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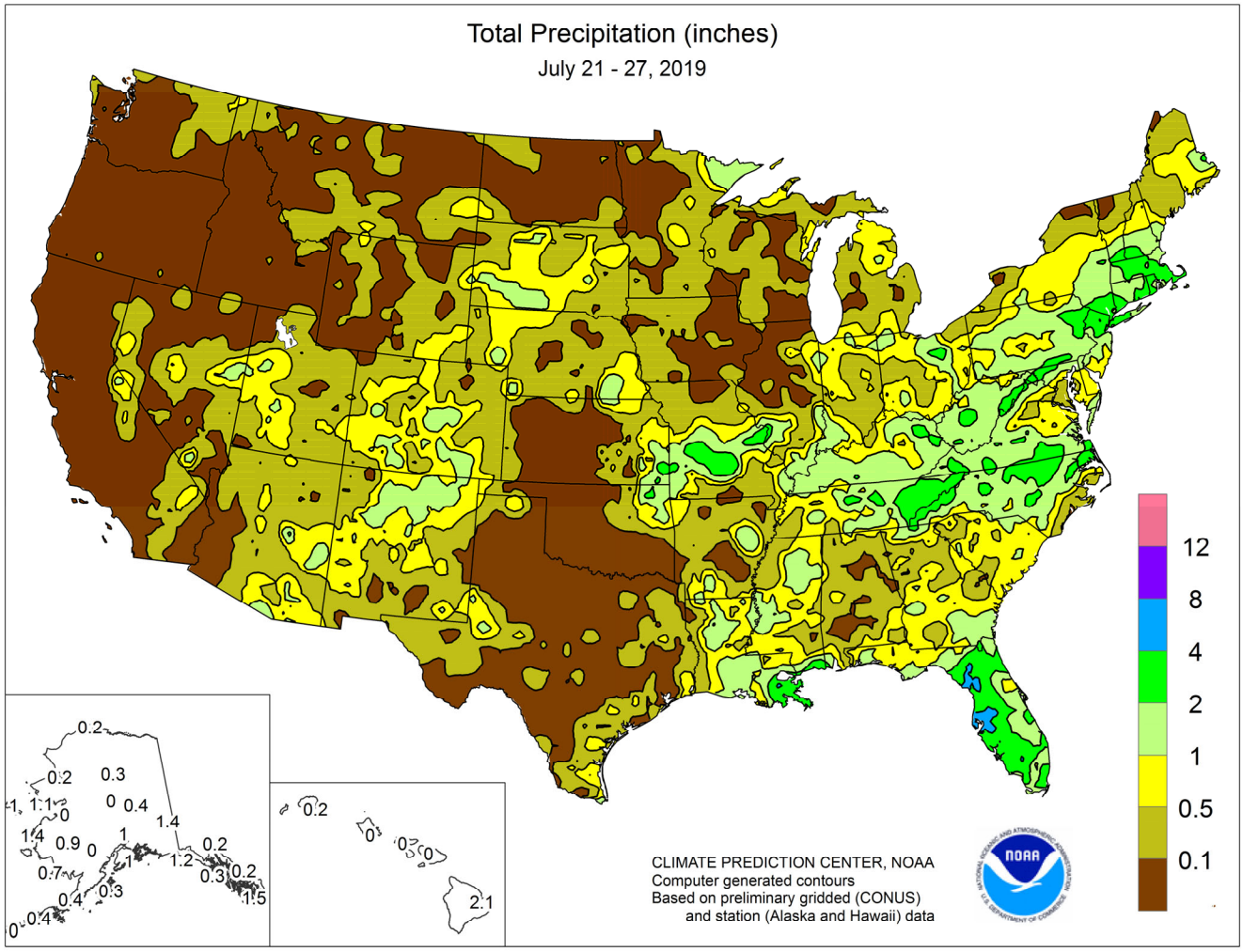
WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS
July 21 – 27, 2019

Highlights provided by USDA/WAOB

Scattered to widespread showers and thunderstorms preceded and accompanied a surge of cooler air across the **eastern one-third of the country**. Some of the heaviest rain, locally 2 to 4 inches or more, fell in parts of **Florida**. Several other areas, including the **southern Mid-Atlantic region** and **southern New England**, also received significant rain. Although extreme heat lingered early in the week along the **Atlantic Seaboard**, near- or below-normal weekly temperatures prevailed in most areas from the **Plains eastward**. In fact, weekly temperatures

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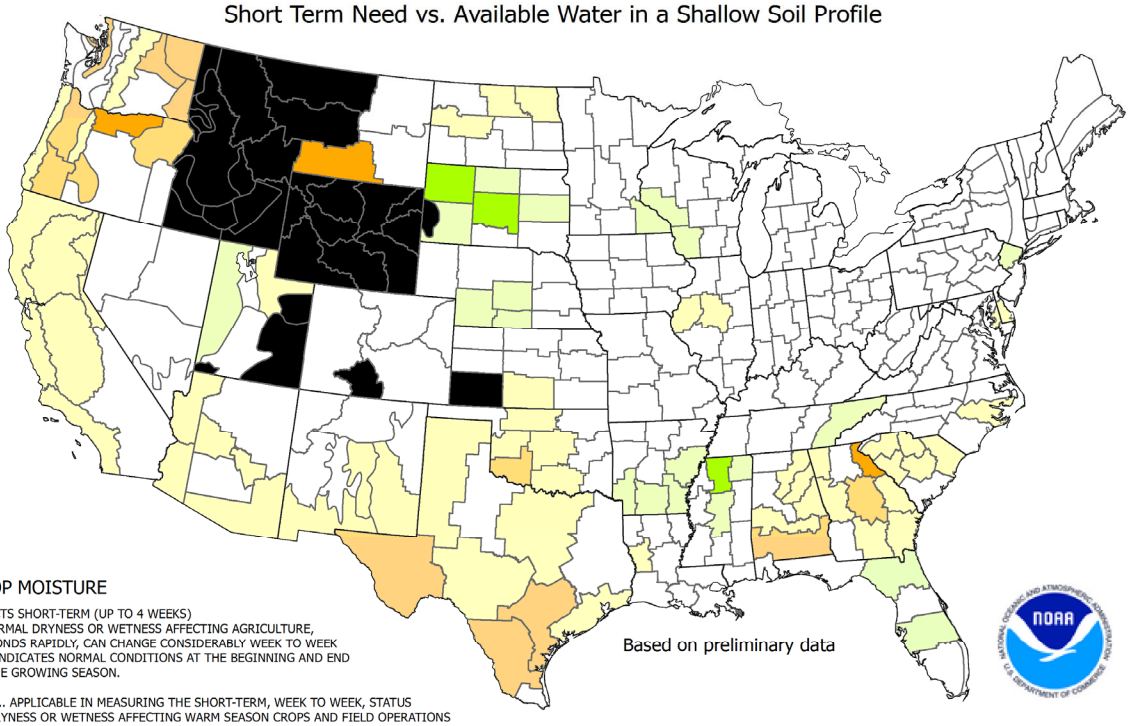


Based on preliminary data

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.

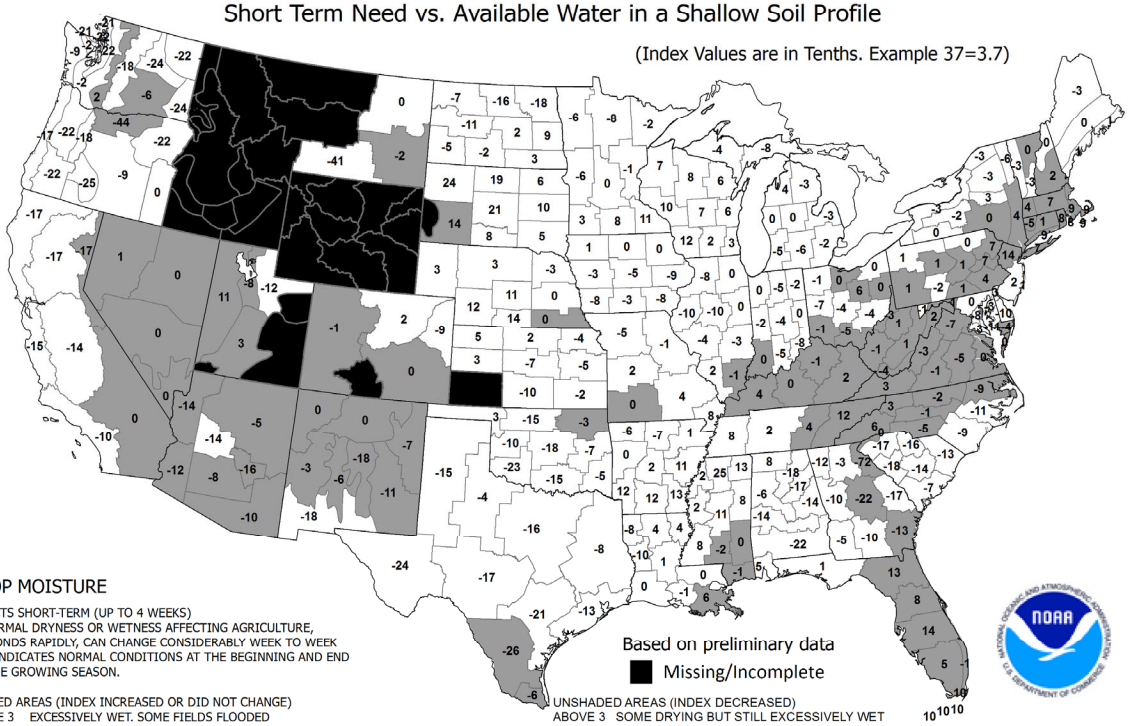
USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

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.

- -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 Jul 27, 2019
Short Term Need vs. Available Water in a Shallow Soil Profile

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



Based on preliminary data

Missing/Incomplete

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.

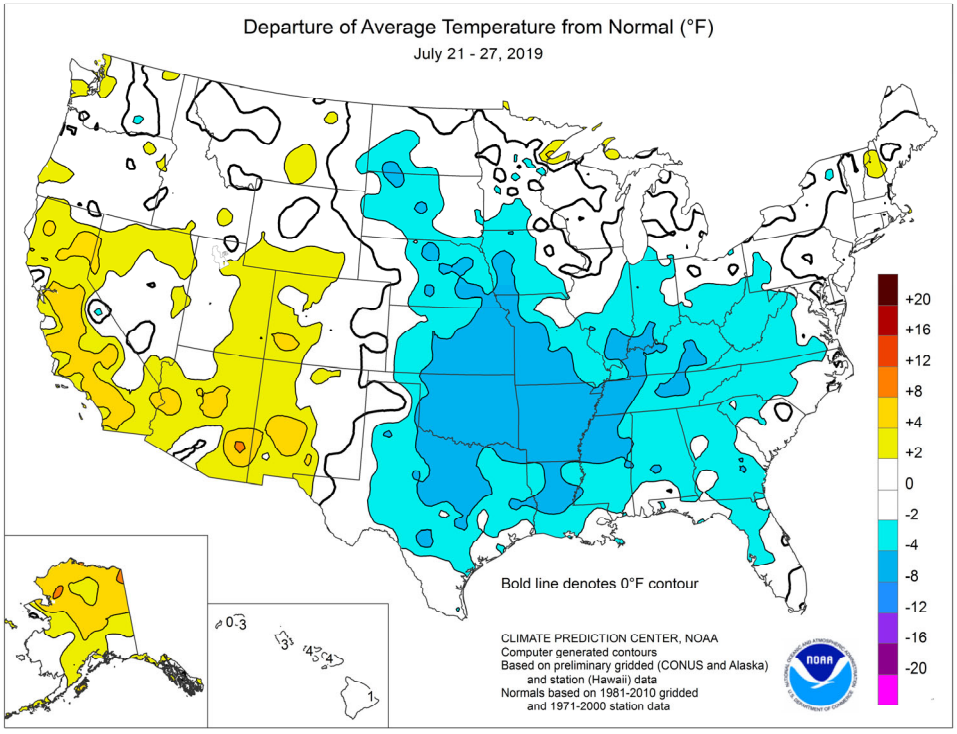
SHADED AREAS (INDEX INCREASED OR DID NOT CHANGE)

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

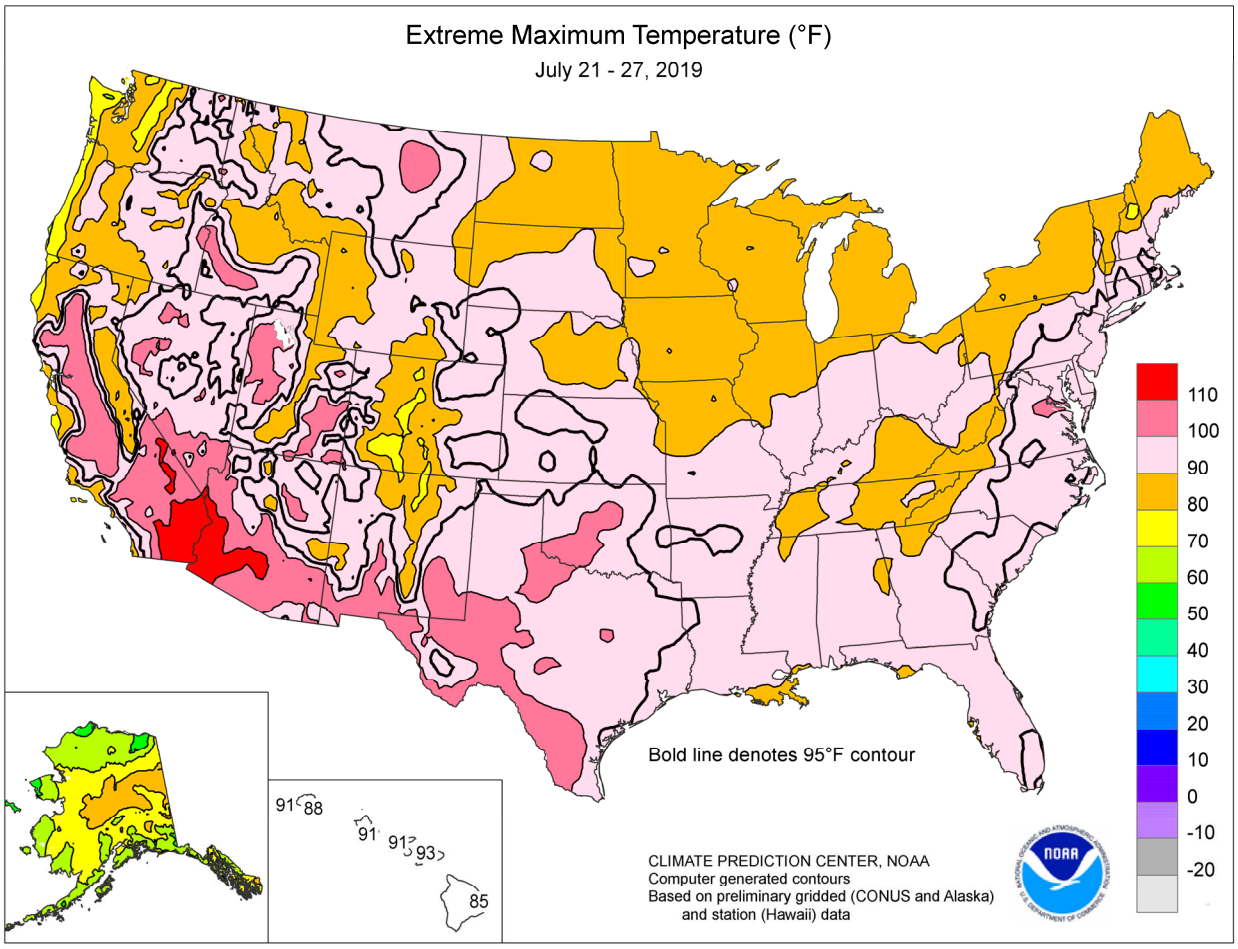
(Continued from front cover)
averaged more than 5°F below normal in a broad area centered over the **southeastern Plains** and **northern Mississippi Delta**. Late in the week, showers developed across parts of the **northern Plains** and **upper Midwest**. Meanwhile, a suddenly active monsoon circulation contributed to an increase in shower activity from **California to the Four Corners States**, curbing the wildfire threat and benefiting rangeland. Despite the showers, **Western** weekly temperatures averaged at least 5°F above normal in many locations from **California into the Southwest**. In contrast, little or no rain fell from the **Pacific Northwest to the northern High Plains**, favoring winter wheat harvesting and the maturation of spring-sown small grains. Mostly dry weather also prevailed on the **southern Plains**, depleting topsoil moisture and increasing stress on rangeland, pastures, and summer crops.

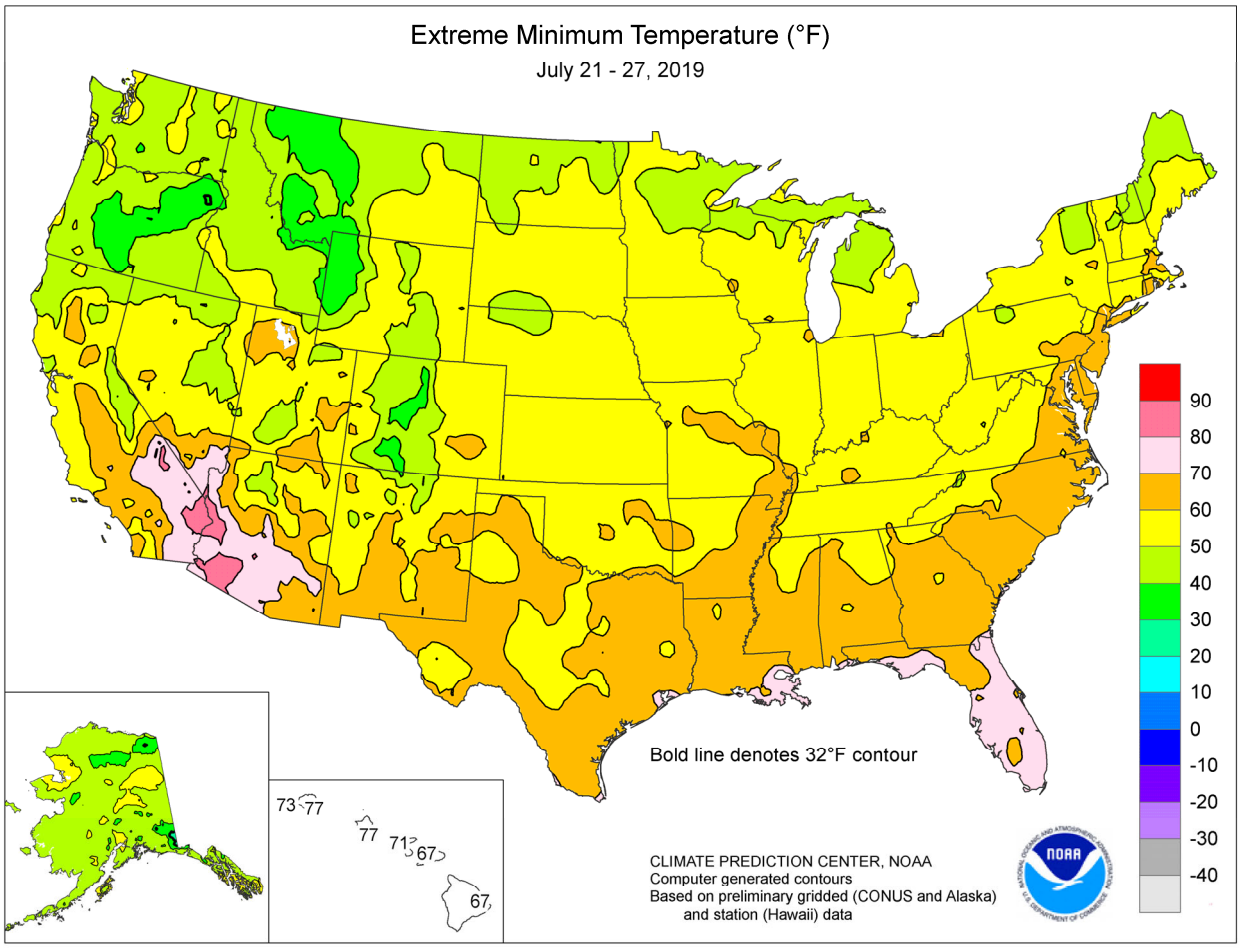


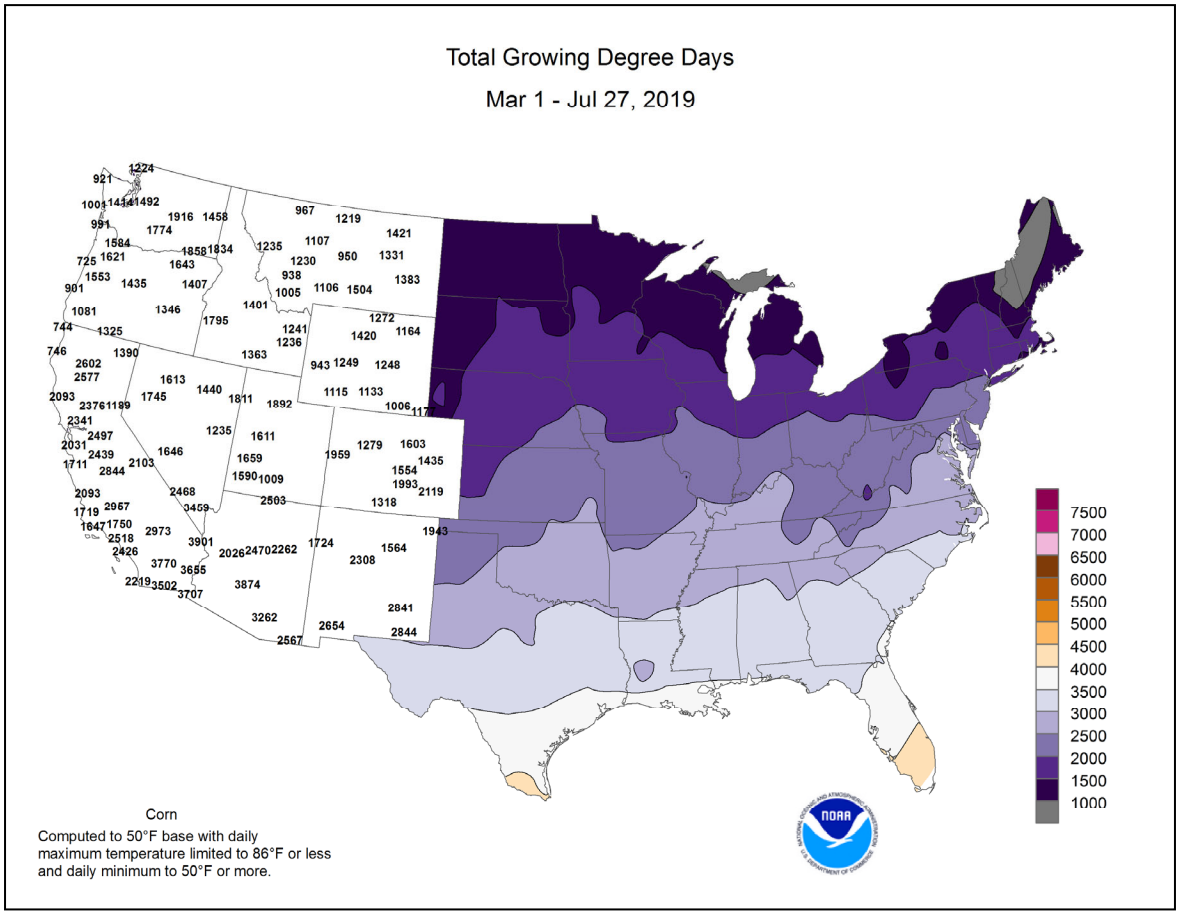
On July 21, the final day of an **Eastern** heat wave, temperatures soared to 100°F—setting or tying daily records—in **Atlantic City, NJ**, and at **New York's LaGuardia Airport**. Extreme heat also lingered across the **south-central U.S.**, where record-setting highs for July 21 soared to 108°F in **Roswell, NM**, and 106°F in **Del Rio, TX**. In contrast, **Great Falls, MT**, reported a daily-record low of 38°F on July 21. It was also the lowest July reading in **Great Falls** since July 16, 1999, when the temperature fell to 36°F. During the mid- to late-week period, 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.

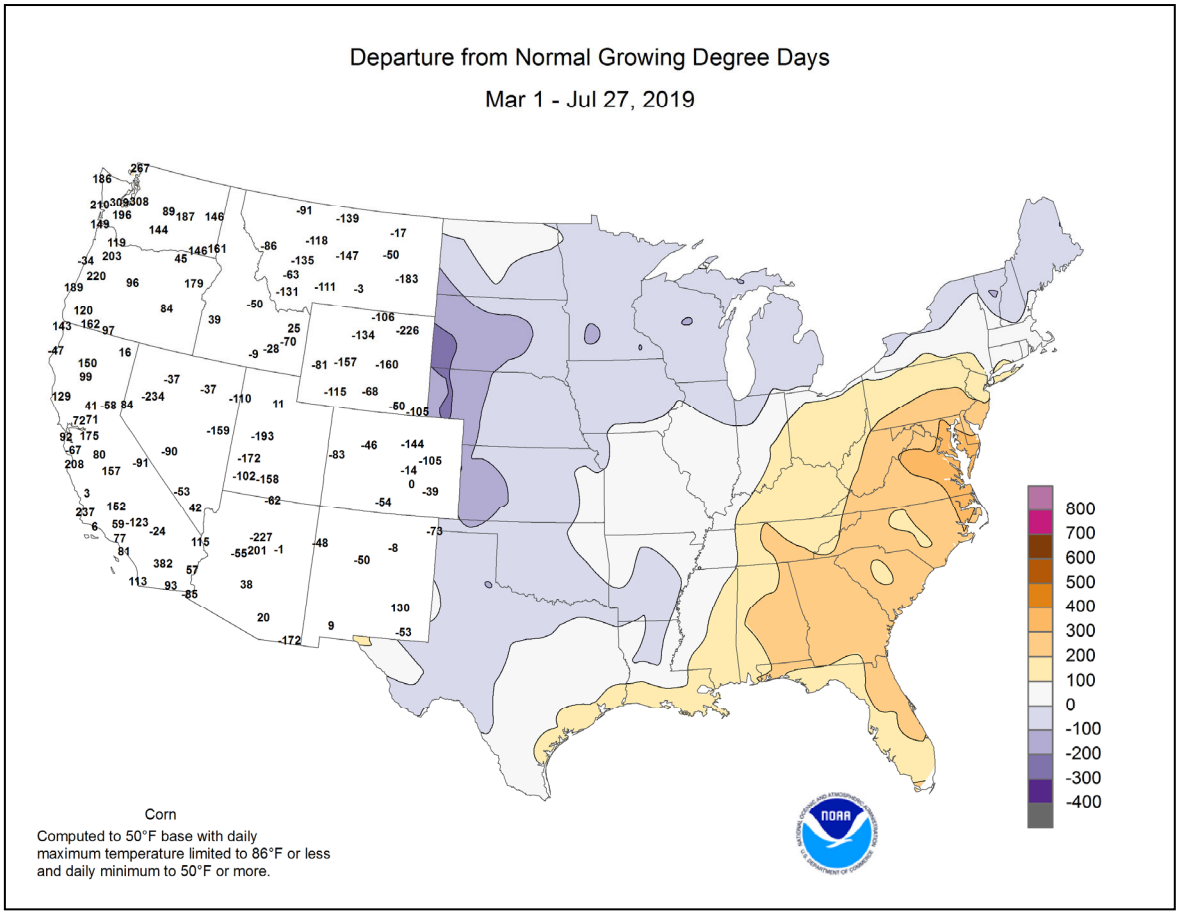
The week began with some heavy rain lingering across the **eastern Plains**. In **Nebraska**, record-setting rainfall totals for July 21 reached 3.26 inches in **Lincoln** and 1.87 inches in **Grand Island**. Meanwhile, heavy showers also dotted the **East**, where daily-record totals topped the 2-inch 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, a final 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 during the week, totaling 6.11 inches. Late in the week, 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, month-to-date rainfall through July 27 in **central Illinois** totaled just 0.46 inch (10 percent of normal) in **Lincoln** and 0.23 inch (7 percent) in **Springfield**.

In **Alaska**, slightly cooler weather and widespread showers aided wildfire containment efforts and provided spotty drought relief. Still, weekly temperatures averaged more than 5°F above normal in parts of **Alaska**. In addition, **Sitka** posted a daily-record high of 73°F on July 23. Meanwhile, significant rain dampened some **Alaskan** locations. For example, **McGrath** received 1.66 inches of rain on July 23-24, topping its total during the preceding 8 weeks. **McGrath** 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. Despite the late-July precipitation, more than 80 wildfires were reported to be active across **Alaska**, according to the National Interagency Fire Center. For the year to date, **Alaskan** wildfire have consumed more than 2.2 million acres of vegetation. **Alaska's** largest active wildfire, the 498,000-acre Chalkyitsik Complex east of the community of **Chalkyitsik**, was a little more than 20 percent contained. Farther south, hot, mostly dry weather covered **Hawaii**, except for some windward showers. **Kahului, Maui**, noted consecutive daily-record highs of 93°F on July 24-25. During the same period, **Lihue, Kauai**, also collected consecutive daily records, reporting highs of 88°F both days. At the state's major airport observation sites, July 1-27 rainfall ranged from 0.04 inch (10 percent of normal) in **Kahului** to 5.33 inches (57 percent) in **Hilo**, on the **Big Island**.


Extreme Maximum Temperature (°F)
July 21 - 27, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
91
88
91
91
93
85
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data

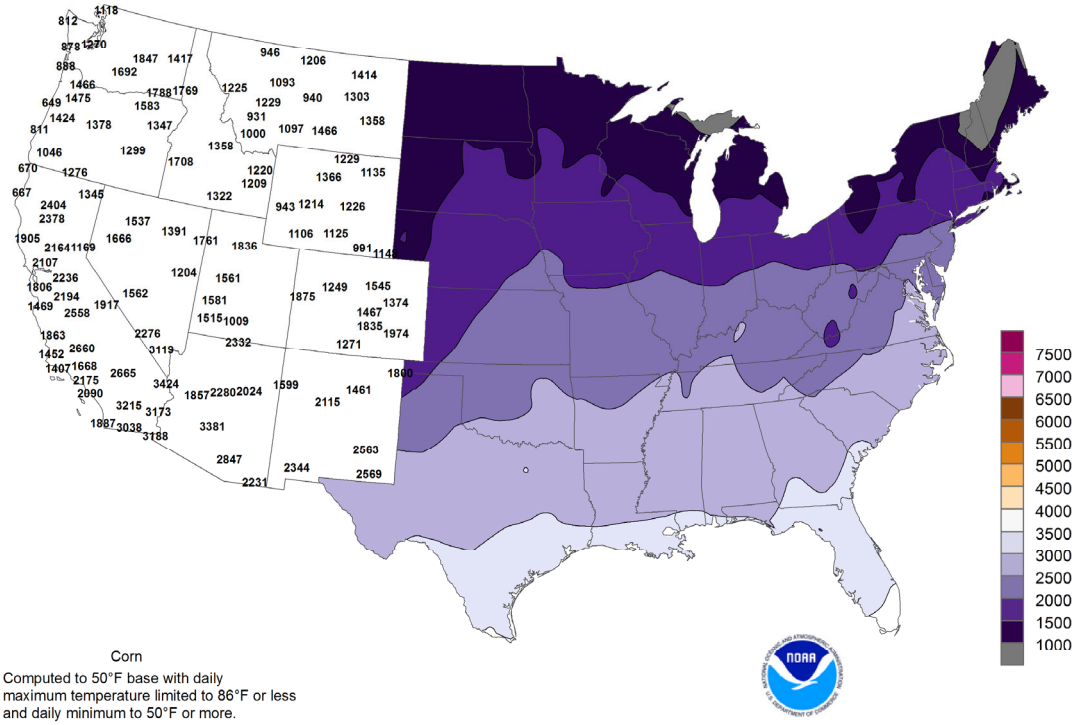

Extreme Minimum Temperature (°F)
July 21 - 27, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
73
77
77
71
67
67
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Total Growing Degree Days
Mar 1 - Jul 27, 2019
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
NOAA
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 - Jul 27, 2019
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400
NOAA
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 - Jul 27, 2019

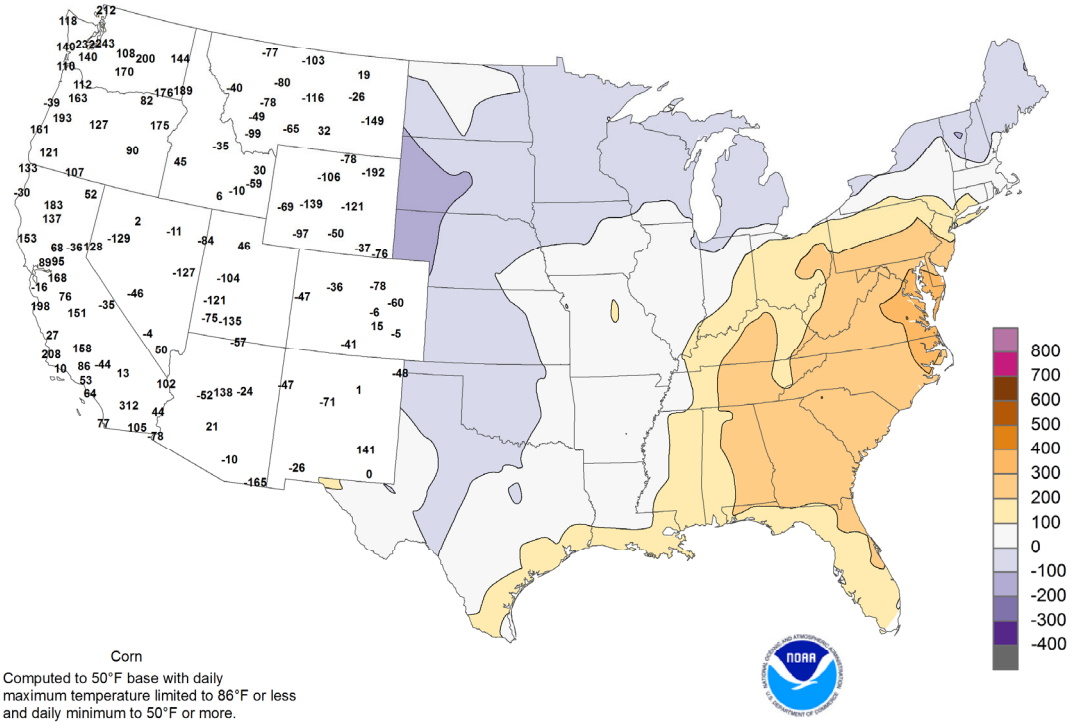


Corn

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

Apr 1 - Jul 27, 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 July 27, 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	89	69	94	60	79	-2	0.01	-1.14	0.01	7.48	91	31.67	95	84	40	4	0	1	0
	HUNTSVILLE	88	67	92	59	77	-3	0.10	-0.87	0.08	7.05	87	41.98	120	89	53	1	0	2	0
	MOBILE	90	72	93	69	81	-1	0.90	-0.62	0.50	12.90	122	34.18	86	94	64	4	0	3	1
	MONTGOMERY	92	68	94	65	80	-2	0.13	-1.03	0.12	6.56	74	27.13	79	88	45	6	0	2	0
AK	ANCHORAGE	70	57	77	56	63	4	0.73	0.32	0.28	0.86	36	5.89	104	86	65	0	0	5	0
	BARROW	52	45	56	40	48	7	0.24	0.03	0.11	2.70	278	5.66	370	96	80	0	0	5	0
	FAIRBANKS	76	58	86	54	67	5	0.19	-0.20	0.19	1.95	69	5.43	112	79	57	0	0	1	0
	JUNEAU	66	51	74	44	59	2	0.76	-0.21	0.24	5.36	79	23.06	90	98	84	0	0	5	0
	KODIAK	67	54	69	52	60	5	0.26	-0.59	0.14	5.99	66	34.41	86	87	70	0	0	2	0
	NOME	55	49	62	48	52	-1	1.13	0.60	1.06	3.88	138	11.02	170	93	81	0	0	4	1
AZ	FLAGSTAFF	84	55	87	52	70	3	0.14	-0.50	0.12	0.28	12	15.45	132	72	25	0	0	2	0
	PHOENIX	108	86	113	80	97	4	0.01	-0.24	0.01	0.01	1	3.03	78	46	29	7	0	1	0
	PRESCOTT	92	66	95	61	79	5	0.75	-0.01	0.51	0.92	36	9.72	104	67	23	5	0	4	1
	TUCSON	103	77	108	73	90	4	0.28	-0.27	0.18	0.59	33	5.62	112	61	34	7	0	3	0
AR	FORT SMITH	90	68	97	65	79	-4	0.22	-0.43	0.22	11.74	164	38.31	152	94	47	2	0	1	0
	LITTLE ROCK	87	66	94	60	77	-6	0.00	-0.68	0.00	7.27	105	41.92	143	91	47	2	0	0	0
CA	BAKERSFIELD	102	77	106	71	90	6	0.00	0.00	0.00	0.23	192	6.50	141	46	26	7	0	0	0
	FRESNO	104	75	106	69	90	8	0.00	0.00	0.00	0.00	0	9.52	121	48	32	7	0	0	0
	LOS ANGELES	79	66	87	63	73	3	0.05	0.05	0.05	0.05	63	12.86	136	85	64	0	0	1	0
	REDDING	102	68	107	64	85	3	0.00	0.00	0.00	0.00	0	31.08	142	56	27	7	0	0	0
	SACRAMENTO	97	63	102	58	80	4	0.00	0.00	0.00	0.00	0	19.36	162	71	20	7	0	0	0
	SAN DIEGO	80	69	84	67	75	4	0.00	0.00	0.00	0.01	11	8.42	110	87	67	0	0	0	0
	SAN FRANCISCO	75	57	83	55	66	3	0.00	0.00	0.00	0.00	0	18.42	138	84	65	0	0	0	0
	STOCKTON	101	65	103	61	83	5	0.00	0.00	0.00	0.00	0	12.48	139	59	29	7	0	0	0
CO	ALAMOSA	84	49	88	47	67	3	0.07	-0.15	0.06	0.52	40	5.20	150	87	37	0	0	2	0
	CO SPRINGS	85	59	89	56	72	2	0.44	-0.26	0.37	3.30	72	8.99	87	84	33	0	0	4	0
	DENVER INTL	90	62	95	57	76	3	1.10	0.55	1.10	4.36	125	11.70	136	76	27	4	0	1	1
	GRAND JUNCTION	96	69	102	64	82	5	0.02	-0.15	0.01	0.85	98	6.69	139	53	31	5	0	2	0
	PUEBLO	91	63	96	61	77	1	0.76	0.26	0.39	4.57	155	9.00	124	88	45	5	0	4	0
CT	BRIDGEPORT	85	69	99	64	77	2	2.86	2.01	2.28	10.46	154	32.35	126	83	60	1	0	2	2
	HARTFORD	87	63	100	56	75	1	1.68	0.86	0.87	4.71	67	29.51	114	87	48	1	0	2	2
DC	WASHINGTON	89	71	99	65	80	1	0.50	-0.35	0.37	10.76	172	28.78	129	79	44	3	0	4	0
DE	WILMINGTON	89	67	97	63	78	1	1.94	0.98	1.43	14.16	194	34.22	137	93	46	2	0	3	1
FL	DAYTONA BEACH	88	73	90	72	80	-2	0.64	-0.45	0.59	16.07	157	27.41	106	100	69	3	0	3	1
	JACKSONVILLE	88	72	94	71	80	-2	0.91	-0.39	0.50	9.54	90	22.10	79	95	62	3	0	4	1
	KEY WEST	90	78	91	74	84	-1	2.39	1.69	1.55	3.72	51	14.50	79	80	65	5	0	4	1
	MIAMI	94	76	102	74	85	1	3.29	2.12	1.70	21.63	159	34.84	120	88	54	7	0	2	2
	ORLANDO	90	73	93	72	81	-1	1.60	0.11	0.73	14.08	102	25.70	91	92	63	5	0	5	1
	PENSACOLA	90	74	91	72	82	-1	0.47	-1.33	0.43	12.33	92	27.24	72	94	60	5	0	2	0
	TALLAHASSEE	90	72	93	71	81	-1	0.42	-1.39	0.30	13.65	98	25.96	67	94	62	5	0	3	0
	TAMPA	88	75	91	73	82	-1	2.94	1.49	1.70	19.74	179	36.19	154	89	69	3	0	6	2
	WEST PALM BEACH	92	77	95	75	84	1	2.02	0.83	1.33	10.10	78	31.11	97	89	57	7	0	2	2
GA	ATHENS	89	66	93	63	78	-2	0.29	-0.70	0.23	8.33	108	24.36	84	84	54	4	0	2	0
	ATLANTA	88	70	91	67	79	-1	0.16	-1.00	0.16	8.40	104	29.56	96	77	48	1	0	1	0
	AUGUSTA	95	68	99	62	81	0	0.81	-0.09	0.81	7.79	102	22.27	83	84	39	7	0	1	1
	COLUMBUS	90	71	92	67	81	-1	0.25	-0.91	0.24	10.34	132	27.90	92	85	42	4	0	2	0
	MACON	92	66	94	60	79	-2	0.31	-0.65	0.31	7.70	106	21.11	76	92	42	5	0	1	0
	SAVANNAH	92	72	97	68	82	0	1.12	-0.25	1.12	15.74	148	26.41	94	90	49	5	0	1	1
HI	HILO	84	70	85	67	77	1	2.06	-0.39	0.62	9.41	57	43.94	63	90	74	0	0	6	2
	HONOLULU	90	79	91	77	84	3	0.00	-0.11	0.00	5.80	734	8.88	92	68	61	6	0	0	0
	KAHULUI	93	72	93	67	83	4	0.01	-0.10	0.01	0.07	12	9.35	82	70	58	7	0	1	0
	LIHUE	87	78	88	77	82	3	0.22	-0.28	0.11	7.25	202	15.71	75	80	72	0	0	4	0
ID	BOISE	94	65	102	57	80	4	0.00	-0.06	0.00	0.04	4	12.11	160	45	26	5	0	0	0
	LEWISTON	95	61	103	53	78	3	0.03	-0.11	0.03	1.23	70	9.17	117	45	27	6	0	1	0
	POCATELLO	92	57	99	49	75	5	0.00	-0.14	0.00	0.55	38	9.09	119	53	30	5	0	0	0
IL	CHICAGO/O'HARE	82	65	89	62	74	0	0.76	-0.03	0.76	6.67	102	27.89	142	76	50	0	0	1	1
	MOLINE	87	66	88	59	76	0	0.00	-0.88	0.00	5.68	70	30.86	139	77	47	0	0	0	0
	PEORIA	85	65	88	59	75	0	0.04	-0.83	0.04	7.05	96	31.35	149	80	46	0	0	1	0
	ROCKFORD	84	64	89	59	74	1	0.00	-0.85	0.00	5.95	71	28.32	134	83	51	0	0	0	0
	SPRINGFIELD	86	63	90	54	74	-2	0.00	-0.77	0.00	7.37	109	30.48	147	91	47	1	0	0	0
IN	EVANSVILLE	85	64	94	59	74	-5	1.20	0.39	1.10	9.81	133	39.56	146	86	50	1	0	2	1
	FORT WAYNE	82	60	91	55	71	-3	0.28	-0.49	0.25	4.95	69	23.81	112	91	47	1	0	2	0
	INDIANAPOLIS	83	63	92	58	73	-3	0.85	-0.14	0.83	10.69	135	33.82	140	83	48	1	0	2	1
	SOUTH BEND	80	59	85	53	69	-4	1.05	0.27	1.05	7.84	105	28.37	131	89	53	0	0	1	1
IA	BURLINGTON	85	65	89	58	75	-2	0.16	-0.82	0.12	5.72	70	28.41	129	87	49	0	0	3	0
	CEDAR RAPIDS	83	62	86	55	72	-3	0.22	-0.66	0.22	6.02	75	24.41	125	94	52	0	0	1	0
	DES MOINES	83	65	90	58	74	-3	0.36	-0.56	0.33	8.93	109	26.98	132	82	54	1	0	2	0
	DUBUQUE	81	63	84	58	72	-1	0.05	-0.78	0.05	8.27	114	26.02	129	87	59	0	0	1	0
	SIOUX CITY	82	60	89	53	71	-4	0.07	-0.65	0.07	8.70	134	23.08	143	95	66	0	0	1	0
	WATERLOO	85	63	90	57	74	0	0.09	-0.80	0.00	8.30	98	24.35	122	84	47	2	0	1	0
KS	CONCORDIA	87	65	93	56	76	-4	0.02	-0.93	0.02	7.64	101	22.73	126	77	45	2	0	1	0
	DODGE CITY	91	63	96	55	77	-3	0.00	-0.71	0.00	4.30	73	16.10	113	76	33	5	0	0	0
	GOODLAND	88	61	95	57	75	-1	0.16	-0.64	0.16	3.77	61	11.58	87	88	52	4	0	1	0
	TOPEKA	86	63	91	58	74	-5	0.44	-0.37	0.44	7.92	96	27.08	129	86	47	1	0	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending July 27, 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	91	65	95	58	78	-4	0.00	-0.70	0.00	7.36	103	27.06	146	78	41	4	0	0	0
KY	JACKSON	82	62	88	57	72	-3	1.50	0.48	1.35	14.80	171	38.03	130	99	58	0	0	3	1
	LEXINGTON	85	64	89	57	74	-2	1.21	0.14	0.78	10.32	118	33.69	119	84	49	0	0	2	1
	LOUISVILLE	87	67	93	63	77	-2	0.18	-0.80	0.18	8.81	118	36.18	133	79	42	2	0	1	0
	PADUCAH	86	64	91	59	75	-3	1.67	0.75	1.17	12.68	149	51.22	171	90	55	1	0	2	2
LA	BATON ROUGE	89	71	92	66	80	-2	1.34	0.02	1.05	13.95	133	41.61	110	93	54	5	0	4	1
	LAKE CHARLES	89	73	94	69	81	-2	0.45	-0.62	0.33	13.18	124	41.65	127	87	59	4	0	3	0
	NEW ORLEANS	90	77	92	74	83	0	6.65	5.39	2.88	15.39	124	42.42	110	82	66	3	0	4	3
	SHREVEPORT	92	70	96	66	81	-3	0.00	-0.81	0.00	8.54	99	31.26	100	86	43	5	0	0	0
ME	CARIBOU	79	54	88	47	66	0	0.12	-0.78	0.11	4.75	72	23.36	116	87	42	0	0	2	0
	PORTLAND	80	62	94	58	71	2	0.80	0.07	0.63	8.38	137	29.84	117	90	53	1	0	2	1
MD	BALTIMORE	90	67	100	61	79	2	0.69	-0.19	0.58	6.80	101	25.50	106	84	45	3	0	2	1
MA	BOSTON	81	69	98	63	75	0	1.88	1.22	0.98	9.70	166	29.89	126	79	52	1	0	2	2
	WORCESTER	79	63	89	59	71	0	1.98	1.04	1.08	8.18	108	31.43	115	92	56	0	0	2	2
MI	ALPENA	82	56	87	48	69	2	0.52	-0.22	0.50	4.88	95	21.09	138	89	44	0	0	3	1
	GRAND RAPIDS	82	62	87	54	72	0	0.14	-0.60	0.13	8.00	117	27.83	141	80	45	0	0	2	0
	HOUGHTON LAKE	80	55	84	47	68	1	0.80	0.19	0.80	6.82	131	22.32	149	86	50	0	0	1	1
	LANSING	82	61	86	52	71	0	0.37	-0.15	0.33	9.92	166	25.52	149	82	51	0	0	2	0
	MUSKEGON	81	61	87	54	71	0	0.21	-0.31	0.21	5.92	132	28.10	171	81	49	0	0	1	0
	TRAVERSE CITY	81	59	87	51	70	0	0.25	-0.40	0.19	6.42	106	23.75	133	86	45	0	0	2	0
MN	DULUTH	83	60	87	54	72	6	0.39	-0.50	0.39	5.22	66	17.85	107	76	49	0	0	1	0
	INT'L FALLS	80	56	85	51	68	1	0.20	-0.48	0.19	7.54	108	16.46	123	99	51	0	0	2	0
	MINNEAPOLIS	83	64	86	60	74	0	0.13	-0.75	0.13	9.88	126	27.29	160	78	45	0	0	1	0
	ROCHESTER	80	60	84	56	70	0	0.00	-1.04	0.00	16.39	206	37.61	208	89	53	0	0	0	0
	ST. CLOUD	83	57	88	54	70	0	1.15	0.46	1.15	8.15	109	23.22	151	97	42	0	0	1	1
MS	JACKSON	89	69	93	64	79	-3	0.80	-0.25	0.59	8.44	107	37.68	109	87	47	3	0	2	1
	MERIDIAN	90	68	95	64	79	-3	0.09	-1.13	0.08	6.56	75	39.41	105	89	56	5	0	2	0
	TUPELO	88	67	93	60	78	-3	2.76	2.01	1.92	15.75	194	53.73	154	87	51	3	0	2	2
MO	COLUMBIA	86	66	90	62	76	-2	0.82	-0.01	0.79	7.58	104	30.27	129	88	47	1	0	2	1
	KANSAS CITY	84	62	89	58	73	-6	0.68	-0.28	0.68	10.78	129	35.33	161	90	49	0	0	1	1
	SAINT LOUIS	86	69	91	63	78	-3	3.31	2.46	3.31	9.66	134	36.03	157	78	47	1	0	1	1
	SPRINGFIELD	86	65	95	58	76	-3	0.33	-0.33	0.31	7.23	87	34.51	136	87	49	1	0	2	0
MT	BILLINGS	92	64	98	59	78	5	0.04	-0.21	0.04	4.74	156	13.55	139	57	25	6	0	1	0
	BUTTE	85	48	91	37	67	3	0.00	-0.30	0.00	2.15	64	8.38	102	66	16	1	0	0	0
	CUT BANK	84	49	95	37	67	3	0.02	-0.28	0.02	3.00	78	7.89	96	73	18	1	0	1	0
	GLASGOW	91	60	102	53	75	4	0.01	-0.34	0.01	5.09	135	9.65	132	68	31	3	0	1	0
	GREAT FALLS	89	49	98	38	69	2	0.00	-0.30	0.00	3.12	90	12.65	132	71	18	3	0	0	0
	HAVRE	91	53	99	45	72	3	0.20	-0.11	0.20	3.67	114	8.38	112	80	32	5	0	1	0
	MISSOULA	88	50	94	44	69	1	0.03	-0.19	0.02	1.63	61	9.44	111	69	32	3	0	2	0
NE	GRAND ISLAND	84	63	90	56	73	-3	1.87	1.18	1.87	10.31	160	26.14	160	78	56	1	0	1	1
	LINCOLN	83	63	90	55	73	-5	3.27	2.47	3.26	8.41	129	23.68	138	80	55	1	0	2	1
	NORFOLK	82	60	88	51	71	-4	0.21	-0.58	0.17	6.23	82	21.69	125	90	59	0	0	2	0
	NORTH PLATTE	86	61	91	55	73	-2	2.84	2.14	2.82	10.38	175	23.24	174	88	49	2	0	2	1
	OMAHA	83	66	91	59	74	-3	0.44	-0.40	0.43	6.11	84	21.34	116	82	57	1	0	2	0
	SCOTTSBLUFF	90	63	99	59	76	2	0.29	-0.13	0.29	5.14	112	20.45	180	89	53	4	0	1	0
	VALENTINE	87	59	95	48	73	-2	0.42	-0.33	0.33	9.07	153	24.81	191	82	54	3	0	3	0
NV	ELY	87	55	95	47	71	3	0.42	0.28	0.28	0.65	60	11.99	206	68	30	2	0	2	0
	LAS VEGAS	105	86	109	81	96	4	0.00	-0.11	0.00	0.03	8	4.63	176	29	22	7	0	0	0
	RENO	95	66	99	61	81	9	0.25	0.22	0.14	0.25	39	8.76	191	56	31	6	0	2	0
	WINNEMUCCA	95	57	101	51	76	3	0.03	0.00	0.03	0.14	16	7.16	140	55	23	6	0	1	0
NH	CONCORD	83	59	94	52	71	0	2.26	1.52	1.71	***	***	***	***	94	45	1	0	2	2
NJ	NEWARK	87	71	99	67	79	1	2.39	1.30	1.78	11.22	152	35.17	131	78	51	1	0	2	2
NM	ALBUQUERQUE	92	68	99	66	80	2	1.06	0.74	1.06	2.01	126	5.46	129	65	28	5	0	1	1
NY	ALBANY	84	63	91	59	73	1	2.07	1.33	1.64	8.71	130	25.03	117	88	44	1	0	2	1
	BINGHAMTON	78	60	87	54	69	0	0.78	0.05	0.69	8.13	118	26.25	120	81	59	0	0	2	1
	BUFFALO	81	64	85	57	72	1	0.01	-0.65	0.01	5.69	87	24.01	112	83	43	0	0	1	0
	ROCHESTER	82	61	88	57	72	1	0.12	-0.49	0.12	6.57	112	19.56	106	85	52	0	0	1	0
	SYRACUSE	83	62	89	58	72	1	0.76	-0.09	0.76	6.98	96	25.43	117	85	47	0	0	1	1
NC	ASHEVILLE	82	61	88	55	71	-2	1.28	0.43	0.76	10.06	130	37.20	132	89	53	0	0	3	1
	CHARLOTTE	89	66	93	61	77	-3	0.89	0.04	0.67	9.47	143	30.94	123	85	44	2	0	2	1
	GREENSBORO	86	66	95	62	76	-2	3.02	2.02	2.25	12.46	169	32.73	130	93	51	2	0	2	2
	HATTERAS	85	76	89	73	81	1	0.33	-0.87	0.27	4.90	63	33.45	112	89	69	0	0	2	0
	RALEIGH	89	66	99	62	78	-1	1.24	0.26	1.16	7.43	105	27.85	110	90	54	2	0	2	1
	WILMINGTON	90	70	97	64	80	-1	0.04	-1.72	0.04	6.96	59	18.35	58	89	43	4	0	1	0
ND	BISMARCK	84	57	89	51	71	0	0.12	-0.43	0.12	6.47	134	13.95	135	85	44	0	0	1	0
	DICKINSON	82	53	89	49	68	-3	0.04	-0.33	0.04	5.32	101	14.13	131	88	41	0	0	1	0
	FARGO	83	60	87	52	71	0	0.03	-0.56	0.03	8.03	133	18.05	144	94	45	0	0	1	0
	GRAND FORKS	84	55	88	48	69	-1	0.05	-0.61	0.05	5.83	103	13.84	123	89	39	0	0	1	0
	JAMESTOWN	81	57	84	53	69	-3	0.00	-0.69	0.00	8.15	139	16.35	143	94	47	0	0	0	0
	WILLISTON	87	54	95	49	71	1	0.00	-0.47	0.00	6.89	158	11.06	123	84	40	1	0	0	0
OH	AKRON-CANTON	83	63	93	58	73	1	0.94	0.04	0.68	15.07	215	33.93	152	84	51	1	0	2	1
	CINCINNATI	83	64	91	60	74	-3	0.65	-0.18	0.35	10.43	136	38.34	149	82	51	1	0	2	0
	CLEVELAND	82	64	88	60	73	1	1.00	0.27	0.54	10.61	152	29.01	135	86	50	0	0	3	1
	COLUMBUS	84	62	94	57	73	-2	0.86	-0.16	0.79	10.24	127	32.53	143	85	47	1	0	2	1
	DAYTON	82	63	91	58	72	-3	1.89	1.09	1.86	9.44	126	33.90	142	87	50	1	0	2	1
	MANSFIELD	81	61	91	57	71	0	2.45	1.53	2.17	15.91	195	36.40	146	97	50	1	0	2	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending July 27, 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	85	62	92	58	73	0	0.88	0.33	0.67	9.04	144	26.83	141	83	45	1	0	3	1
	YOUNGSTOWN	82	60	91	55	71	1	0.39	-0.47	0.34	12.15	161	34.29	158	85	50	1	0	2	0
OK	OKLAHOMA CITY	90	64	100	59	77	-6	0.00	-0.59	0.00	7.00	96	30.89	144	88	35	2	0	0	0
	TULSA	89	66	98	62	78	-6	0.48	-0.10	0.43	10.38	140	37.55	153	88	49	2	0	2	0
OR	ASTORIA	71	55	76	51	63	2	0.11	-0.06	0.09	2.50	68	24.50	67	92	72	0	0	2	0
	BURNS	91	50	95	43	71	4	0.00	-0.08	0.00	1.05	107	11.09	173	57	25	6	0	0	0
	EUGENE	88	51	95	44	70	3	0.00	-0.09	0.00	0.58	28	22.65	80	82	48	2	0	0	0
	MEDFORD	94	61	98	55	77	3	0.00	-0.06	0.00	0.01	1	13.86	141	57	23	7	0	0	0
	PENDLETON	92	58	97	49	75	1	0.02	-0.06	0.01	0.33	30	9.61	130	48	25	5	0	2	0
	PORTLAND	86	60	92	55	73	4	0.00	-0.11	0.00	1.25	56	14.17	70	73	50	3	0	0	0
	SALEM	86	54	93	52	70	2	0.00	-0.07	0.00	0.85	43	19.40	88	83	48	2	0	0	0
PA	ALLENTOWN	87	65	96	61	76	2	3.26	2.30	2.50	14.73	193	41.10	162	85	49	1	0	3	2
	ERIE	81	64	89	60	73	0	0.53	-0.13	0.48	6.73	94	23.35	107	72	55	0	0	2	0
	MIDDLETOWN	88	68	97	65	78	2	0.70	-0.08	0.60	8.34	119	30.67	130	85	42	2	0	2	1
	PHILADELPHIA	88	69	98	65	79	1	0.87	-0.14	0.50	13.95	198	35.13	143	77	45	3	0	2	1
	PITTSBURGH	81	61	89	56	71	-2	1.14	0.30	0.69	13.21	173	34.17	151	94	50	0	0	2	1
	WILKES-BARRE	85	63	93	58	74	1	2.34	1.57	1.89	12.85	176	32.24	150	91	47	1	0	3	1
	WILLIAMSPORT	85	63	95	58	74	1	0.72	-0.11	0.69	12.49	153	33.00	137	90	49	1	0	2	1
RI	PROVIDENCE	82	67	96	63	75	1	1.83	1.13	1.01	8.18	135	31.98	122	89	59	1	0	3	2
SC	CHARLESTON	90	71	94	68	81	-1	0.71	-0.64	0.71	16.70	149	24.41	85	91	47	3	0	1	1
	COLUMBIA	91	69	96	63	80	-2	1.25	0.01	1.25	11.92	122	23.83	82	82	44	4	0	1	1
	FLORENCE	94	72	100	67	83	2	1.19	-0.04	1.19	9.08	104	22.42	86	87	38	6	0	1	1
	GREENVILLE	87	66	91	60	76	-3	0.22	-0.85	0.20	8.27	105	29.31	98	85	46	2	0	2	0
SD	ABERDEEN	84	58	91	54	71	-2	0.00	-0.61	0.00	7.95	131	18.79	146	87	51	1	0	0	0
	HURON	83	61	92	57	72	-2	0.01	-0.58	0.01	8.34	143	23.02	166	93	50	1	0	1	0
	RAPID CITY	84	59	92	54	71	-2	0.20	-0.21	0.13	8.63	188	25.88	229	88	45	1	0	2	0
	SIOUX FALLS	84	62	91	54	73	-1	0.03	-0.60	0.03	9.48	157	27.54	185	86	55	2	0	1	0
TN	BRISTOL	84	61	90	54	72	-2	1.73	0.80	0.87	11.01	145	37.42	144	95	46	1	0	3	2
	CHATTANOOGA	89	67	91	61	78	-2	0.35	-0.69	0.35	7.13	87	41.70	126	90	49	4	0	1	0
	KNOXVILLE	85	64	90	57	75	-3	4.23	3.19	3.34	12.90	158	45.10	147	92	47	1	0	2	2
	MEMPHIS	88	69	92	62	78	-5	0.36	-0.53	0.36	16.36	202	47.07	142	88	49	2	0	1	0
	NASHVILLE	89	66	97	60	77	-3	2.70	1.88	2.63	12.37	167	42.39	147	88	44	4	0	3	1
TX	ABILENE	93	69	99	62	81	-3	0.00	-0.34	0.00	4.46	99	18.80	150	73	38	4	0	0	0
	AMARILLO	92	65	99	60	78	0	0.00	-0.58	0.00	5.55	99	13.32	114	64	28	5	0	0	0
	AUSTIN	93	67	98	58	80	-5	0.00	-0.41	0.00	5.60	102	24.78	130	76	36	6	0	0	0
	BEAUMONT	90	73	93	68	82	-1	3.21	2.15	1.58	20.37	180	44.13	131	86	65	4	0	4	2
	BROWNSVILLE	94	76	98	72	85	1	2.56	2.25	2.12	6.94	153	12.62	101	95	63	7	0	4	1
	CORPUS CHRISTI	94	72	96	68	83	-1	0.56	0.17	0.51	3.17	60	12.82	80	91	53	7	0	2	1
	DEL RIO	99	72	103	67	85	-1	0.00	-0.41	0.00	7.85	191	13.26	125	64	40	7	0	0	0
	EL PASO	97	74	106	68	86	3	0.09	-0.25	0.09	1.15	56	1.86	49	45	22	7	0	1	0
	FORT WORTH	92	72	97	67	82	-3	0.01	-0.47	0.01	4.91	98	24.69	119	72	37	5	0	1	0
	GALVESTON	90	80	91	75	85	0	0.00	-0.71	0.00	8.02	113	25.14	110	79	53	5	0	0	0
	HOUSTON	93	72	95	66	83	-1	0.00	-0.61	0.00	9.21	112	26.34	98	85	50	7	0	0	0
	LUBBOCK	91	66	98	60	79	-1	0.00	-0.41	0.00	2.22	46	9.12	87	62	37	4	0	0	0
	MIDLAND	94	66	102	63	80	-2	1.19	0.78	1.19	3.03	92	11.08	151	73	35	6	0	1	1
	SAN ANGELO	96	64	101	57	80	-3	0.05	-0.15	0.05	4.53	131	14.16	127	74	34	7	0	1	0
	SAN ANTONIO	94	71	97	64	83	-2	0.00	-0.39	0.00	5.66	93	14.99	80	76	34	7	0	0	0
	VICTORIA	96	70	99	62	83	-2	0.05	-0.49	0.04	4.59	60	14.63	65	90	44	7	0	2	0
	WACO	94	69	101	60	81	-5	0.00	-0.47	0.00	8.41	168	27.72	144	82	37	6	0	0	0
	WICHITA FALLS	92	65	99	60	79	-6	0.00	-0.28	0.00	4.68	92	19.70	119	85	40	6	0	0	0
UT	SALT LAKE CITY	96	73	103	69	84	6	0.28	0.11	0.26	0.90	68	15.11	150	51	24	5	0	2	0
VT	BURLINGTON	84	63	90	58	73	2	0.08	-0.80	0.07	6.54	96	23.15	120	85	47	1	0	2	0
VA	LYNCHBURG	86	63	98	58	75	0	1.63	0.66	1.13	7.38	97	24.68	96	94	56	1	0	3	1
	NORFOLK	88	73	100	68	80	1	2.42	1.21	2.39	8.30	102	27.04	102	87	53	2	0	2	1
	RICHMOND	89	68	100	64	78	0	0.43	-0.67	0.41	10.90	146	31.28	124	89	54	2	0	2	0
	ROANOKE	85	64	95	58	74	-3	4.12	3.22	2.76	10.01	140	27.75	110	86	58	1	0	3	2
	WASH/DULLES	89	65	100	59	77	1	0.76	-0.01	0.69	5.15	72	25.03	104	84	44	3	0	2	1
WA	OLYMPIA	81	53	90	48	67	4	0.03	-0.09	0.03	1.40	55	16.42	60	90	53	1	0	1	0
	QUILLAYUTE	72	51	77	46	61	2	0.18	-0.32	0.18	3.95	71	35.60	64	95	64	0	0	1	0
	SEATTLE-TACOMA	82	59	91	56	70	4	0.00	-0.13	0.00	2.05	94	16.02	82	75	50	1	0	0	0
	SPOKANE	87	59	94	53	73	3	0.23	0.09	0.12	0.96	53	8.64	90	56	22	3	0	2	0
	YAKIMA	91	54	97	47	73	3	0.08	0.05	0.08	0.14	18	6.03	134	66	30	5	0	1	0
WV	BECKLEY	79	58	88	52	68	-3	2.05	0.98	1.66	8.57	106	31.81	124	86	56	0	0	3	1
	CHARLESTON	84	62	94	56	73	-1	1.27	0.17	1.11	6.29	76	28.88	110	98	54	1	0	3	1
	ELKINS	82	58	92	53	70	0	1.59	0.52	0.80	11.42	130	32.09	116	93	58	1	0	3	2
	HUNTINGTON	84	62	91	55	73	-3	1.44	0.42	1.41	9.20	120	30.26	119	94	53	1	0	2	1
WI	EAU CLAIRE	82	60	84	54	71	-1	0.16	-0.70	0.16	7.83	102	26.20	146	93	44	0	0	1	0
	GREEN BAY	83	61	88	57	72	2	0.04	-0.70	0.03	7.99	125	23.92	150	91	46	0	0	2	0
	LA CROSSE	87	65	92	62	76	2	0.00	-0.93	0.00	11.75	153	28.66	154	82	39	2	0	0	0
	MADISON	82	65	85	58	74	2	0.01	-0.84	0.01	10.73	144	28.44	151	84	49	0	0	1	0
	MILWAUKEE	81	65	90	59	73	1	0.03	-0.74	0.03	7.59	114	25.40	130	72	51	1	0	1	0
WY	CASPER	91	55	96	50	73	2	0.20	-0.08	0.17	3.50	138	13.72	160	81	37	5	0	2	0
	CHEYENNE	84	58	90	55	71	3	0.13	-0.37	0.04	5.50	141	18.06	183	77	42	1	0	5	0
	LANDER	87	58	92	54	72	0	0.16	-0.01	0.16	1.02	55	14.40	167	65	23	3	0	1	0
	SHERIDAN	88	57	92	50	72	2	0.02	-0.17	0.02	3.69	121	14.54	152	78	44	4	0	1	0

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

National Agricultural Summary

July 22 – 28, 2019

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Rain during the week ending July 28 fell heaviest in parts of Colorado, Florida, Georgia, the mid Atlantic, Mississippi Valley, Minnesota, New England, and New Mexico, with some areas receiving 3 inches or more of precipitation. Temperatures were above normal across much of the western United States and parts of the northern-tier states, with reported temperature more than 6°F above normal in California. In contrast, temperatures were 6°F or more below normal in parts of the central and southern Great Plains and the Mississippi Valley.

Corn: Fifty-eight percent of the nation's corn acreage was at or beyond the silking stage by July 28, thirty-two percentage points behind last year and 25 percentage points behind the 5-year average. Silking progress was most active in the Corn Belt, advancing at least 18 percentage points in Colorado, Illinois, Iowa, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin. By July 28, thirteen percent of the corn acreage was at or beyond the dough stage, 22 percentage points behind last year and 10 percentage points behind the 5-year average. Overall, fifty-eight percent of the nation's corn acreage was rated in good to excellent condition, 1 percentage point above the previous week but 14 percentage points below the same time last year.

Soybean: By July 28, fifty-seven percent of the nation's soybean acreage had reached the blooming stage, 28 percentage points behind last year and 22 percentage points behind the 5-year average. Nationally, 21 percent of the nation's soybean acreage was setting pods, 37 percentage points behind last year and 24 percentage points behind the 5-year average. Advances of 19 percentage points or more occurred in Arkansas, Minnesota, Nebraska, and North Dakota. On July 28, fifty-four percent of the nation's soybean acreage was rated in good to excellent condition, identical to the previous week but 16 percentage points below the same time last year.

Winter Wheat: Seventy-five percent of the 2019 winter wheat acreage was harvested by July 28, nine percentage points behind last year and 11 percentage points behind the 5-year average. Winter wheat harvest progress continued with advances of 15 percentage points or better reported in Colorado, Michigan, Nebraska, Oregon, and South Dakota.

Cotton: Eighty-six percent of the nation's cotton acreage had reached the squaring stage by July 28, one percentage point behind both last year and the 5-year average. Advances were made in Mississippi and Missouri of 11 and 17 percentage points, respectively. By July 28, forty-five percent of the nation's cotton acreage had begun setting bolls, 3 percentage points behind both last year and the 5-year average. On July 28, sixty-one percent of the 2019 cotton acreage was rated in good to excellent condition, 1 percentage point above the previous week and 18 percentage points above the same time last year.

Sorghum: By July 28, thirty-three percent of the nation's sorghum acreage had reached the heading stage, 19 percentage points behind last year and 17 percentage points behind the 5-year average. Seventy-nine percent of Texas' sorghum acreage had reached the heading stage by July 28, identical to last year but 4 percentage points behind the 5-year average. Twenty-one percent of nation's sorghum acreage was at or beyond the coloring stage by July 28, four percentage points behind both last year and the 5-year average. Coloring advanced 17 percentage points in Texas during the week. On July 28, seventy-one percent of the nation's sorghum acreage was rated in good to excellent condition, 2 percentage points below the previous week but 19 percentage points above the same time last year.

Rice: By July 28, forty-two percent of the nation's rice acreage had reached the heading stage, 19 percentage points behind last year and 15 percentage points behind the 5-year average. Advances of 10 percentage points or more occurred in Arkansas, California, and Mississippi. On July 28, sixty-eight percent of the nation's rice acreage was rated in good to excellent condition, 3 percentage points above the previous week but 1 percentage point below the same time last year.

Small Grains: By July 28, ninety-seven percent of the nation's oat acreage had headed, 3 percentage points behind both last year and the 5-year average. Twenty-one percent of the nation's oat acreage had been harvested by July 28, fifteen percentage points behind last year and 14 percentage points behind the 5-year average. Oats harvest progress continued with advances of 27 percentage points or better reported in Iowa, Nebraska, and Ohio. Harvest was complete in Texas. On July 28, sixty-six percent of the nation's oat acreage was rated in good to excellent condition, 2 percentage points above the previous week but 5 percentage points below the same time last year.

Ninety-six percent of the nation's barley acreage had reached the heading stage by July 28, one percentage point behind last year and 2 percentage points behind the 5-year average. On July 28, seventy-seven percent of the nation's barley acreage was rated in good to excellent condition, 1 percentage point above the previous week but 3 percentage points below the same time last year.

By July 28, ninety-seven percent of the nation's spring wheat acres had reached the heading stage, 2 percentage points behind last year and 1 percentage point behind the 5-year average. On July 28, seventy-three percent of the nation's spring wheat acreage was rated in good to excellent condition, 3 percentage points below the previous week and 5 percentage points below the same time last year.

Other Crops: By July 28, eighty-four percent of the nation's peanut acreage had reached the pegging stage, 1 percentage point behind both the previous week and the 5-year average. On July 28, seventy percent of the nation's peanut acreage was rated in good to excellent condition, 1 percentage point below the previous week and 5 percentage points below the same time last year.

Crop Progress and Condition

Week Ending July 28, 2019

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

Corn Percent Silking

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
CO	70	21	53	54
IL	100	36	59	94
IN	92	23	40	84
IA	95	41	69	89
KS	91	54	71	86
KY	90	69	79	88
MI	65	5	20	65
MN	90	21	54	81
MO	99	62	77	95
NE	90	40	70	88
NC	97	89	93	96
ND	83	10	38	59
OH	87	18	32	75
PA	65	55	70	69
SD	90	9	27	77
TN	96	88	94	96
TX	88	81	89	91
WI	73	10	28	63
18 Sts	90	35	58	83

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

Corn Percent Dough

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
CO	8	0	1	2
IL	60	1	16	36
IN	30	0	8	19
IA	28	1	7	20
KS	47	13	24	31
KY	43	19	34	37
MI	8	0	0	4
MN	20	0	3	12
MO	70	5	21	48
NE	36	2	12	22
NC	75	53	71	78
ND	9	0	0	3
OH	23	0	3	12
PA	8	0	2	10
SD	31	0	2	13
TN	76	45	66	65
TX	70	58	65	68
WI	7	0	0	4
18 Sts	35	5	13	23

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

Corn Condition by Percent

	VP	P	F	G	EX
CO	0	1	19	70	10
IL	4	14	38	35	9
IN	7	18	39	31	5
IA	2	6	27	53	12
KS	3	9	31	46	11
KY	3	7	21	47	22
MI	4	18	35	35	8
MN	3	8	33	47	9
MO	7	17	42	30	4
NE	1	4	20	60	15
NC	12	25	29	30	4
ND	1	5	19	64	11
OH	7	17	42	31	3
PA	0	5	15	63	17
SD	2	6	31	48	13
TN	1	2	13	59	25
TX	1	3	27	52	17
WI	3	10	24	43	20
18 Sts	3	9	30	47	11
Prev Wk	3	10	30	47	10
Prev Yr	3	6	19	50	22

Soybeans Percent Blooming

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AR	96	75	82	89
IL	91	30	52	83
IN	84	21	37	79
IA	89	47	65	84
KS	82	28	40	66
KY	62	34	51	57
LA	99	90	95	96
MI	72	23	42	76
MN	86	47	69	85
MS	94	82	88	88
MO	77	25	38	62
NE	86	46	66	83
NC	56	36	45	56
ND	94	49	71	85
OH	85	27	41	76
SD	80	45	53	80
TN	82	56	68	74
WI	77	29	48	75
18 Sts	85	40	57	79

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

Soybeans Percent Setting Pods

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AR	85	43	62	71
IL	75	2	14	50
IN	64	1	8	49
IA	60	4	13	50
KS	45	6	12	28
KY	39	11	25	33
LA	94	72	81	87
MI	35	0	15	35
MN	56	2	27	46
MS	83	48	63	71
MO	41	2	9	28
NE	49	8	34	43
NC	28	18	26	30
ND	65	1	26	50
OH	56	1	9	36
SD	47	0	12	42
TN	53	27	41	45
WI	42	1	10	39
18 Sts	58	7	21	45

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

Soybean Condition by Percent

	VP	P	F	G	EX
AR	3	10	31	39	17
IL	6	14	36	36	8
IN	7	18	39	31	5
IA	3	6	29	52	10
KS	3	8	39	44	6
KY	2	5	23	54	16
LA	1	6	34	51	8
MI	3	16	40	34	7
MN	2	7	31	52	8
MS	1	8	30	48	13
MO	4	13	42	38	3
NE	1	3	22	63	11
NC	4	10	33	44	9
ND	1	8	26	58	7
OH	9	21	40	27	3
SD	2	7	41	40	10
TN	1	3	18	60	18
WI	2	7	26	46	19
18 Sts	3	10	33	45	9
Prev Wk	3	9	34	46	8
Prev Yr	2	6	22	53	17

Crop Progress and Condition

Week Ending July 28, 2019

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

Cotton Percent Squaring

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AL	88	88	92	89
AZ	96	97	99	96
AR	100	95	97	100
CA	79	80	85	89
GA	92	90	95	94
KS	91	60	67	64
LA	100	93	98	99
MS	97	74	85	94
MO	100	64	81	93
NC	93	90	93	94
OK	83	77	78	80
SC	79	89	91	90
TN	98	79	88	94
TX	82	74	83	83
VA	89	88	92	92
15 Sts	87	78	86	87

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

Cotton Percent Setting Bolls

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AL	70	50	69	68
AZ	72	59	74	70
AR	99	79	87	95
CA	48	35	45	69
GA	63	60	72	67
KS	19	10	15	14
LA	95	59	72	86
MS	82	33	55	74
MO	96	6	26	50
NC	59	53	70	65
OK	34	18	25	33
SC	44	53	59	62
TN	67	24	47	59
TX	34	24	34	34
VA	43	32	44	48
15 Sts	48	33	45	48

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

Cotton Condition by Percent

	VP	P	F	G	EX
AL	1	6	33	51	9
AZ	0	10	34	49	7
AR	0	2	14	47	37
CA	0	0	90	10	0
GA	3	7	29	51	10
KS	8	19	40	30	3
LA	0	1	27	63	9
MS	0	7	37	41	15
MO	7	9	53	31	0
NC	5	18	27	45	5
OK	0	0	27	69	4
SC	0	3	28	63	6
TN	4	7	21	55	13
TX	1	13	27	41	18
VA	0	1	6	83	10
15 Sts	1	10	28	46	15
Prev Wk	2	8	30	50	10
Prev Yr	11	19	27	34	9

Sorghum Percent Headed

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
CO	37	0	18	23
KS	36	7	10	26
NE	51	17	26	38
OK	43	20	22	42
SD	40	9	23	45
TX	79	73	79	83
6 Sts	52	27	33	50

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

Sorghum Percent Coloring

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
CO	2	0	0	1
KS	3	1	1	1
NE	4	0	1	3
OK	18	1	3	15
SD	0	0	0	3
TX	70	53	70	64
6 Sts	25	16	21	25

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

Sorghum Condition by Percent

	VP	P	F	G	EX
CO	1	1	24	69	5
KS	1	5	25	62	7
NE	0	2	14	73	11
OK	0	1	16	77	6
SD	0	1	31	57	11
TX	0	1	26	50	23
6 Sts	1	3	25	59	12
Prev Wk	1	2	24	60	13
Prev Yr	4	11	33	44	8

Peanuts Percent Pegging

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AL	89	87	94	80
FL	84	84	92	90
GA	93	92	96	92
NC	87	72	86	88
OK	59	45	50	63
SC	76	87	89	90
TX	64	26	32	57
VA	71	74	82	71
8 Sts	85	78	84	85

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

Peanut Condition by Percent

	VP	P	F	G	EX
AL	0	7	47	38	8
FL	1	5	30	61	3
GA	1	4	26	58	11
NC	3	7	29	52	9
OK	0	0	17	72	11
SC	0	0	24	68	8
TX	0	0	4	87	9
VA	0	0	2	79	19
8 Sts	1	4	25	61	9
Prev Wk	1	3	25	62	9
Prev Yr	0	2	23	61	14

Crop Progress and Condition

Week Ending July 28, 2019

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

Winter Wheat Percent Harvested

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AR	100	100	100	100
CA	95	95	97	95
CO	96	65	80	92
ID	22	2	6	22
IL	100	94	98	99
IN	100	92	96	98
KS	100	96	98	99
MI	85	14	45	78
MO	100	100	100	99
MT	17	0	1	35
NE	88	33	55	89
NC	100	100	100	100
OH	99	83	93	96
OK	100	100	100	100
OR	52	17	33	53
SD	74	0	24	64
TX	100	100	100	100
WA	26	10	19	39
18 Sts	84	69	75	86

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

Rice Percent Headed

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
AR	67	18	33	56
CA	15	15	25	22
LA	93	78	82	89
MS	58	48	60	68
MO	49	7	14	45
TX	93	78	86	88
6 Sts	61	31	42	57

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

Rice Condition by Percent

	VP	P	F	G	EX
AR	2	9	30	40	19
CA	0	0	0	60	40
LA	0	4	27	61	8
MS	1	3	30	54	12
MO	3	5	39	34	19
TX	0	2	27	60	11
6 Sts	1	6	25	48	20
Prev Wk	1	6	28	46	19
Prev Yr	1	7	23	55	14

Spring Wheat Percent Headed

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
ID	94	93	95	97
MN	100	100	100	98
MT	94	87	96	96
ND	99	93	98	97
SD	100	86	94	100
WA	100	100	100	100
6 Sts	99	92	97	98

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

Spring Wheat Condition by Percent

	VP	P	F	G	EX
ID	7	4	20	60	9
MN	0	1	16	70	13
MT	1	13	22	54	10
ND	0	3	19	67	11
SD	1	2	32	54	11
WA	2	4	28	57	9
6 Sts	1	5	21	62	11
Prev Wk	0	4	20	63	13
Prev Yr	1	3	18	64	14

Oats Percent Headed

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
IA	100	98	99	100
MN	100	99	100	99
NE	100	97	100	100
ND	99	87	96	96
OH	100	91	95	100
PA	93	92	97	97
SD	100	90	95	100
TX	100	100	100	100
WI	99	88	93	99
9 Sts	100	94	97	100

These 9 States planted 66% of last year's oat acreage.

Oats Percent Harvested

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
IA	57	12	39	60
MN	13	0	3	17
NE	90	14	49	75
ND	4	0	0	8
OH	76	8	46	57
PA	28	1	14	23
SD	50	0	8	47
TX	100	99	100	100
WI	17	1	6	18
9 Sts	36	12	21	35

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

Oat Condition by Percent

	VP	P	F	G	EX
IA	1	4	32	53	10
MN	1	3	26	59	11
NE	2	4	25	58	11
ND	0	2	18	61	19
OH	1	10	44	42	3
PA	0	5	18	59	18
SD	1	2	24	63	10
TX	5	12	32	43	8
WI	1	5	23	49	22
9 Sts	2	6	26	53	13
Prev Wk	3	5	28	52	12
Prev Yr	4	3	22	58	13

Crop Progress and Condition

Week Ending July 28, 2019

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

Barley Percent Headed

	Prev Year	Prev Week	Jul 28 2019	5-Yr Avg
ID	96	87	95	97
MN	99	99	100	98
MT	94	88	95	97
ND	99	93	97	97
WA	100	98	100	100
5 Sts	97	90	96	98

These 5 States planted 78% of last year's barley acreage.

Barley Condition by Percent

	VP	P	F	G	EX
ID	1	2	12	73	12
MN	1	1	19	68	11
MT	0	9	21	50	20
ND	0	2	16	71	11
WA	1	2	28	64	5
5 Sts	0	5	18	62	15
Prev Wk	0	5	19	58	18
Prev Yr	1	2	17	66	14

Pasture and Range Condition by Percent
Week Ending Jul 28, 2019

	VP	P	F	G	EX		VP	P	F	G	EX
AL	2	10	41	44	3	NH	0	18	35	43	4
AZ	6	29	35	29	1	NJ	0	0	20	78	2
AR	0	3	27	50	20	NM	10	29	38	21	2
CA	30	10	15	45	0	NY	2	6	26	50	16
CO	1	4	21	64	10	NC	1	7	31	56	5
CT	0	8	58	29	5	ND	1	6	19	58	16
DE	4	17	32	42	5	OH	1	18	41	37	3
FL	2	4	17	59	18	OK	1	4	29	59	7
GA	3	12	38	43	4	OR	1	22	27	45	5
ID	0	5	21	57	17	PA	0	2	34	51	13
IL	6	12	44	27	11	RI	0	20	50	30	0
IN	3	12	39	37	9	SC	0	10	40	43	7
IA	2	10	32	49	7	SD	1	3	16	53	27
KS	1	4	26	57	12	TN	1	5	25	57	12
KY	1	7	25	59	8	TX	4	14	29	41	12
LA	0	5	39	51	5	UT	0	3	17	63	17
ME	0	0	29	57	14	VT	0	25	50	25	0
MD	2	5	29	56	8	VA	2	16	33	43	6
MA	0	5	15	70	10	WA	3	19	45	33	0
MI	4	14	31	43	8	WV	1	7	25	61	6
MN	1	4	21	59	15	WI	1	7	27	46	19
MS	0	6	31	50	13	WY	0	7	25	61	7
MO	0	7	21	57	15	48 Sts	2	8	26	52	12
MT	1	4	22	56	17						
NE	1	2	16	68	13	Prev Wk	2	7	25	53	13
NV	5	10	35	50	0	Prev Yr	11	18	30	35	6

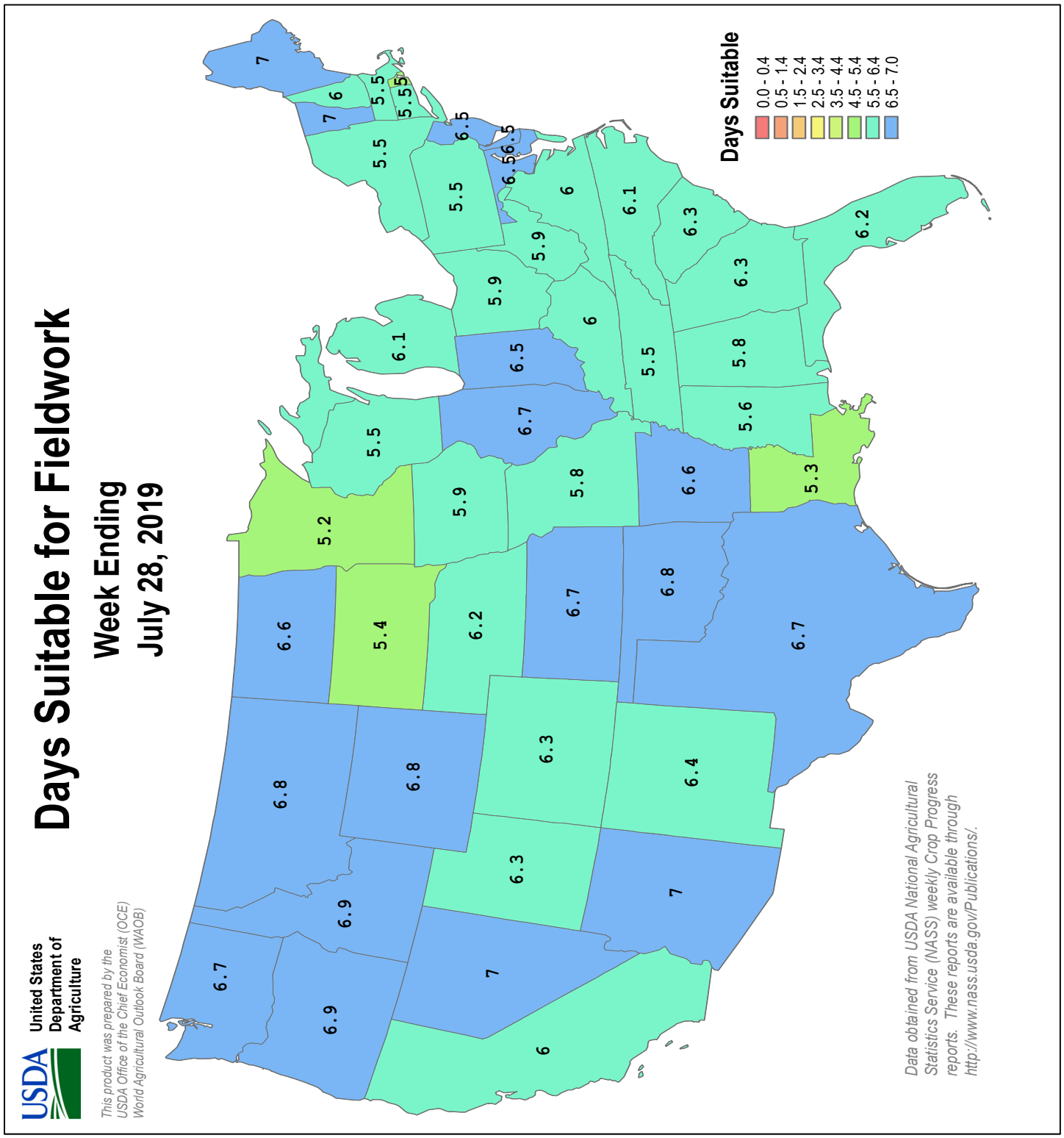
VP - Very Poor; P - Poor; F - Fair; G - Good; EX - Excellent

NA - Not Available; *Revised

Crop Progress and Condition

Week Ending July 28, 2019

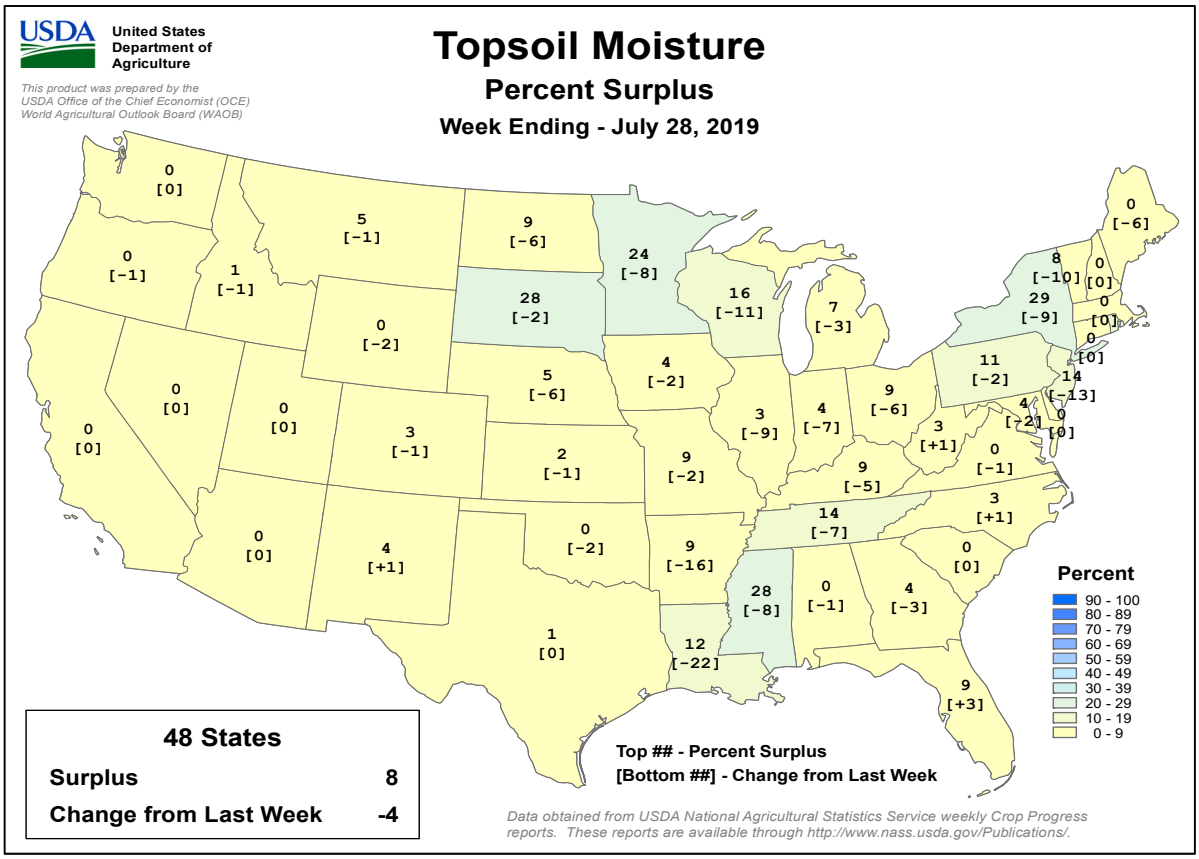
Weekly U.S. Progress and Condition Data provided by USDA/NASS

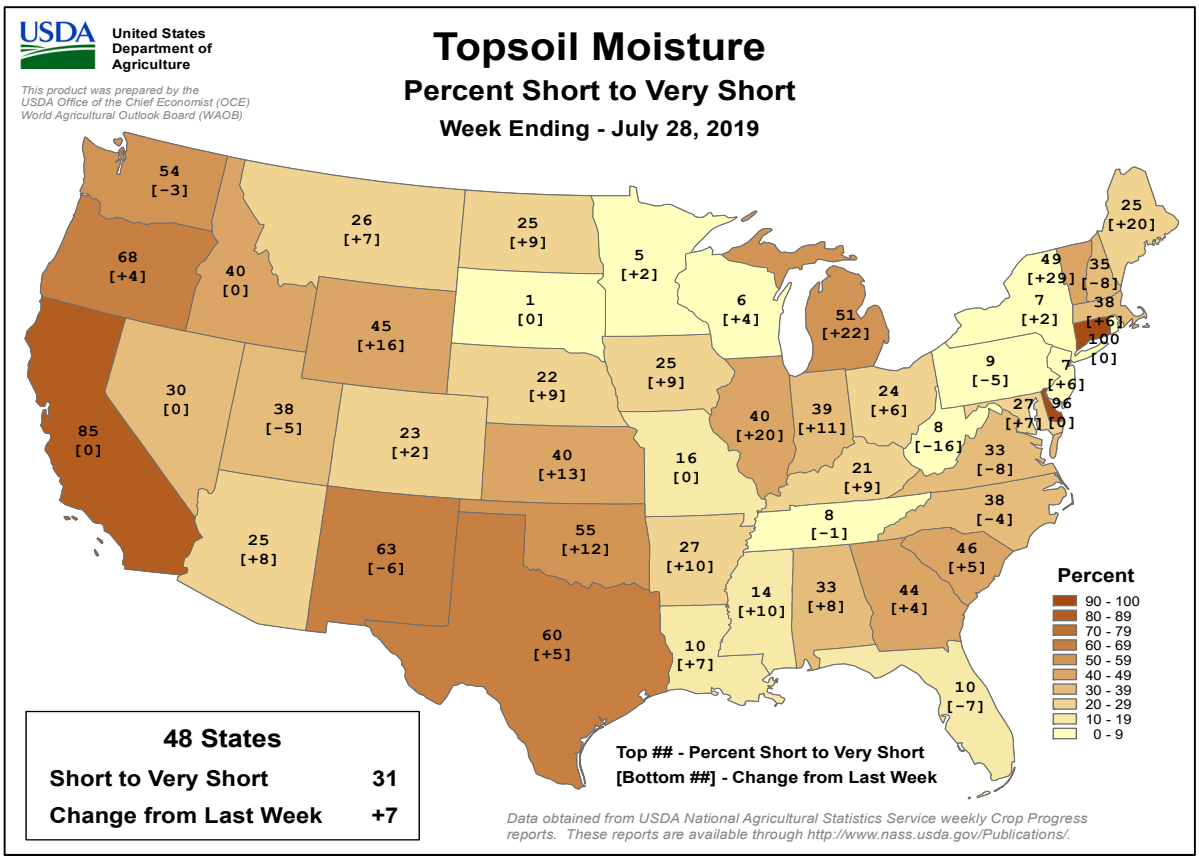


Crop Progress and Condition

Week Ending July 28, 2019

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

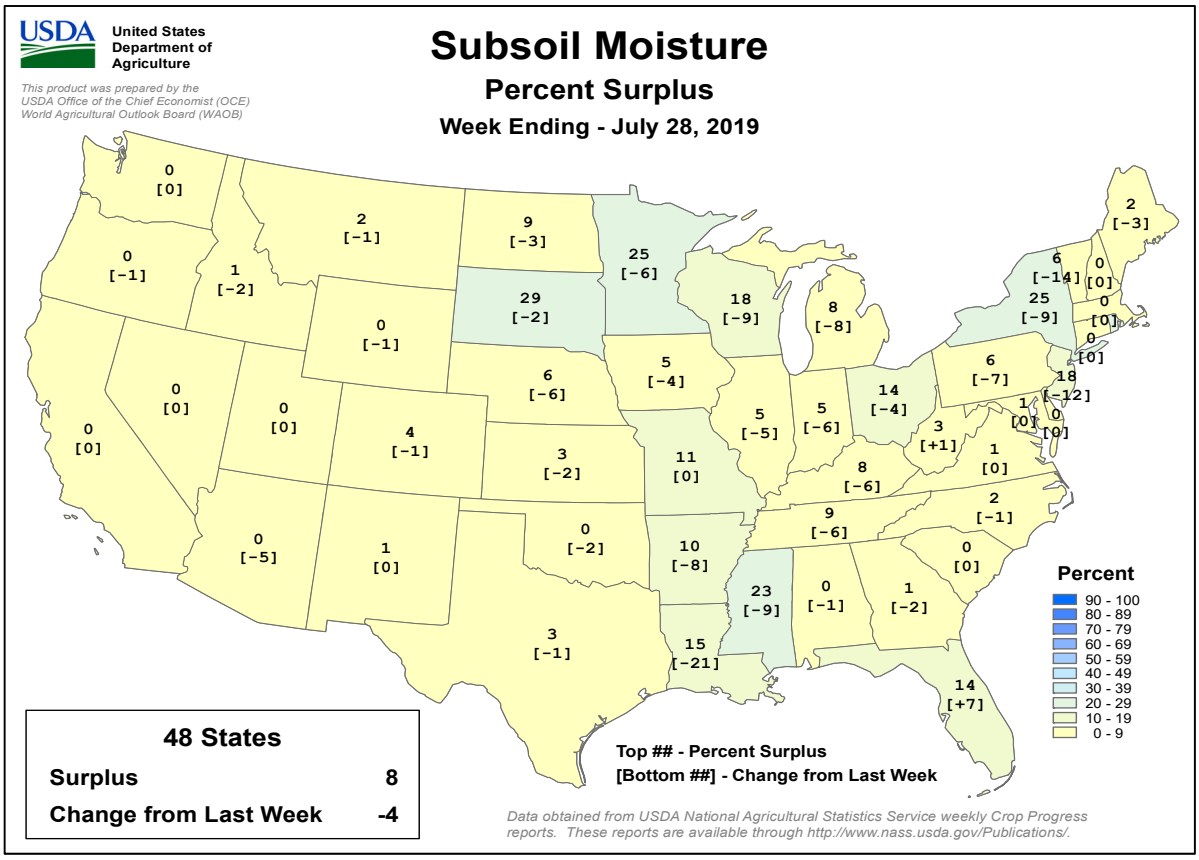


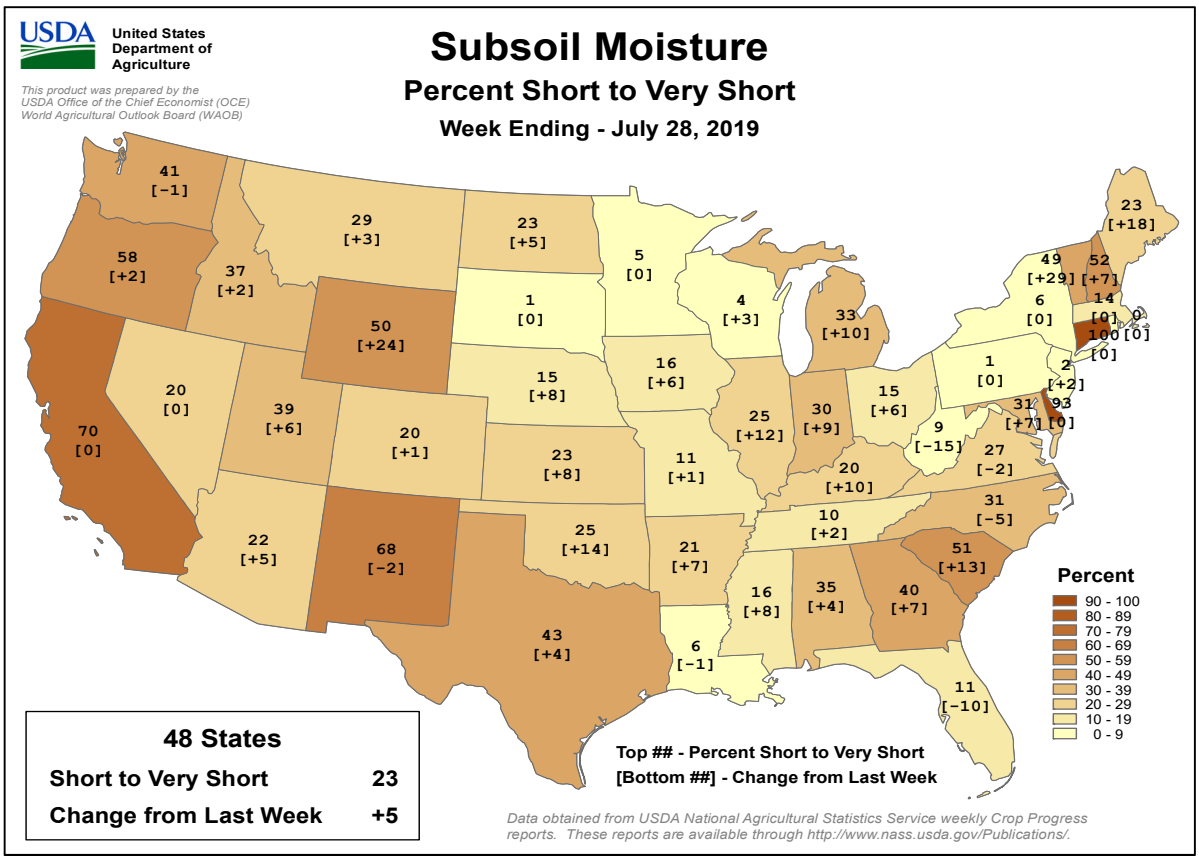


Crop Progress and Condition

Week Ending July 28, 2019

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





International Weather and Crop Summary

July 21-27, 2019

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

HIGHLIGHTS

EUROPE: The return of extreme heat renewed stress on reproductive summer crops across western and central Europe, while conditions remained good to excellent in the southeast.

WESTERN FSU: Widespread rain and near-normal temperatures were favorable for reproductive to filling summer crops.

EASTERN FSU: Heat abated in the west but continued in the south, while showers maintained excellent wheat prospects in eastern growing areas.

MIDDLE EAST: Sunny skies benefited reproductive to filling summer crops in Turkey after early July rain.

SOUTH ASIA: Monsoon showers returned to India following a brief lull.

EASTERN ASIA: Rainfall was lighter in portions of southern China, while heavier showers in the northeast maintained favorable soil moisture for reproductive crops.

SOUTHEAST ASIA: Widespread showers maintained or improved moisture supplies for rice and other summer crops, but more rain is needed to overcome seasonal moisture deficits in parts of Thailand and the Philippines.

AUSTRALIA: Crop conditions remained good in the west and south but deteriorated further in the northeast.

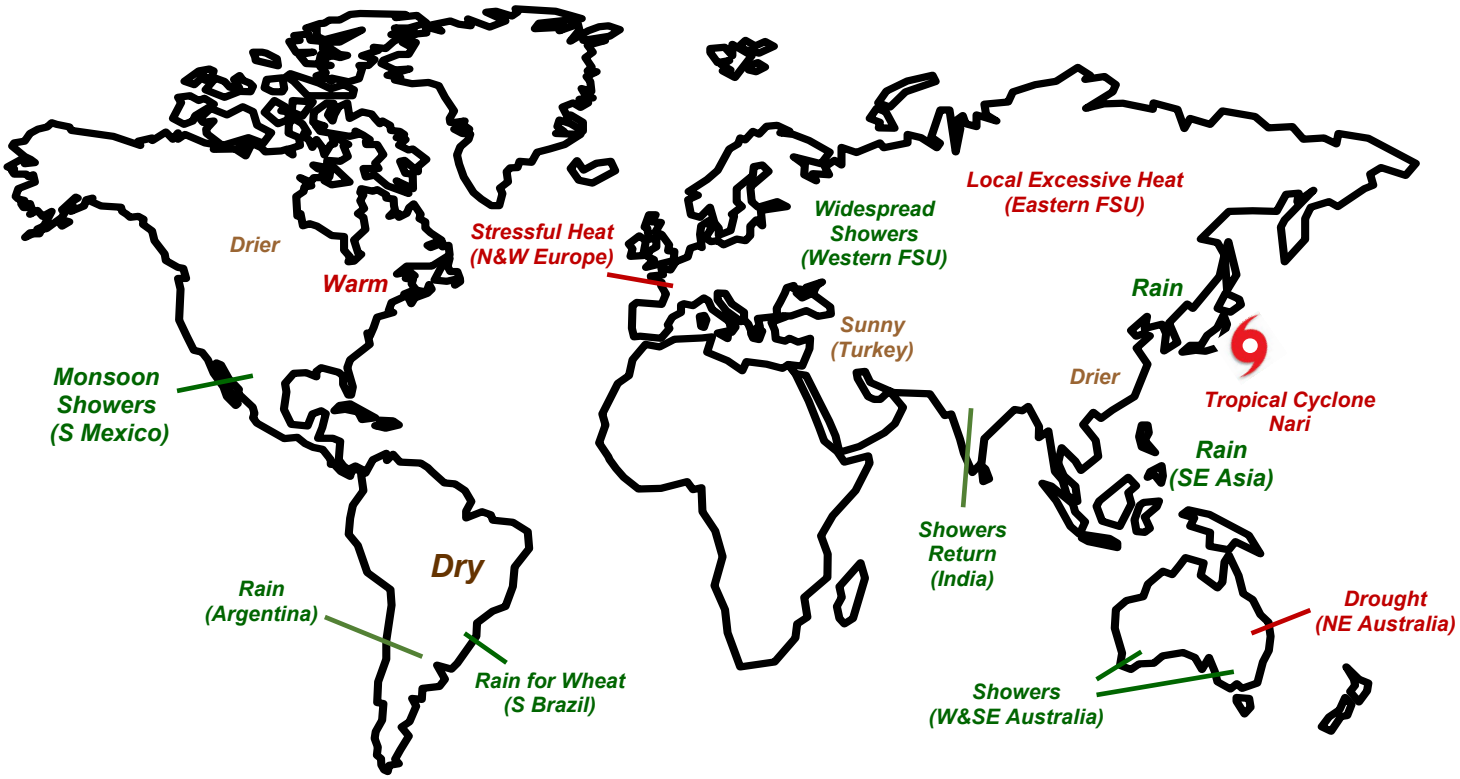
ARGENTINA: Heavy rain increased moisture for winter grains in northeastern Argentina.

BRAZIL: Dry weather favored harvesting of corn, cotton, and other summer crops in most major production areas.

MEXICO: Rain benefited summer crops in previously dry southern farming areas.

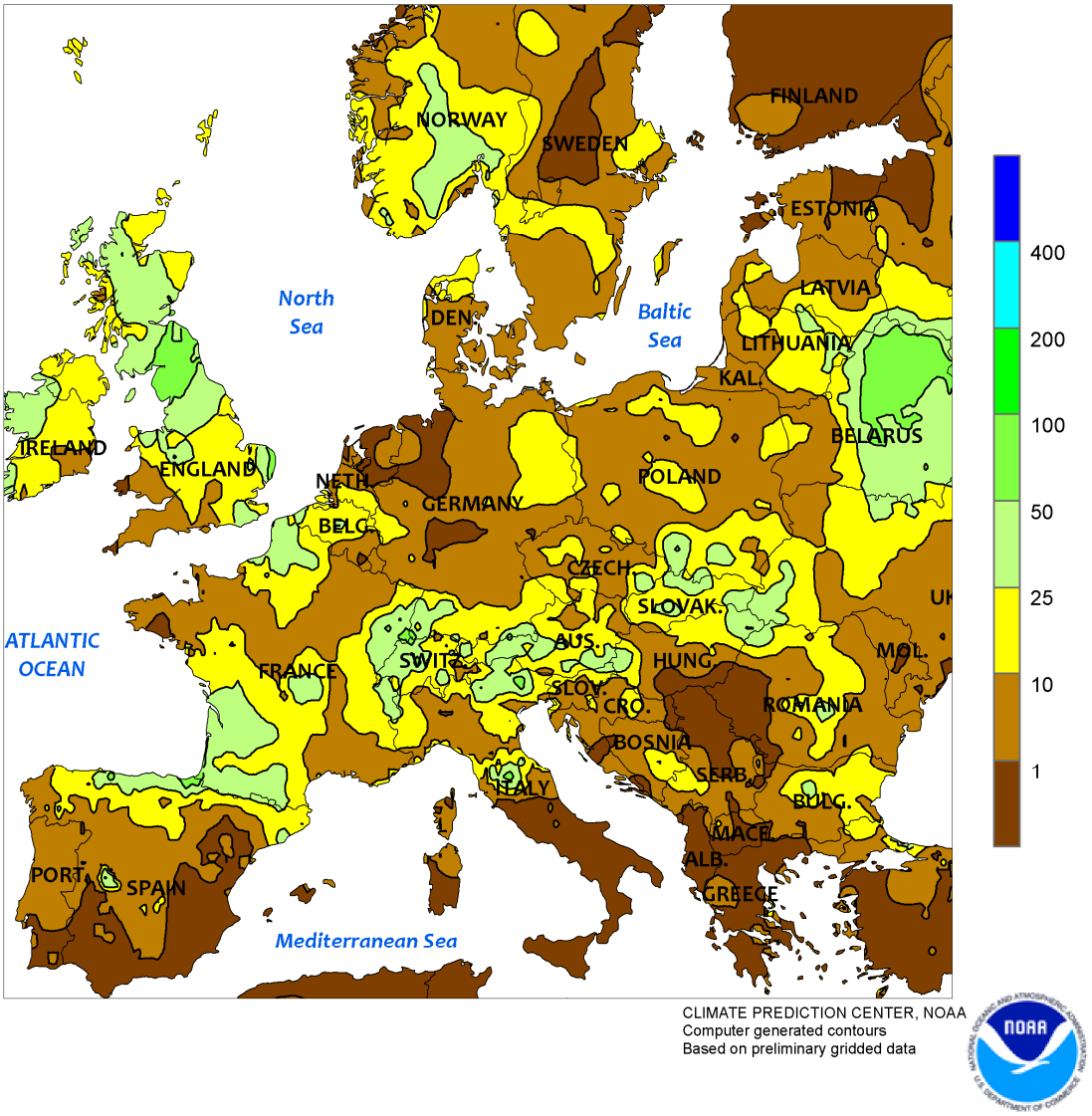
CANADIAN PRAIRIES: Dry, occasionally hot weather fostered rapid development of spring grains and oilseeds.

SOUTHEASTERN CANADA: Warm, sunny weather fostered rapid growth of corn and soybeans.



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

EUROPE
Total Precipitation (mm)
July 21 - 27, 2019

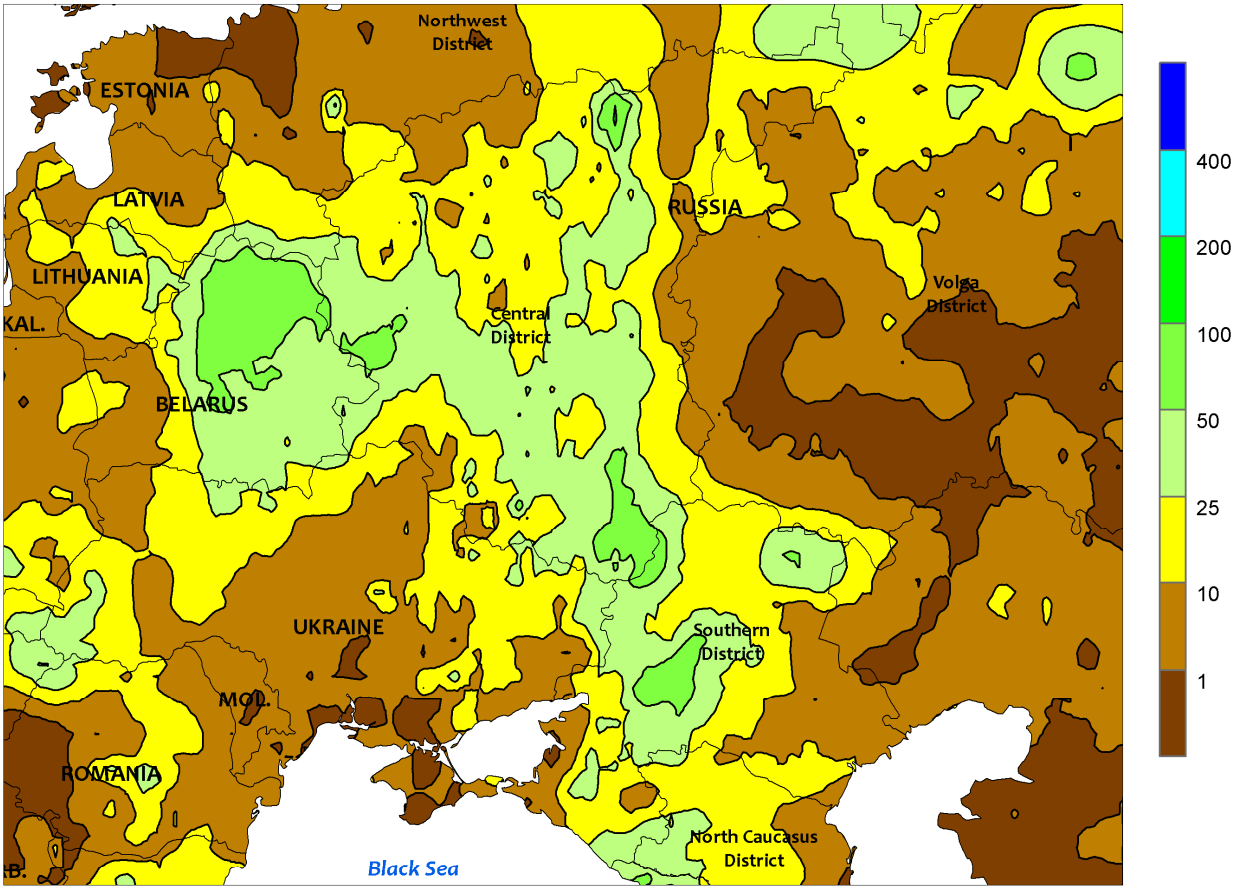


EUROPE

Heat returned, renewing crop stress over central and western growing areas. Temperatures during the period averaged 4 to 8°C above normal, with somewhat cooler readings (1-3°C above normal) noted in southeastern Europe. Maximum temperatures topped 35°C across the western two thirds of the continent, with scorching heat (highs approaching or topping 40°C) noted from western France into northwestern Germany and the Low Countries. The resumption of hot weather after last week's respite was especially detrimental to corn in southern France, where temperatures as high as 42°C were coincident with the tasseling and silking stages of development. Soybeans and sunflowers were likewise in the reproductive stages of development and also adversely impacted, though oilseeds are typically more heat tolerant. Furthermore, protracted short-term dryness exacerbated the impacts of the heat; through the first three weeks of July, 30-day rainfall had totaled a meager 10 percent of normal or less over much of France, and less than 50 percent of normal from Germany into Poland and Hungary. At the end of week, much-needed rain (10-50 mm) and cooler temperatures over central and western Europe brought an end to the latest heat wave and provided sorely needed soil moisture. Producers in the heat- and drought-afflicted areas will likely need time to ascertain the extent of crop impacts, but some yield losses are likely to the region's corn, sunflowers, and soybeans. In contrast, reproductive to filling summer crops in southeastern Europe were developing favorably due to good rains during the spring and summer (to date) as well as a lack of extreme heat, and yield prospects for corn, sunflowers and soybeans remained good to excellent.

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

WESTERN FSU
Total Precipitation (mm)
July 21 - 27, 2019



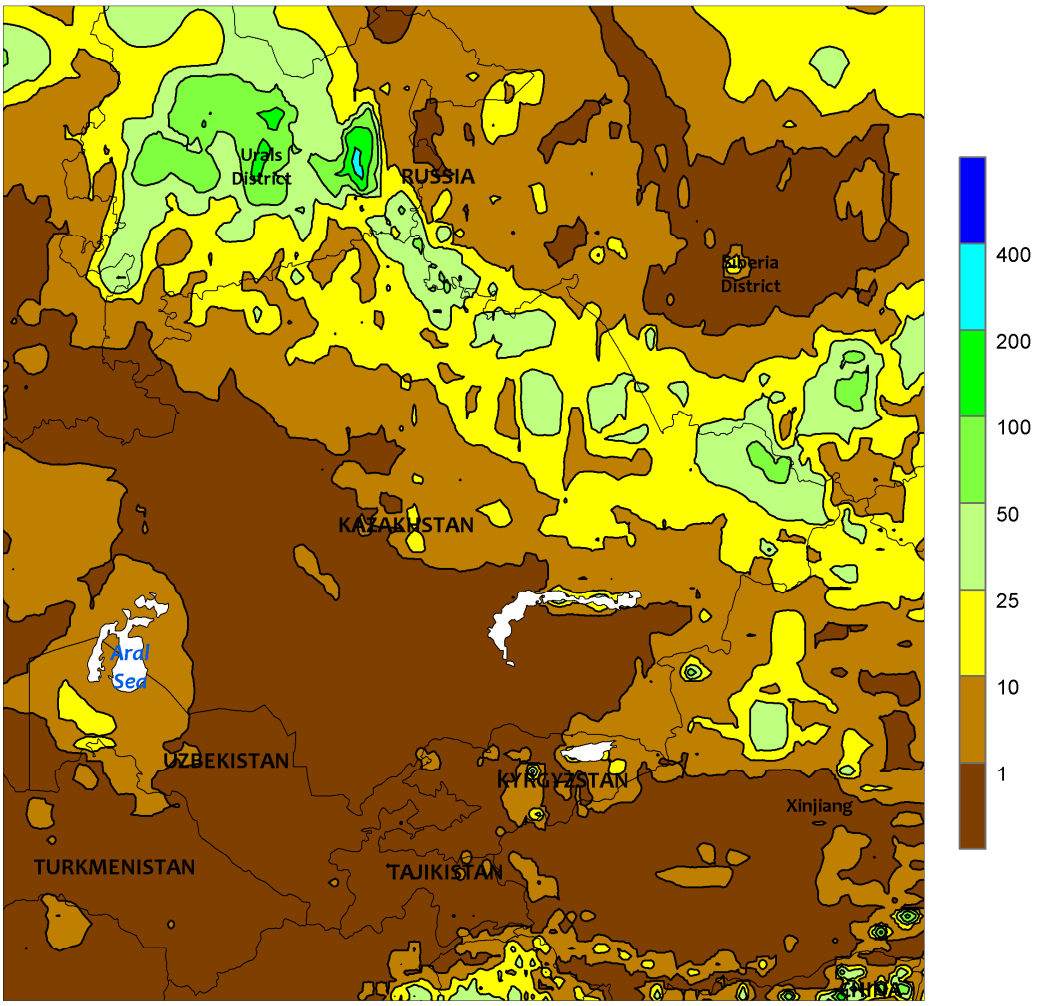
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

WESTERN FSU

Favorable conditions for summer crops continued over much of the region. For the third consecutive week, a lack of extreme heat (29-34°C) coupled with widespread showers and thunderstorms (15-100 mm, locally more) were ideal for corn, soybeans, and sunflowers progressing through the temperature-sensitive reproductive and filling stages of development. While localized pockets of short-term dryness (30-day rainfall locally less than half of normal) have been noted in northern and western Ukraine, the lack of heat stress lessened the potential impacts on corn, soybeans, and sunflowers. Consequently, yield prospects indicated by satellite-derived vegetation health data for reproductive (north) to filling (south) summer crops remained favorable.

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

EASTERN FSU
Total Precipitation (mm)
July 21 - 27, 2019



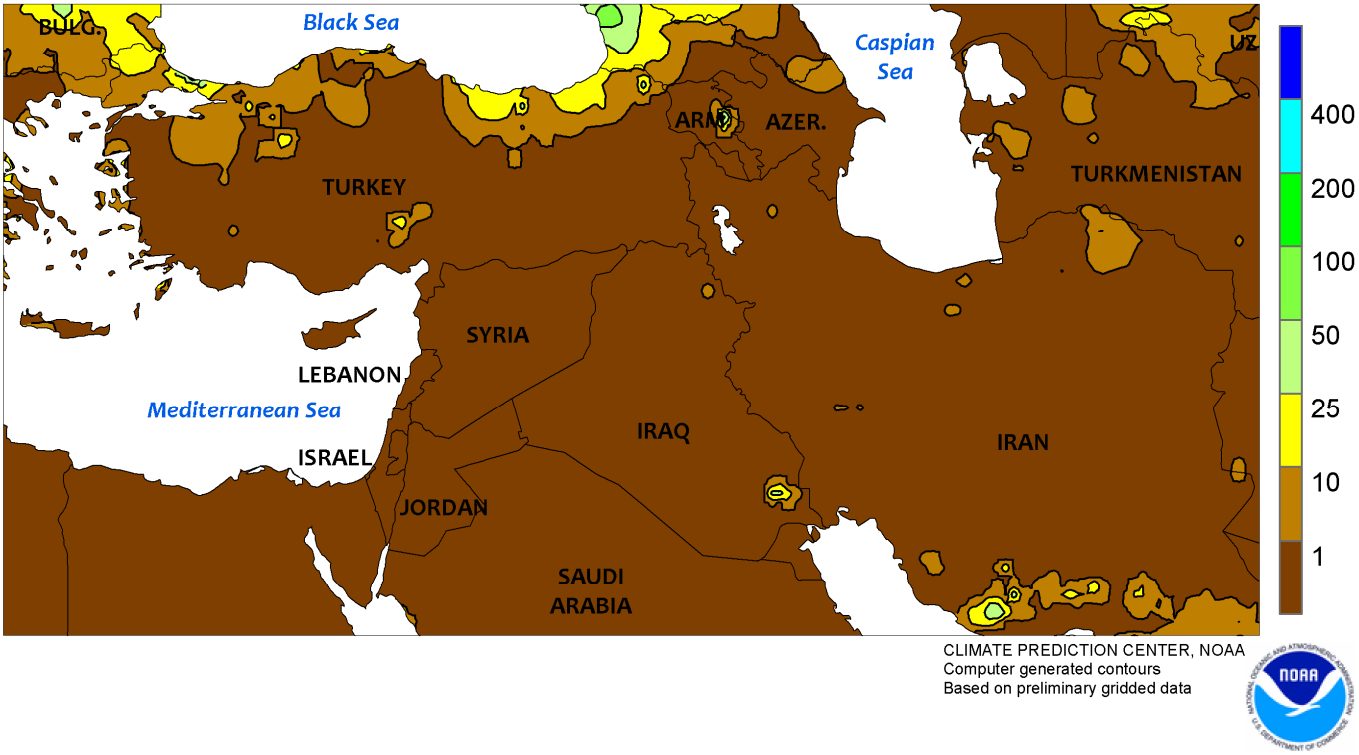
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN FSU

Western heat and dryness abated, while the favorable growing season continued in the east. For much of the summer, drought and excessive heat have afflicted spring grains in the southeastern Volga District (west-central Russia) and the Kostanay Oblast (northwestern Kazakhstan). In particular, daytime highs in early to mid-July soared into the middle and upper 30s (degrees C) during the heading and flowering stages of development. While this week's cooler weather (1-2°C above normal) and scattered albeit variable showers (1-15 mm) were welcome, satellite-derived vegetation health data indicated dire crop prospects in the aforementioned locales. Meanwhile, moderate to heavy rain (10-80 mm) from the Urals District southeastward into northeastern Kazakhstan and Russia's Siberia District maintained favorable moisture supplies for heading to flowering wheat and barley. Conditions remained good to excellent in these central and eastern growing areas, as indicated by satellite-derived vegetation health data. Farther south, sunny skies and above-normal temperatures maintained very high irrigation demands for flowering cotton in Uzbekistan and environs. The hotter-than-normal weather maintained crop stress; daytime highs in Uzbekistan reached as high as 46°C, with 7-day average temperatures above 30°C (an indicator of stress to flowering cotton) — locally greater than 35°C — for a third consecutive week across Turkmenistan, Uzbekistan, and southwestern Kazakhstan. As of July 27, daytime highs topped 42°C on 18 of 21 consecutive days in central Uzbekistan as cotton progressed through the flowering stage.

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

MIDDLE EAST
Total Precipitation (mm)
July 21 - 27, 2019



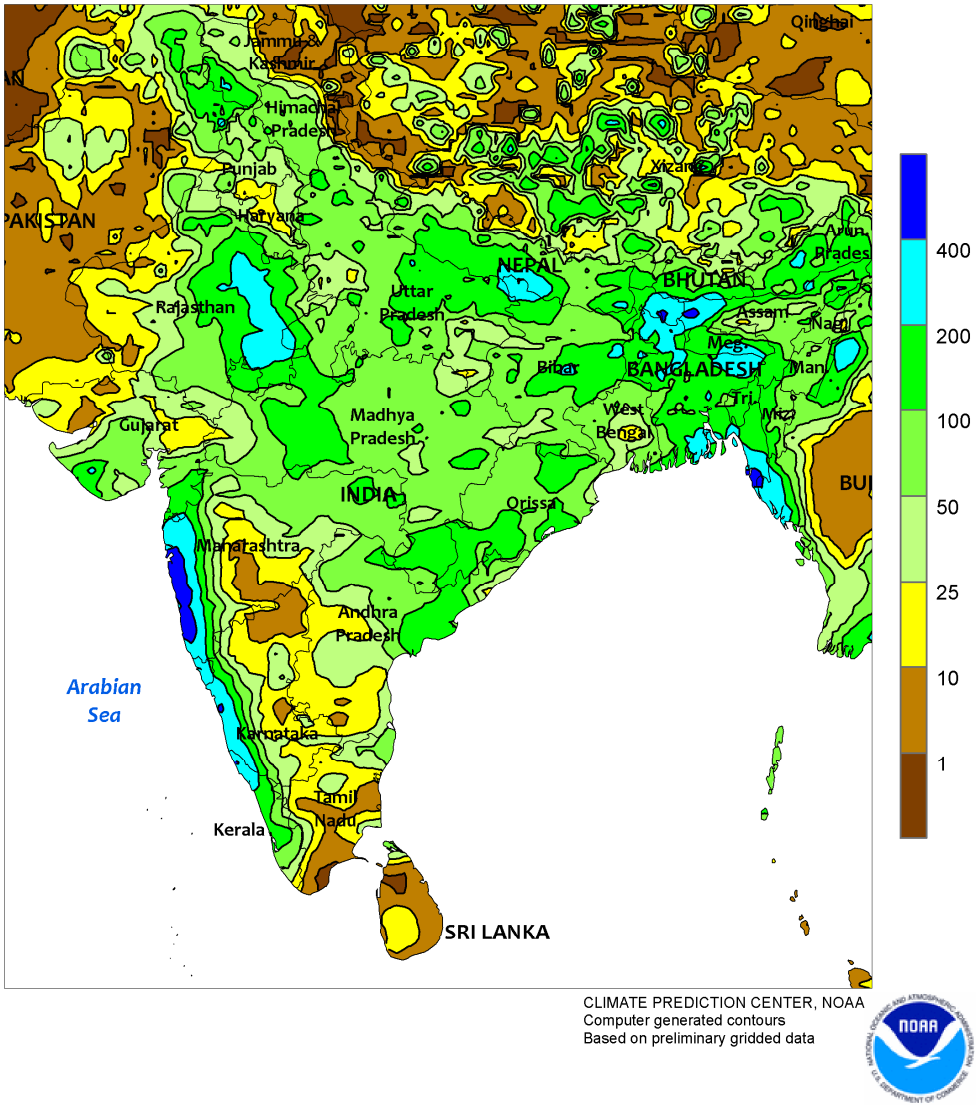
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MIDDLE EAST

Mostly dry weather in Turkey promoted summer crop development. After early July supplemental rainfall, sunny skies in Turkey were beneficial for summer crops progressing through the reproductive and filling stages of development. Summer crop prospects remained good to excellent, as indicated by satellite-derived vegetation health data. Elsewhere, seasonably sunny skies favored the development of irrigated summer crops and fieldwork.

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

SOUTH ASIA
Total Precipitation (mm)
July 21 - 27, 2019



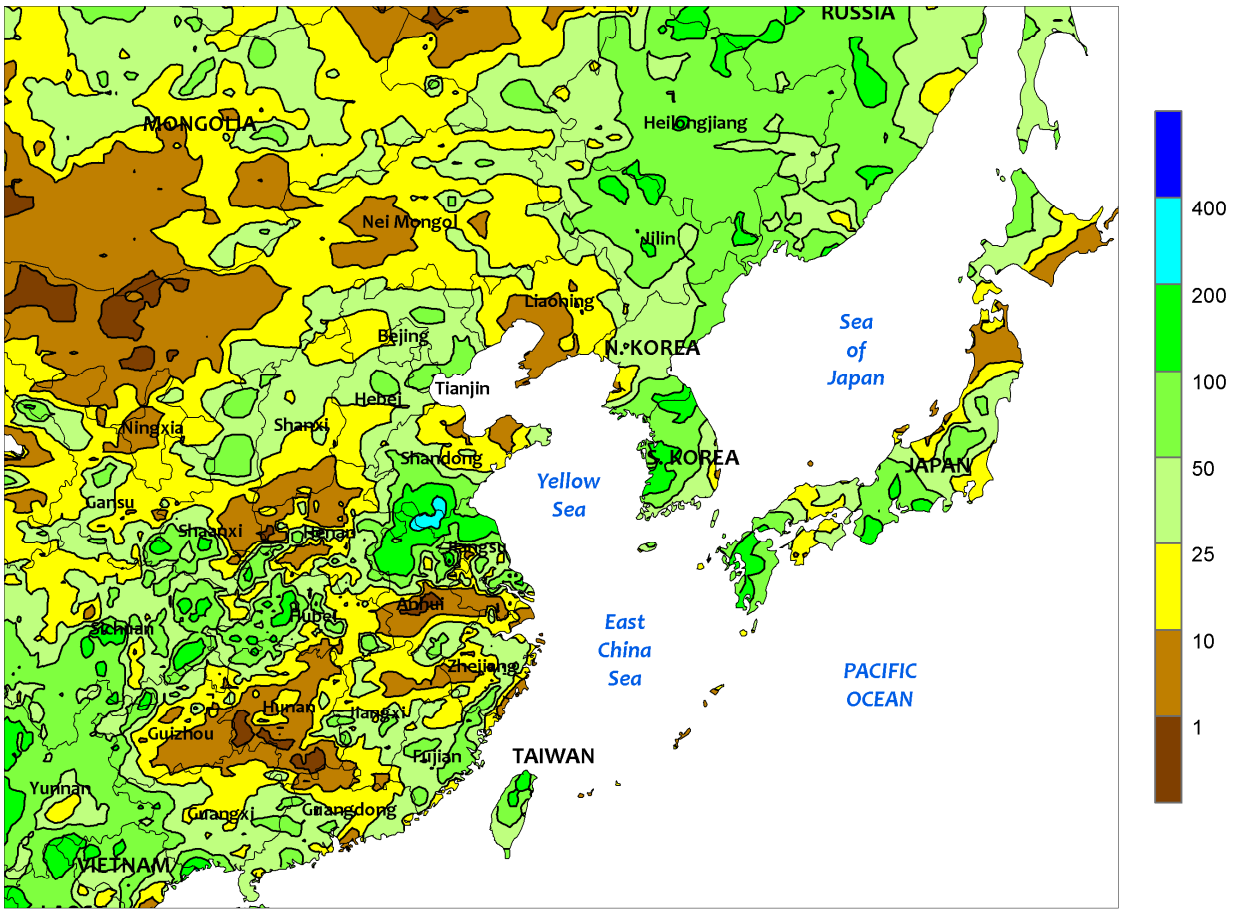
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTH ASIA

Widespread monsoon showers returned to India after a brief lull. Rainfall totals between 50 and 200 mm bolstered soil moisture and irrigation supplies for kharif crop establishment as well as encouraged planting. The moisture was particularly welcome in Gujarat and other western cotton and groundnut areas that were experiencing below-average seasonal rainfall. However, temperatures remained 1 to 3°C above normal across a swath of central India, causing localized stress to vegetative crops. Elsewhere, heavier-than-normal showers (100-300 mm) in Bangladesh maintained abundant to locally excessive moisture supplies for rice (aman), while showers (10-50 mm) in northern Pakistan increased irrigation supplies for cotton and rice nearing reproduction.

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

EASTERN ASIA
Total Precipitation (mm)
July 21 - 27, 2019



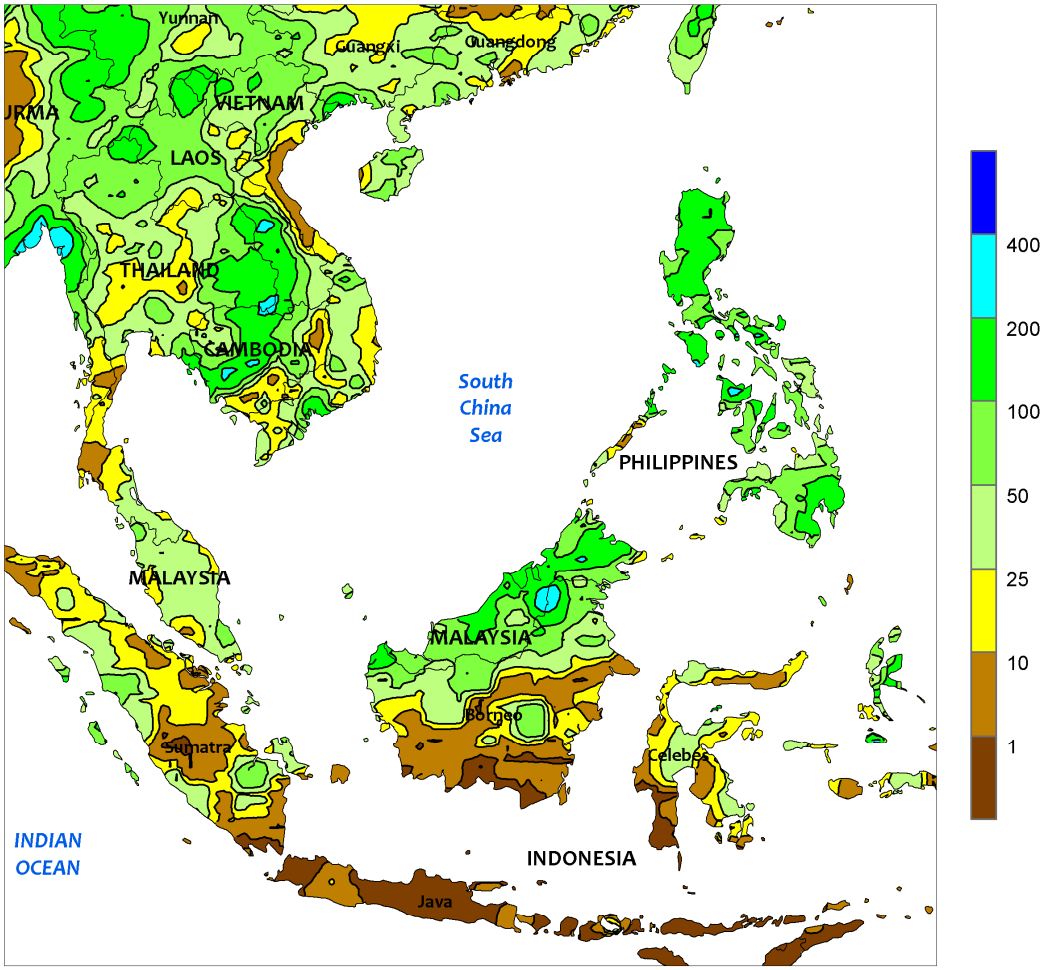
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN ASIA

Rainfall amounts varied widely (1-100 mm or more) across eastern and southern China. Moisture in the south remained adequate for late-crop rice and improved slightly for single-crop rice nearer to the Yangtze River. In addition, rainfall on large portions of the North China Plain also improved moisture conditions for summer crops, although dryness was still prevalent in western sections (Henan and environs). At the same time, stressful heat (weekly average temperatures over 30°C; 3-5°C above normal) was reported throughout the Yangtze Valley and on the North China Plain. In the northeast, widespread showers (25-100 mm or more) in Heilongjiang, Jilin, and neighboring prefectures of Inner Mongolia maintained good to excellent soil moisture for reproductive corn and soybeans. However, lesser totals (below 25 mm) were reported in Liaoning where significant short-term moisture deficits continued. Meanwhile in western China, nighttime temperatures in northwestern cotton areas of Xinjiang have been consistently well above average (nearly 5°C) since late June, preventing recovery from the hot daytime temperatures and causing stress to the crop. In other parts of the region, late-week showers on the Korean Peninsula provided some relief from seasonal drought conditions, especially along western border areas. A tropical cyclone (Nari) made landfall in southeastern Japan with winds of 35 knots and locally heavy rainfall (over 50 mm).

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

SOUTHEAST ASIA
Total Precipitation (mm)
July 21 - 27, 2019

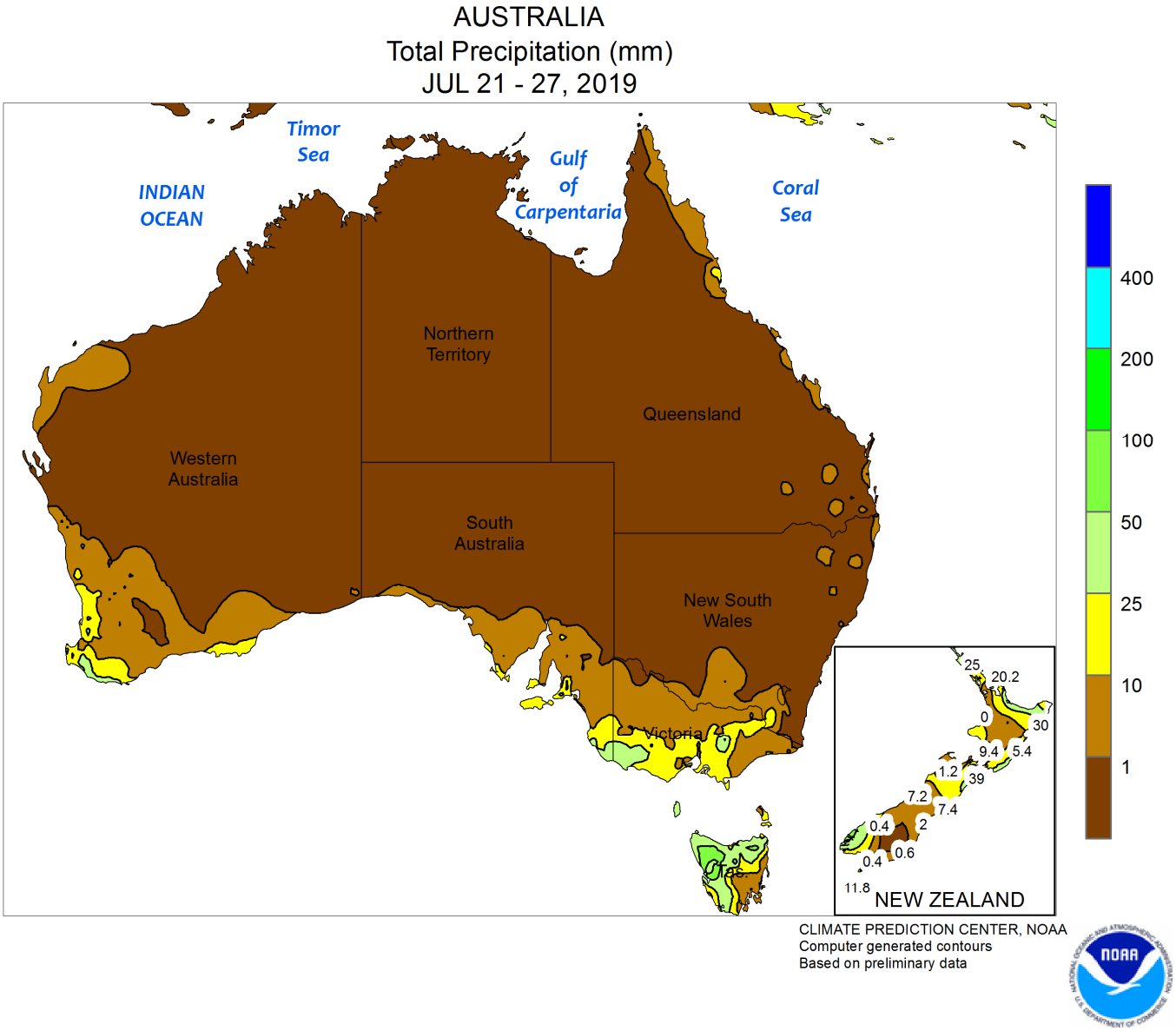


CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTHEAST ASIA

Showers were generally widespread in the region with most areas receiving over 50 mm for the week. Despite a small pocket of mostly dry weather in central Thailand, showers (25-100 mm) across the north and northeast significantly improved moisture supplies for rice. However, more rain is needed to fully eradicate lingering seasonal moisture deficits. Similarly in the Philippines, recent rainfall has improved moisture supplies for rice and other summer crops but more is needed to overcome poor June rainfall. In the southern parts of the region, showers (25-100 mm) in Malaysia and eastern Indonesia benefited oil palm, while drier weather in western Indonesia lowered soil moisture for oil palm.

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

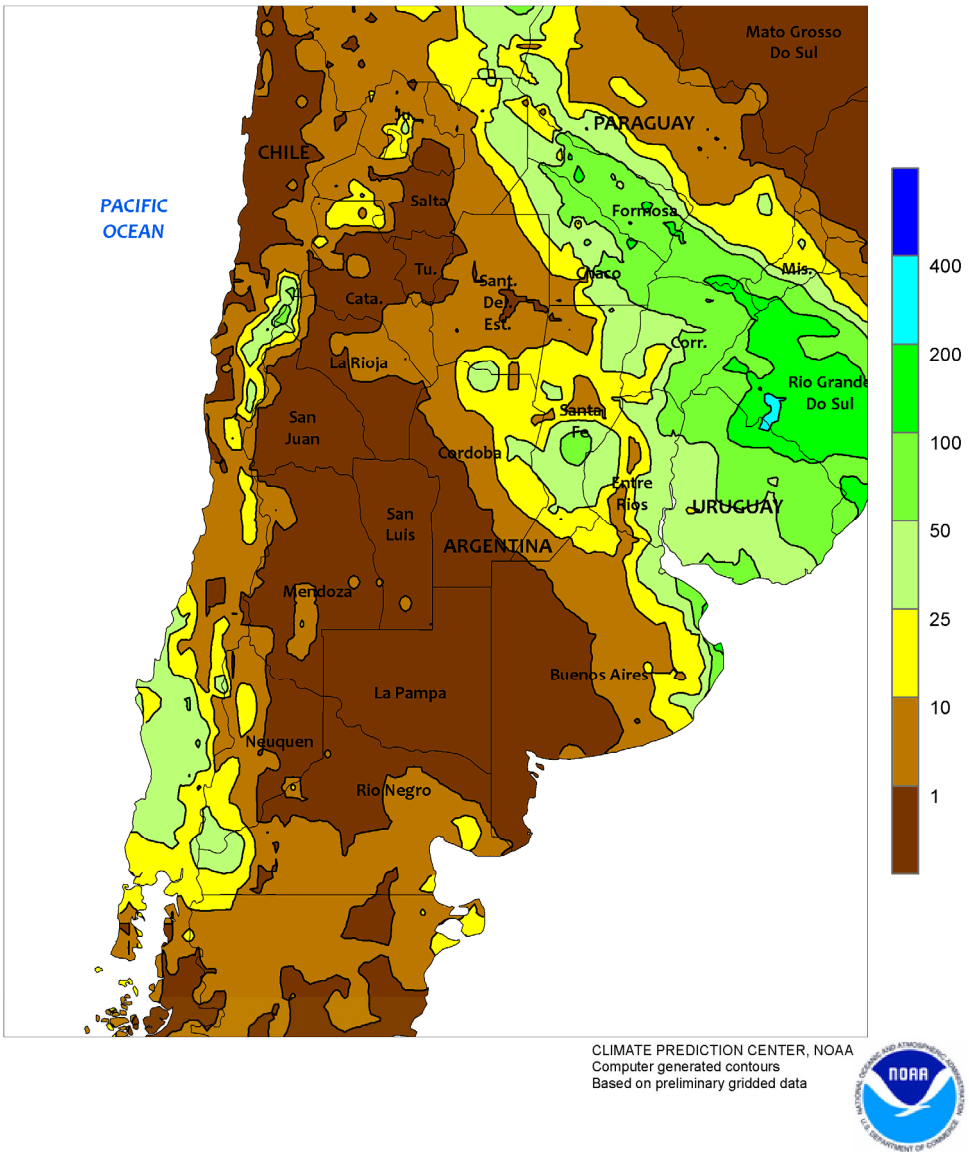


AUSTRALIA

Dry weather persisted in drought-ravaged southern Queensland and northern New South Wales, leading to a further deterioration in winter wheat conditions. The dry weather stretched into southern New South Wales as well, reducing soil moisture for vegetative winter grains and oilseeds. Elsewhere in southeastern Australia, scattered showers (3-15 mm) aided wheat, barley, and canola development in Victoria and South Australia, maintaining good yield prospects. In Western Australia, widely scattered showers (less than 5 mm in most locations) provided little additional water for vegetative winter crops, but soil moisture was generally adequate throughout the region, promoting winter grain and oilseed development. Temperatures averaged near normal in Western Australia. In southern and eastern Australia, temperatures averaged 1 to 3°C above normal, accelerating crop development.

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

ARGENTINA
Total Precipitation (mm)
July 21 - 27, 2019

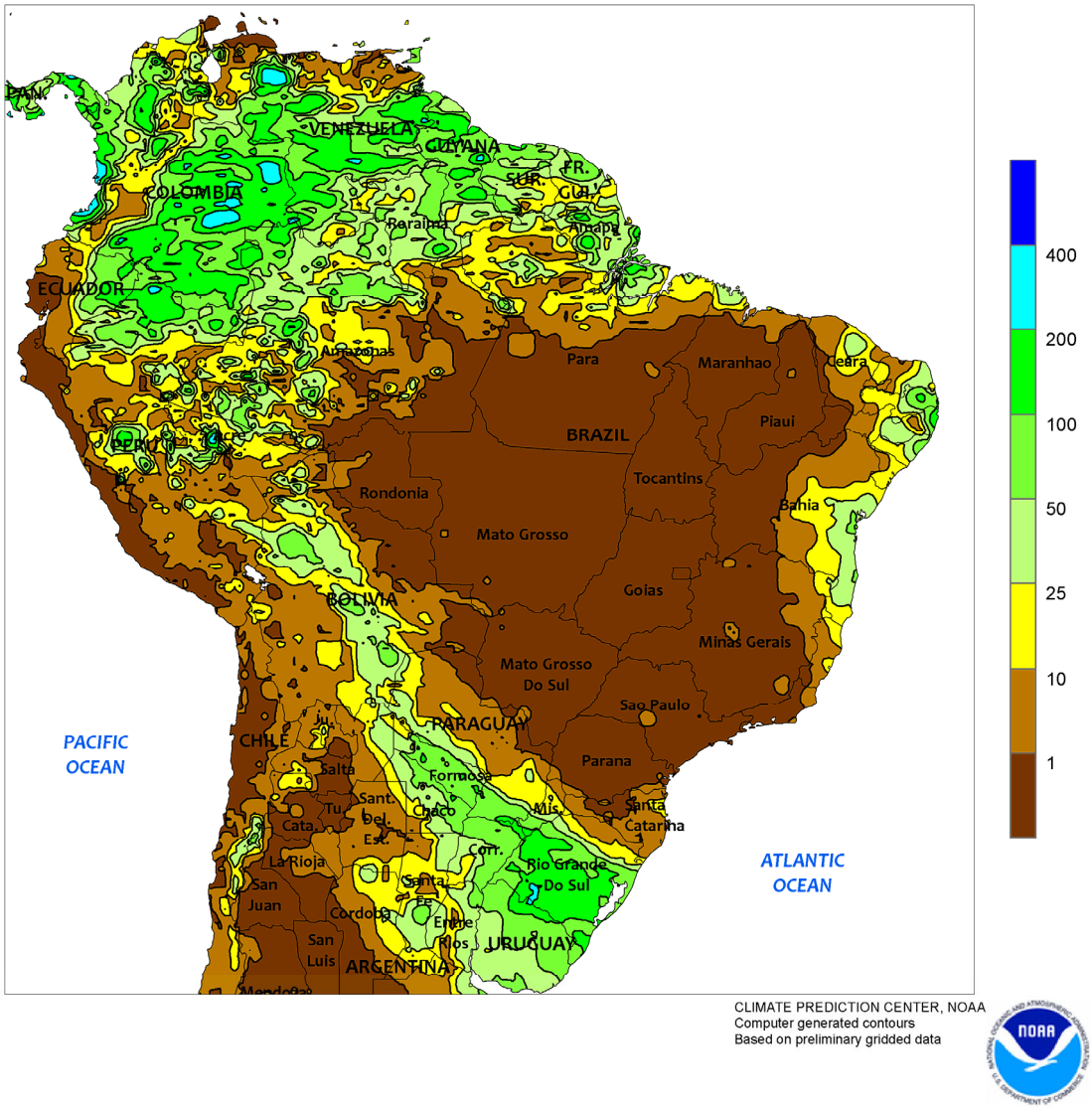


ARGENTINA

Unseasonably wet weather provided abundant moisture for germination and establishment of winter grains in northeastern production areas. Rainfall totaled 25 to 100 mm from Santa Fe and Entre Rios north and eastward through Formosa and Corrientes, with lighter amounts (10 to 25 mm, with isolated higher amounts) in eastern Buenos Aires and from Cordoba northward. Other locations in the far northwest and southwest — including La Pampa and the remainder of Buenos Aires — remained dry, favoring autumn fieldwork. Temperatures were highly variable, with highest daytime readings ranging from the middle 10s (degrees C) in southern Buenos Aires to the lower and middle 30s in and around Chaco and Formosa; freezes were confined to traditionally cooler southern and western farming areas. According to the government of Argentina, cotton was 94 percent harvested as of July 25, with the only fieldwork remaining in Cordoba, Santiago del Estero, and San Luis; corn was 82 percent harvested, lagging last year's pace by 8 points. Meanwhile, wheat was 94 percent planted, equaling last year's pace.

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

BRAZIL
Total Precipitation (mm)
July 21 - 27, 2019



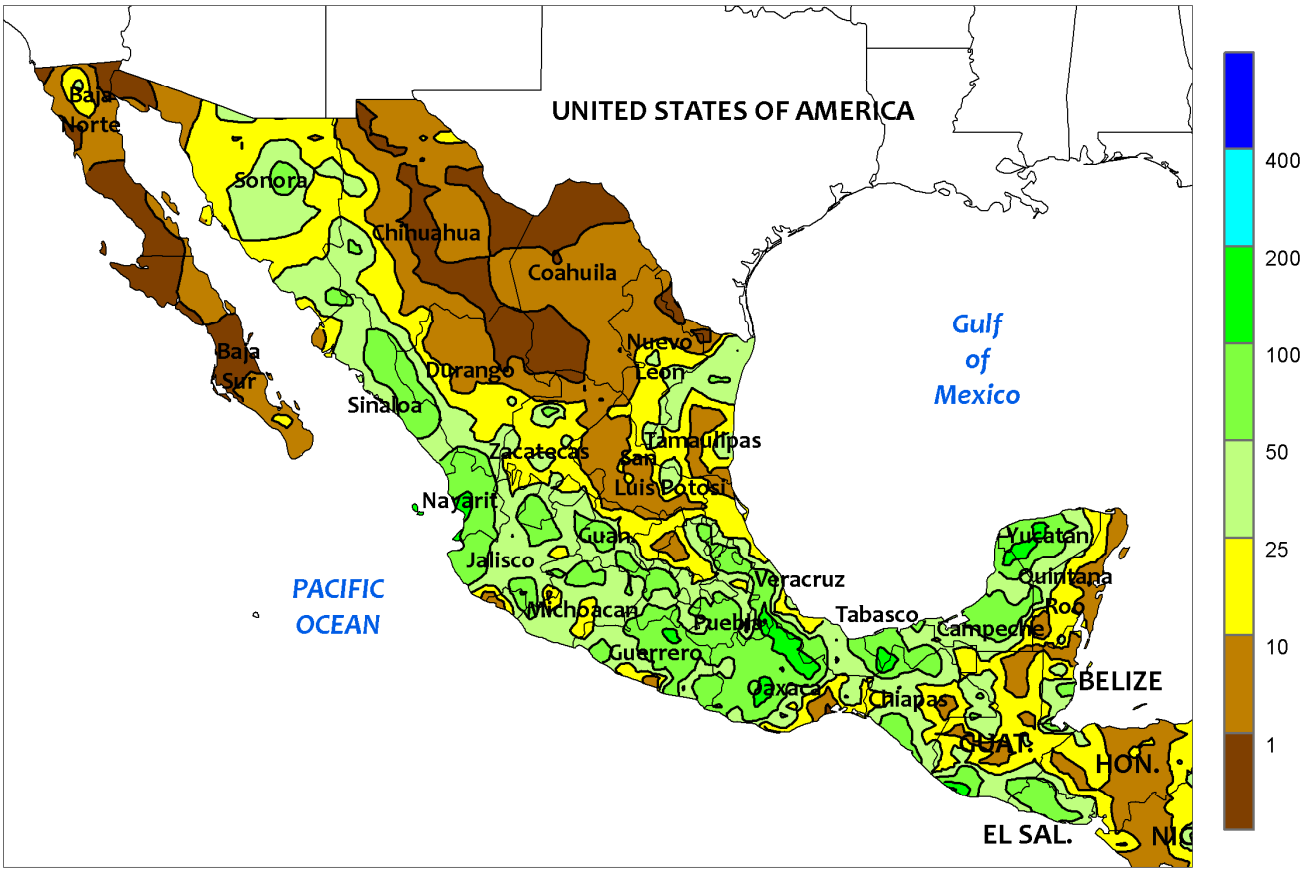
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

BRAZIL

Dry weather dominated most major agricultural areas, supporting drydown and harvesting of corn, cotton, and other summer crops. Complete dryness dominated a large area extending northeastward through Tocantins and southeastward through Sao Paulo and Minas Gerais, accompanied by summer warmth, with daytime highs reaching the middle 30s (degrees C) in traditionally warmer locations in Mato Grosso and Tocantins. According to the government of Parana, second-crop corn was 65 percent harvested as of July 22; meanwhile, nearly 60 percent of the wheat crop had reached flowering. In Mato Grosso, corn was 94 percent harvested as of July 26, 11 points ahead of the 5-year average; cotton was 25 harvested, 3 points behind average. In contrast to the aforementioned dry farming areas, heavy rain (25-100 mm, locally approaching 200 mm) soaked Rio Grande do Sul, where typically later-planted wheat was entering reproduction. Meanwhile, seasonal showers (10-50 mm ore more) continued along the northeastern coast, boosting moisture for coffee, sugarcane, and cocoa.

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

MEXICO
Total Precipitation (mm)
July 21 - 27, 2019



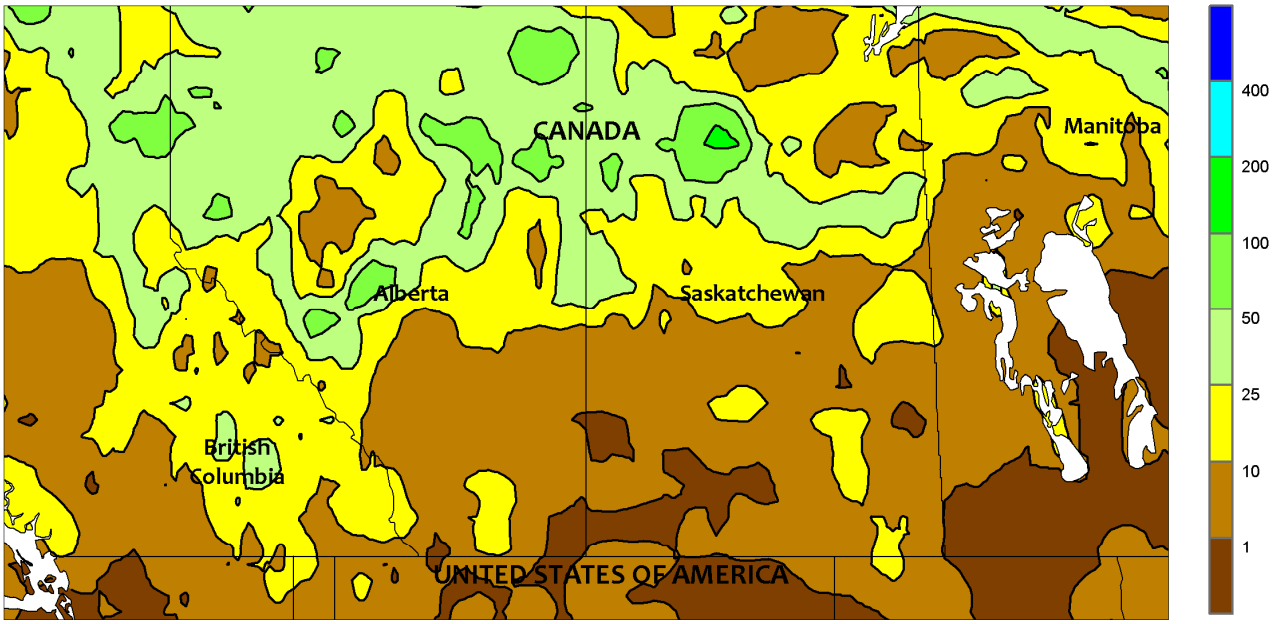
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MEXICO

Rain intensified throughout agricultural areas along the Gulf Coast, bringing some relief from previous dryness. Pockets of moderate to heavy rain (greater than 50 mm) were recorded in northeastern Tamaulipas, and from Veracruz and Tabasco northeastward through the Yucatan Peninsula. While providing a much-needed boost in moisture to sugarcane and other rain-fed crops, additional rain will be needed to more fully replenish reserves. Meanwhile, beneficial rain (10-50 mm or more) continued across the southern plateau corn belt (Jalisco to Puebla) and along the southern Pacific Coast (Michoacan to Chiapas), increasing moisture for corn, coffee, and other crops of regional importance. Farther north, monsoon showers (10-50 mm, locally higher) were scattered throughout northwestern watersheds but mostly dry, occasionally hot weather (daytime highs reaching the 40s degrees C) dominated rangeland and cotton areas of north-central Mexico (central Chihuahua to northern Nuevo Leon).

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

CANADIAN PRAIRIES
Total Precipitation (mm)
July 21 - 27, 2019



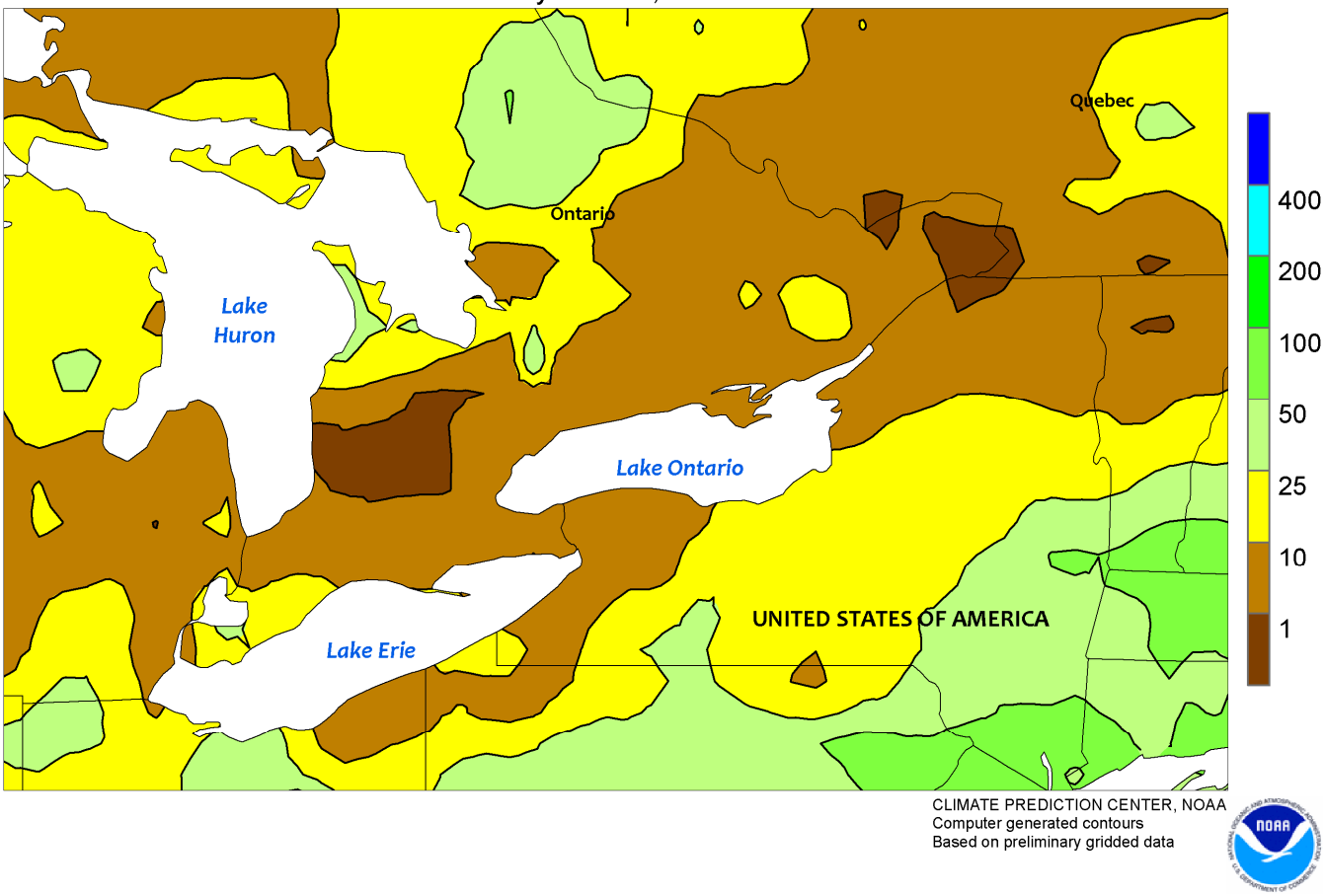
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

CANADIAN PRAIRIES

Warmth and dryness fostered rapid spring crop development across most Prairie farming areas. Rainfall totaled less than 5 mm from southern Alberta eastward through Manitoba, where daytime highs reached the upper 20s and lower 30s (degrees C). Highs reached 35°C on several days in previously dry southwestern locations, stressing spring grains and oilseeds in or approaching reproductive stages of development. According to the government of Saskatchewan in a report issued on July 22, hay production was expected to be lower in the drier western and southwestern districts due to this season's lack of moisture. Meanwhile, heavier rain (greater than 25 mm) was recorded in Alberta's northern-most agricultural areas, including the Peace River Valley. Temperatures in the wetter northern locations ranged from the upper 20s to lower 30s.

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

SOUTHEASTERN CANADA
Total Precipitation (mm)
July 21 - 27, 2019



SOUTHEASTERN CANADA

Warm, mostly dry weather dominated the region, spurring growth of summer crops, winter wheat, and pastures. Little to no rain fell in the main farming areas of Ontario and Quebec, with just a few locations recording amounts in excess of 10 mm. In combination with the increased sunshine, near- to above-normal temperatures accompanying the dryness aided the pace of development. Daytime highs reached the upper 20s and lower 30s degrees C on several days both at the beginning and end of the week. According to the government of Ontario, winter wheat harvesting was lagging last year's pace by one to two weeks as of July 25.

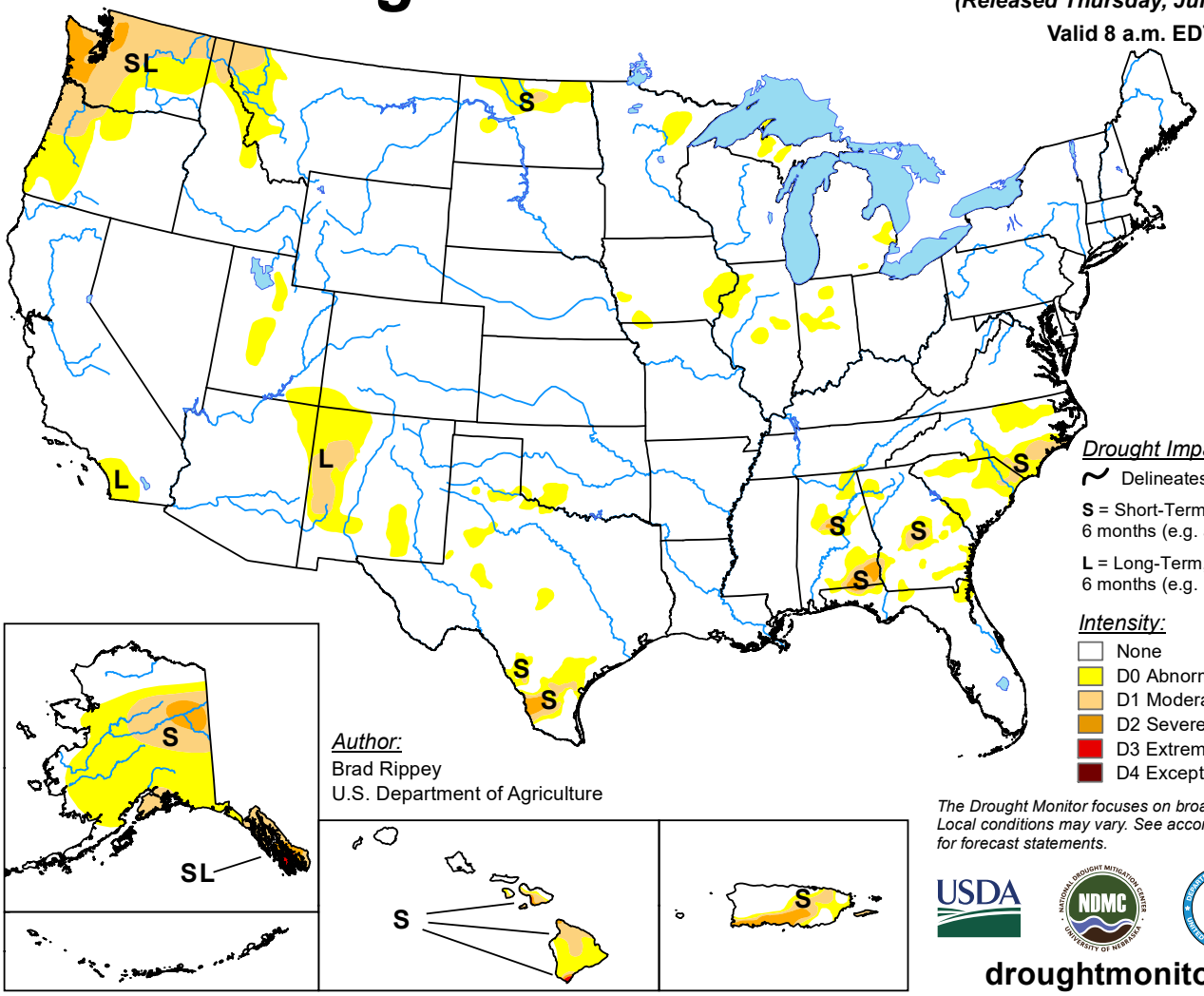
For additional information contact: mbrusberg@oce.usda.gov

U.S. Drought Monitor

July 23, 2019

(Released Thursday, Jul. 25, 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:
Brad Rippey
U.S. Department of Agriculture

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

droughtmonitor.unl.edu

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Internet URL: **http://www.usda.gov/oce/weather**
E-mail address: ***brippey@oce.usda.gov***

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