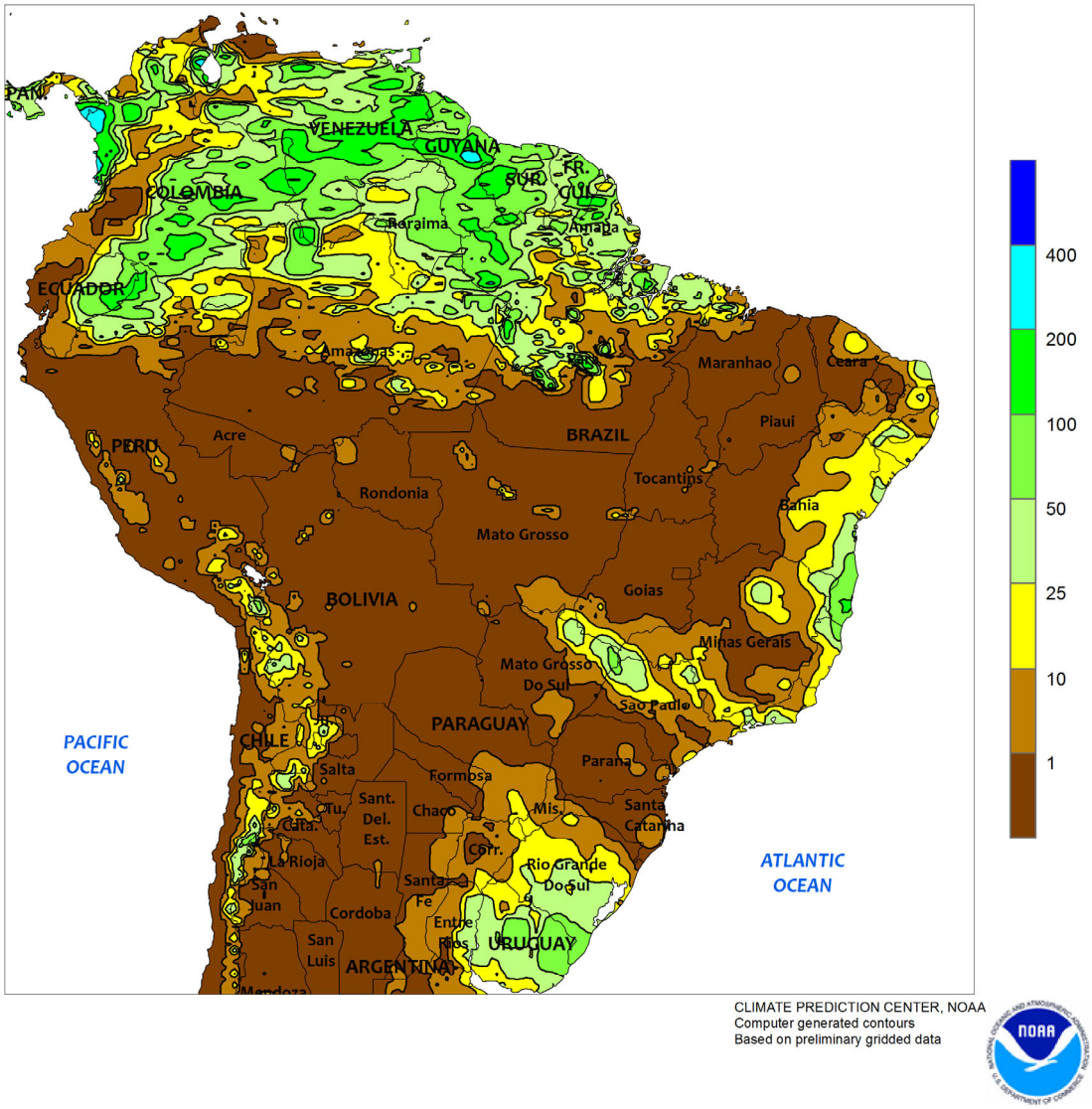
August 4 - 10, 2019



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

BRAZIL

Seasonably dry weather throughout Brazil's central and northeastern farming areas supported the late stages of corn and cotton harvesting, with summer heat (daytime highs reaching the middle and upper 30s degrees C) aiding the drydown process. In Mato Grosso, corn harvesting was nearing 100 percent completion as of August 9; cotton was 47 percent harvested, 5 points behind average. Farther south, pockets of rainfall (10-50 mm) were recorded over Rio Grande do Sul and in the vicinity of northern Sao Paulo. The rain in Rio Grande do Sul maintained locally excessive levels of moisture for mostly vegetative wheat while the more northerly rain temporarily disrupted harvesting of sugarcane and coffee. Meanwhile, drier conditions prevailed in Parana where, according to government reports, second-crop corn was 81 percent harvested as of August 5; meanwhile, over 70 percent of the wheat crop had reached flowering, with 4 percent mature. Elsewhere, seasonal showers (10-50 mm or more) boosted moisture for sugarcane, coffee, and cocoa along the northeastern coast.

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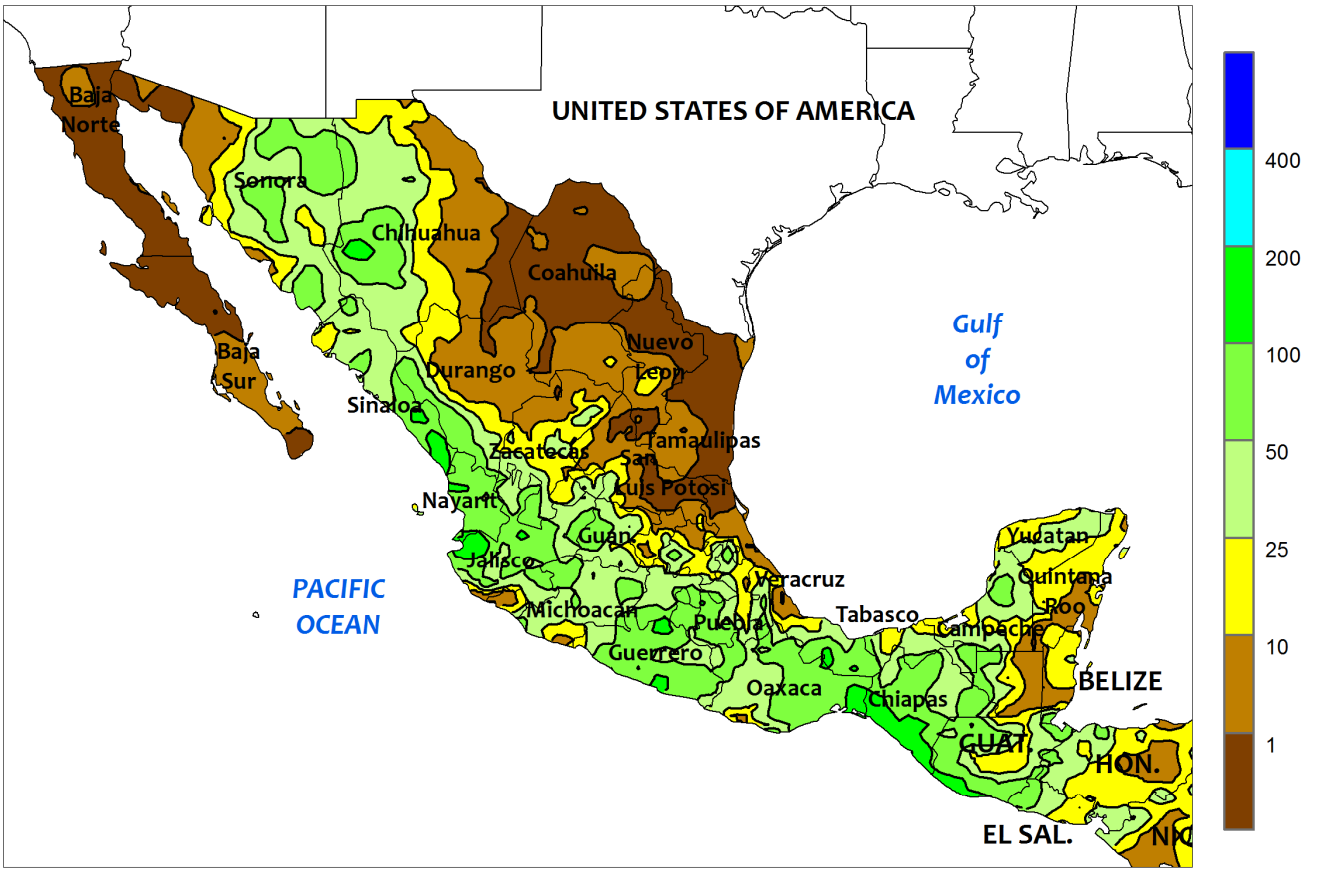
MEXICO
Total Precipitation (mm)
August 4 - 10, 2019



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

MEXICO

Showers intensified in northwestern watersheds and across the southern plateau, but pockets of dryness persisted along the Gulf Coast. Rainfall totaling 25 to more than 50 mm stretched from Jalisco to Puebla, with similar amounts recorded along the southern Pacific Coast (Michoacan to Chiapas), increasing moisture for corn and other rain-fed summer crops. Light to moderate rain (10-50 mm) also fell in the Yucatan Peninsula but drier weather dominated a large section of northeastern Mexico, from Veracruz northward through Tamaulipas and Coahuila. The dryness in Veracruz continued the recent trend of below-normal rainfall, which has reduced moisture for sugarcane and other summer crops. Farther north, above-normal temperatures (daytime highs reaching the lower 40s degrees C) accompanied the dry weather, maintaining high water requirements of livestock and irrigated crops. Meanwhile, scattered, locally heavy showers (exceeding 50 mm in spots) increased irrigation reserves in northwestern watersheds (Sinaloa northward through Sonora and western Chihuahua).

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CANADIAN PRAIRIES
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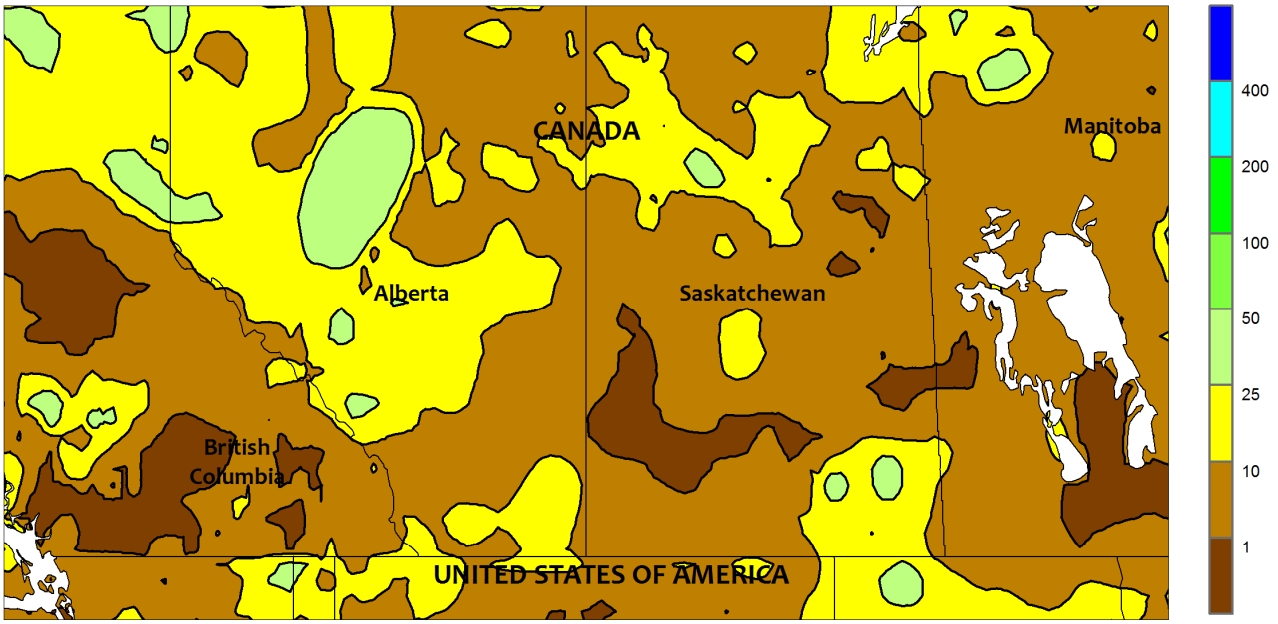
August 4 - 10, 2019



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

CANADIAN PRAIRIES

Showers and milder weather dominated the dominated the Prairies for much of the week, providing a late-season boost in moisture for late-planted spring crops but slowing developmental rates. Pockets of rainfall totaling more than 10 mm were scattered throughout the regions, including previously dry locations in southern Alberta. Near- to below-normal temperatures accompanied the moisture, with nighttime lows reaching 0°C in Alberta's Peace River Valley. According to the government of Saskatchewan in a report issued on August 5, crop development continued to be one to two weeks behind the normal pace in some locations, raising concern for potential damage during the first autumn freeze. In Alberta, spring grains and oilseeds reportedly reached the late flowering stage by the end of July, making crops vulnerable to the current frost.

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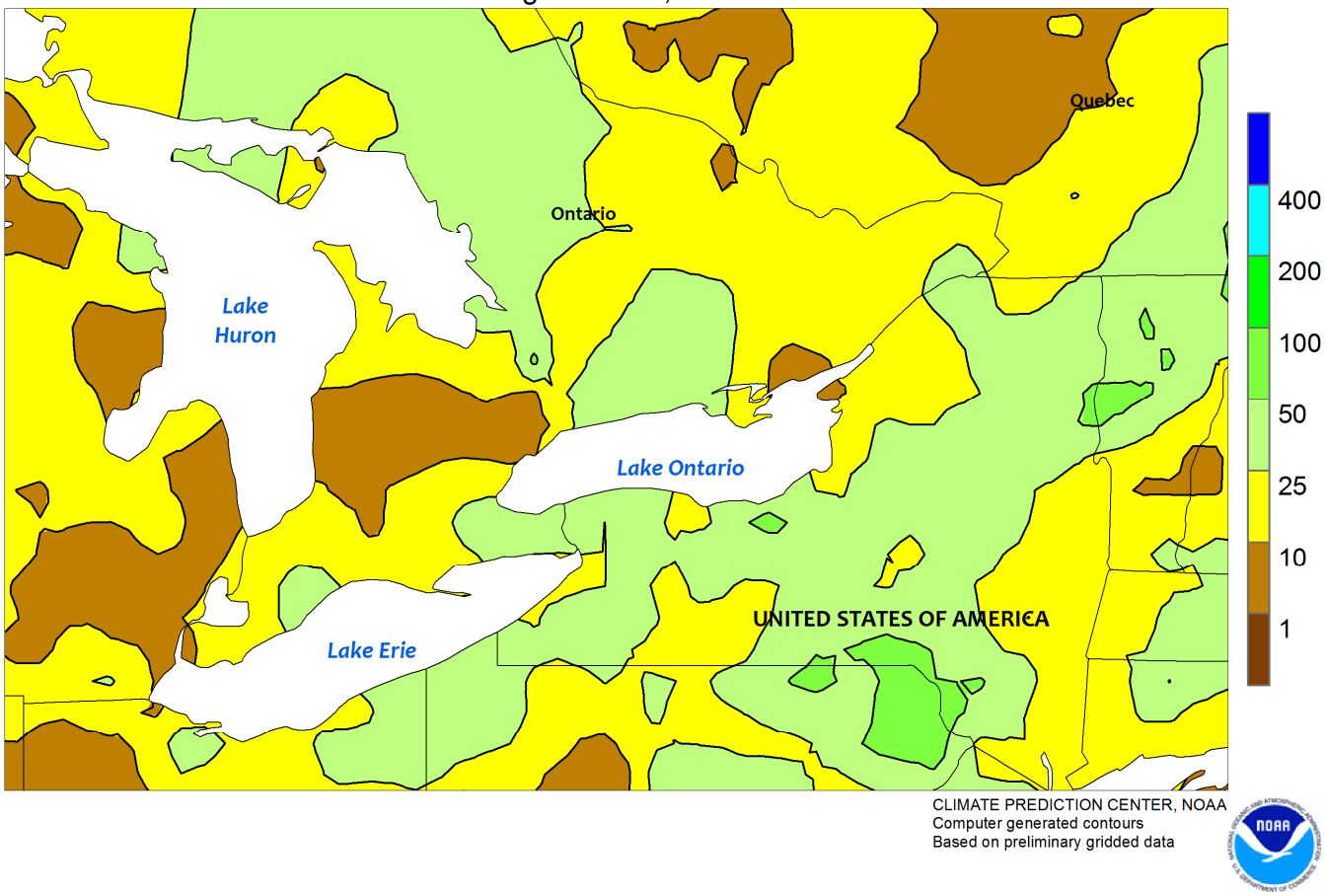
SOUTHEASTERN CANADA
Total Precipitation (mm)
August 4 - 10, 2019



SOUTHEASTERN CANADA

Scattered showers and occasional warmth spurred growth of summer crops and pastures. Rainfall was highly variable, ranging from 5 to more than 25 mm in the agricultural districts of Ontario and Quebec; the heaviest rain was concentrated north of Lakes Erie and Ontario. Weekly average temperatures were near to slightly above normal, reaching the upper 20s and lower 30s degrees C° on several days. Nighttime lows dropped below 10°C in Quebec and Ontario's eastern farming areas but temperatures stayed well above freezing. Warmer, sunnier conditions would be welcome for development of late-planted corn and soybeans, as well as maturation and harvesting of winter wheat.

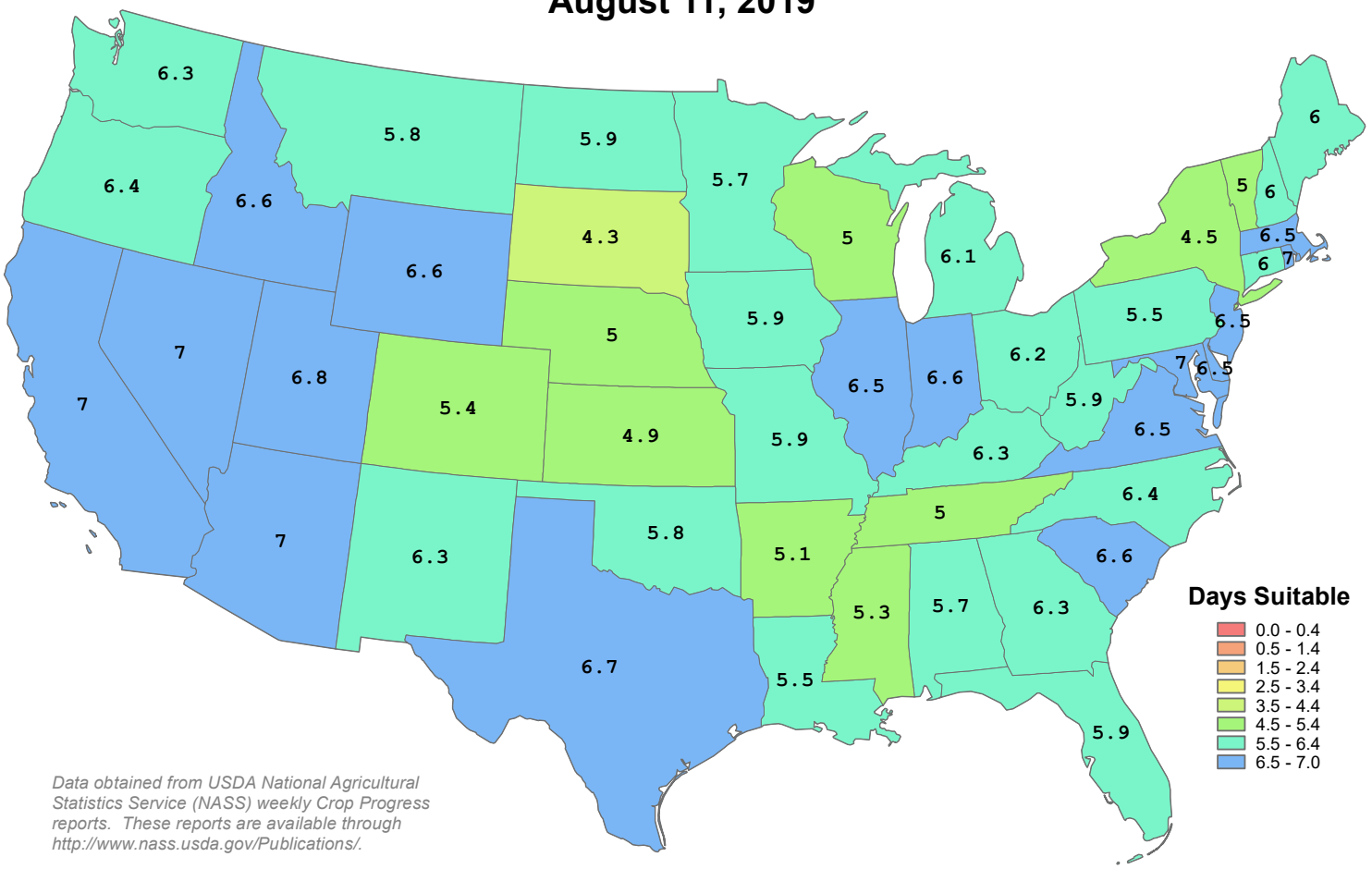
For additional information contact: mbrusberg@oce.usda.gov

United States Department of Agriculture

Days Suitable for Fieldwork

Week Ending
August 11, 2019

This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)



Data obtained from USDA National Agricultural Statistics Service (NASS) weekly Crop Progress reports. These reports are available through http://www.nass.usda.gov/Publications/.

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