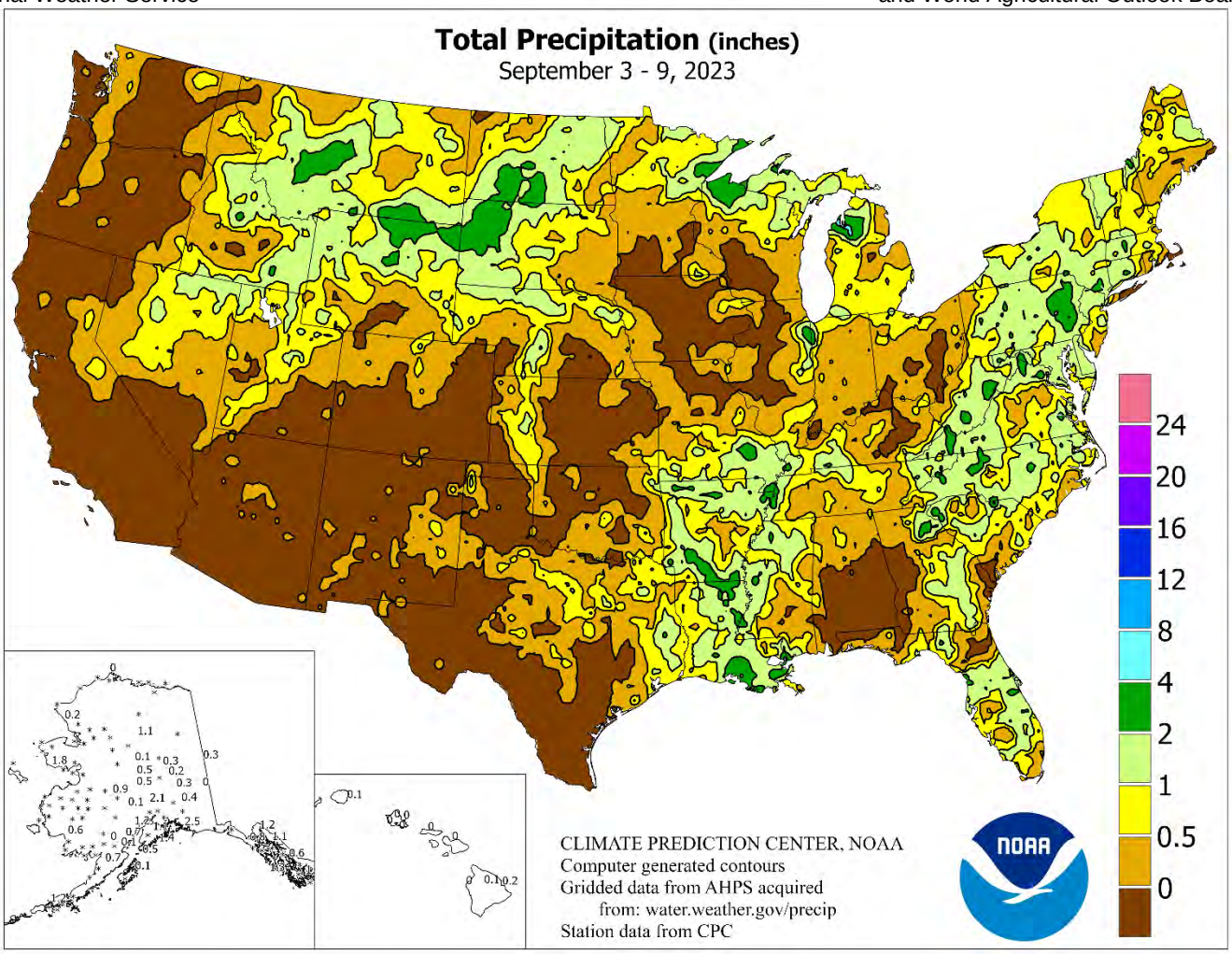
Volume 110, No. 37 www.usda.gov/oce/weather-drought-monitor September 12, 2023

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
September 3 – 9, 2023

Highlights provided by USDA/WAOB

In the wake of Hurricane Idalia's departure, quiet weather prevailed nearly nationwide. Noteworthy rainfall was confined to a few areas, including the **lower Mississippi Valley**, parts of the **East**, and **northern sections of the Rockies and Plains**. As the week began, locally heavy showers shifted northeastward from the **Great Basin** and **Intermountain West**. A few days later, rain reached the **upper Great Lakes region**. During the second half of the week, showers and thunderstorms were mostly focused along a slow-moving cold front, which eventually reached

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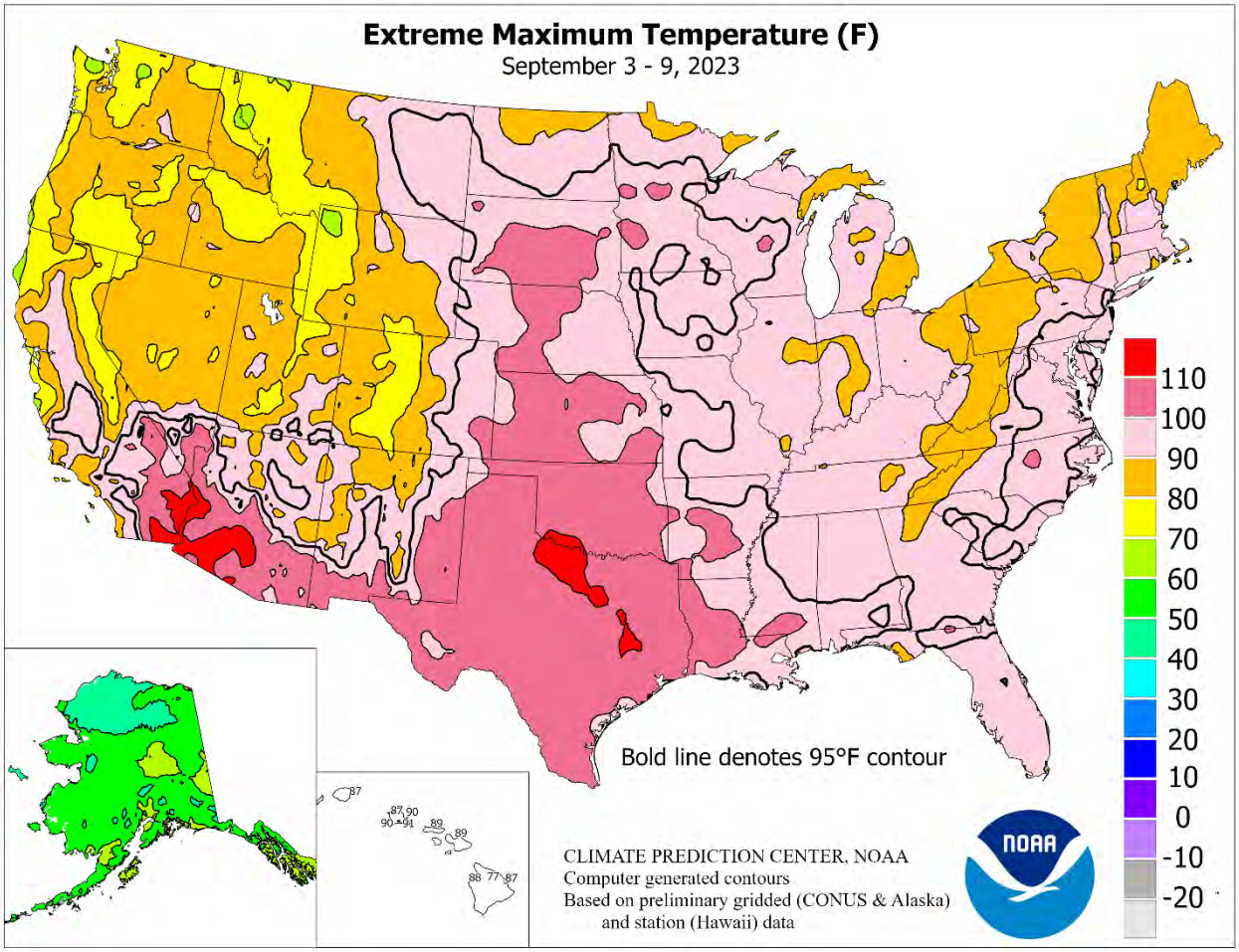
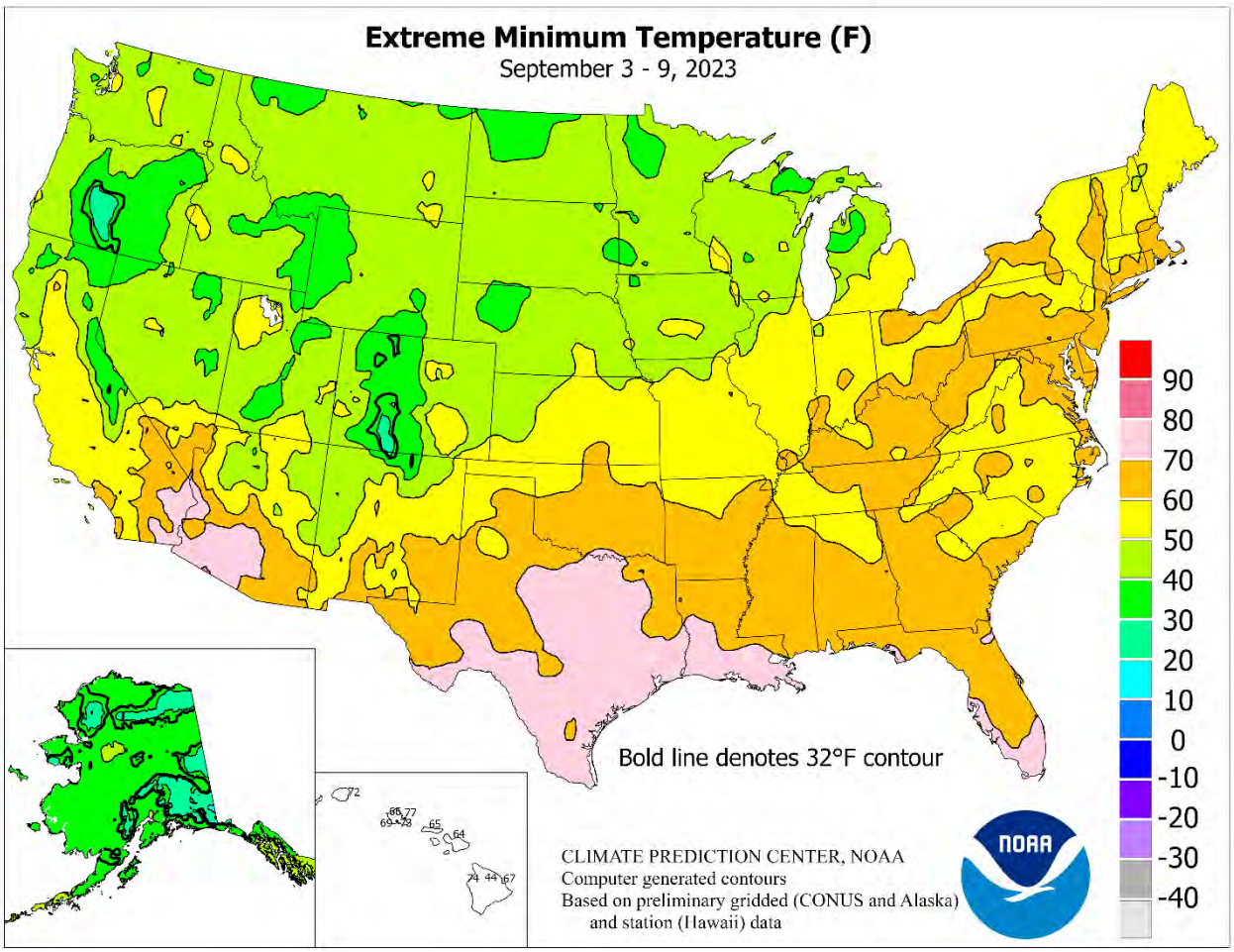
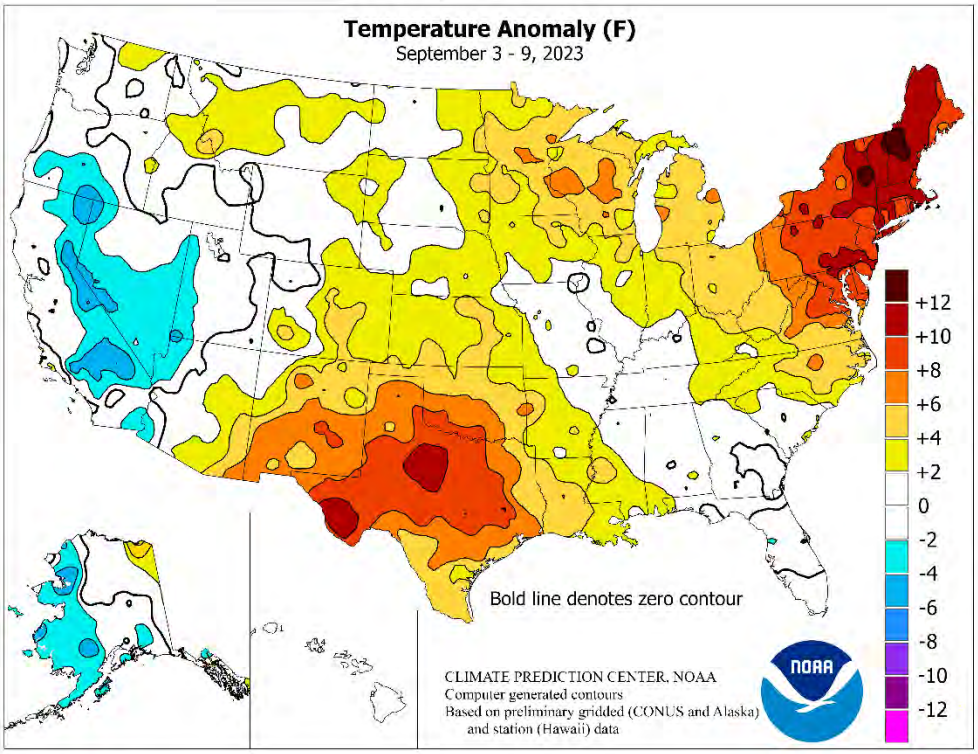
Contents


Extreme Maximum Temperature (F)
September 3 - 9, 2023
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (F)
September 3 - 9, 2023
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

(Continued from front cover)

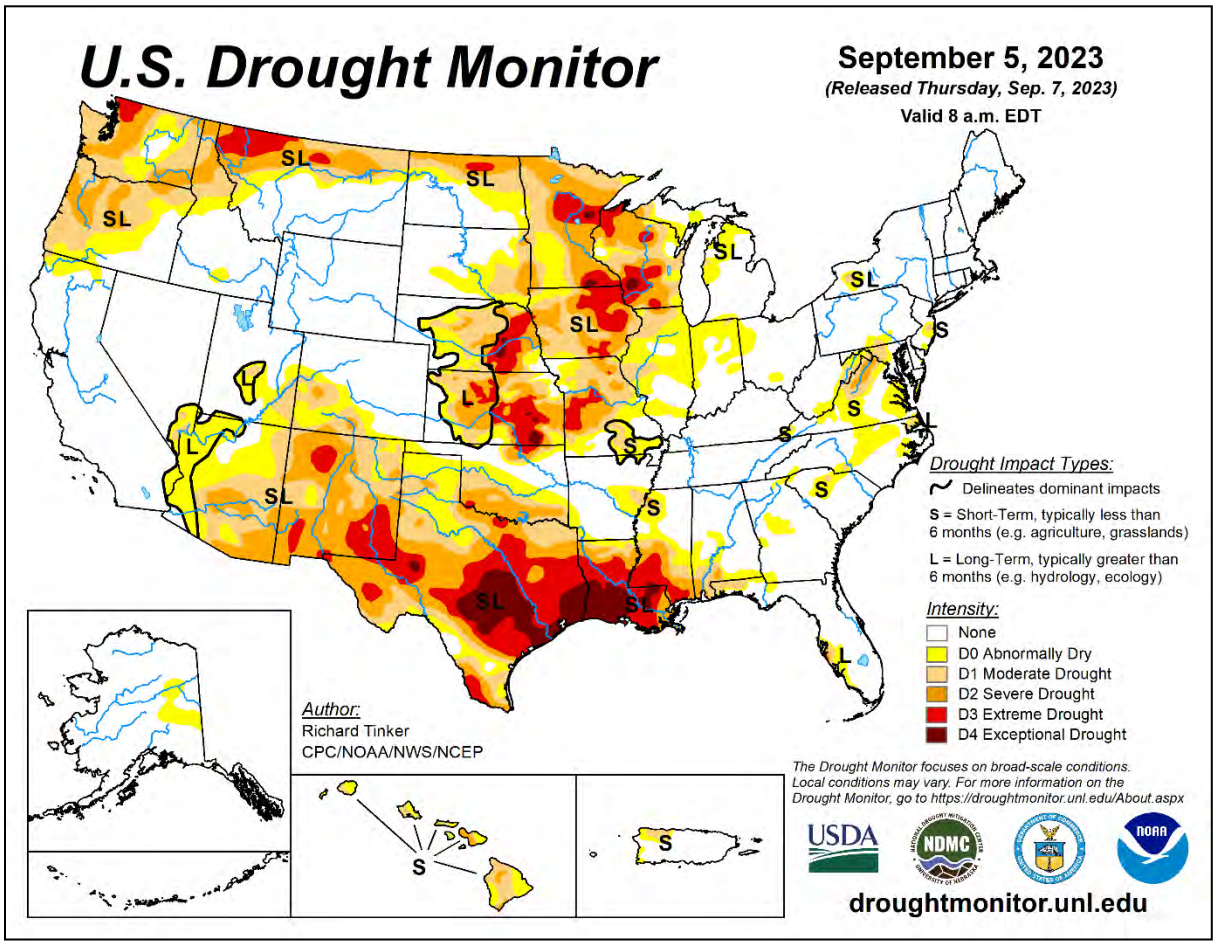
the **Atlantic Coast**. Dry weather prevailed in most other areas, including the **Far West** and the **nation's southern tier** as far east as the **Rio Grande Valley**. Showers also bypassed large sections of the **Midwest**, helping to push summer crops toward maturity during a spell of late-season warmth. In fact, near- or above-normal temperatures encompassed much of the **central and eastern U.S.**, with two notable areas experiencing unusually hot weather. First, the **Northeast** experienced a heat wave, with weekly temperatures averaging 10 to 15°F above normal. A separate area, covering the **south-central U.S.**, also had several locations where readings averaged at least 10°F above normal. In contrast, weekly temperatures averaged as much as 5°F below normal in the **Far West**, especially near the **California-Nevada border**.

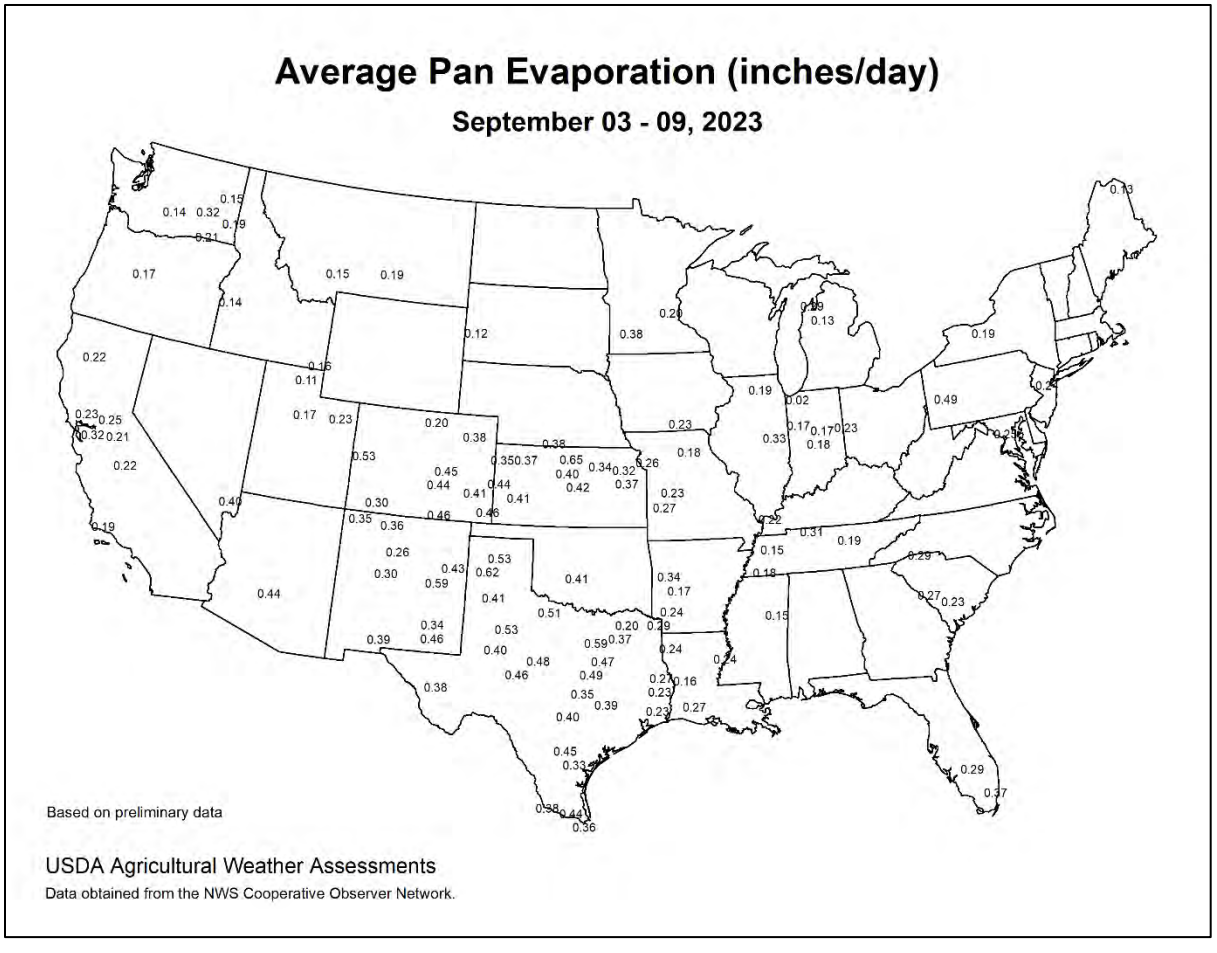


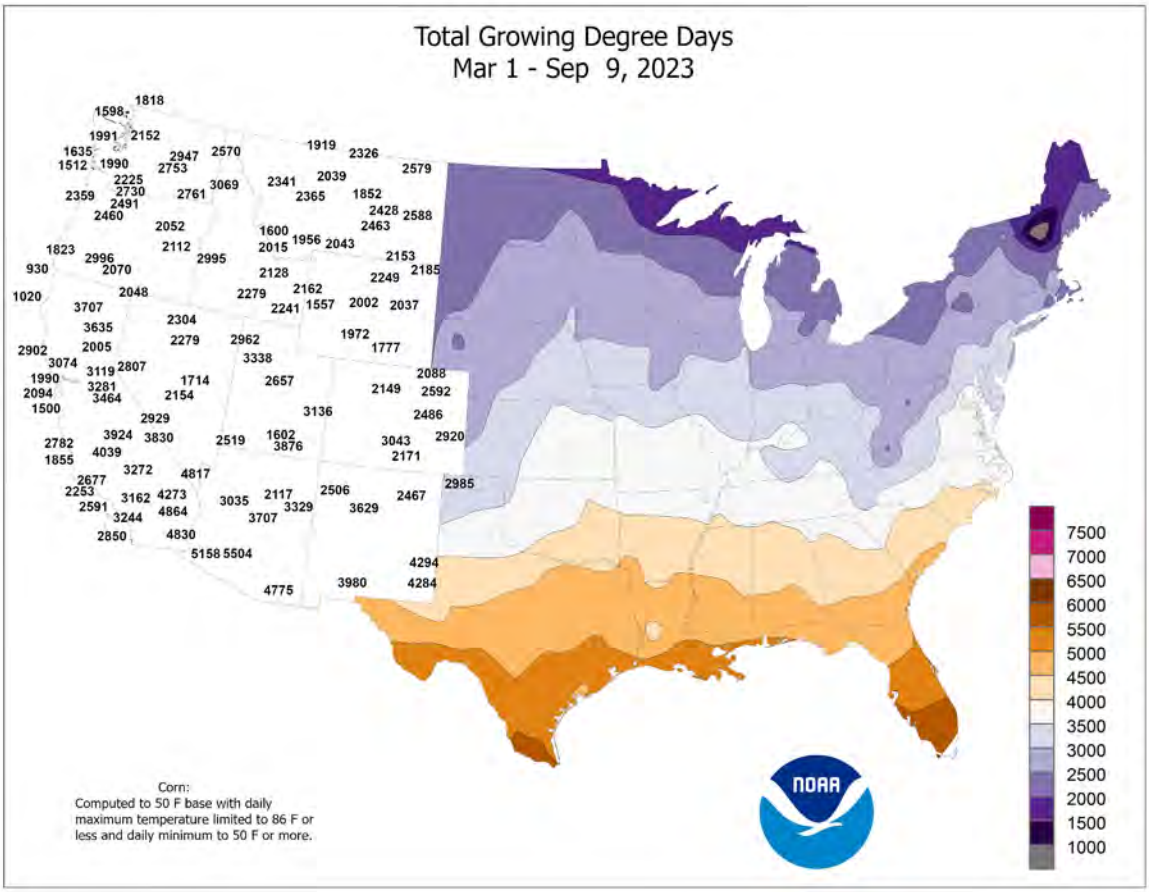
Early-September heat across the **upper Midwest** hastened summer crop maturation and resulted in several monthly record high temperatures. On September 3, monthly records were established in locations such as **Wausau, WI** (99°F), and **Duluth, MN** (97°F). Triple-digit temperatures were reported on the 3rd as far north as **Brainerd, MN** (102°F), where the still-intact monthly record of 103°F was set on September 10, 1931. Triple-digit, daily-record highs were attained on the 3rd in **Midwestern** locations such as **Huron, SD** (103°F), and **Norfolk, NE** (101°F). With highs of 102, 103, and 102°F from September 2-4, **Huron** noted 3 consecutive September days with 100-degree heat for the first time since September 9-11, 1931. Meanwhile in **Texas**, September began with a run of 9 consecutive days with triple-digit heat in locations such as **Abilene** and **San Angelo**. In **Abilene**, a September record was tied with a high of 107°F on the 5th; that mark was broken with a reading of 108°F on the 8th. Elsewhere in **Texas**, other monthly record highs established on September 8 included 112°F in **Wichita Falls** (previously, 111°F on September 4, 2000); 107°F in **Lubbock** (previously, 105°F on September 19, 1930); and 106°F in **El Paso** (previously, 104°F on September 1, 1982). In fact, **El Paso** tied its original record on September 6, followed by a reading of 105°F on September 7. With **El Paso** recording highs of 100°F or greater on 8 of the first 9 days of the month, that city's record for triple-digit days in September (previously, 4 days in 1959 and 1978) was doubled. Multiple monthly records highs were noted on September 7 in **Texas' northern panhandle**, with temperatures reaching 108°F in **Borger**, 105°F in **Amarillo**, and 104°F in **Dalhart**. In neighboring states, monthly record highs included 106°F (on September 7) in **Roswell, NM**, and 111°F (on September 8) in **Lawton, OK**. The former record in **Lawton**, 110°F, had been set on September 2, 1939, and September 4, 2000. Meanwhile in the **mid-Atlantic**, **Virginia's Dulles Airport** tied a monthly record with highs of 99°F on September 3, 4, and 5, followed by a reading of 100°F on September 6. Previously, **Dulles Airport** had reached 99°F only on September 2, 1980, and September 10 and 11, 1983. Farther south, **Baton Rouge, LA**, attained 100°F on September 6 and 7, that city's 31st and 32nd days this year with triple-digit heat (previously, 21 days in 1921). Similarly, **Phoenix, AZ**, closed the week on September 8-9 with daily record highs of 110 and 114°F, respectively. That marked the 53rd and 54th days this year in **Phoenix** with a high temperature of 110°F or greater, surpassing 53 such days in 2020.

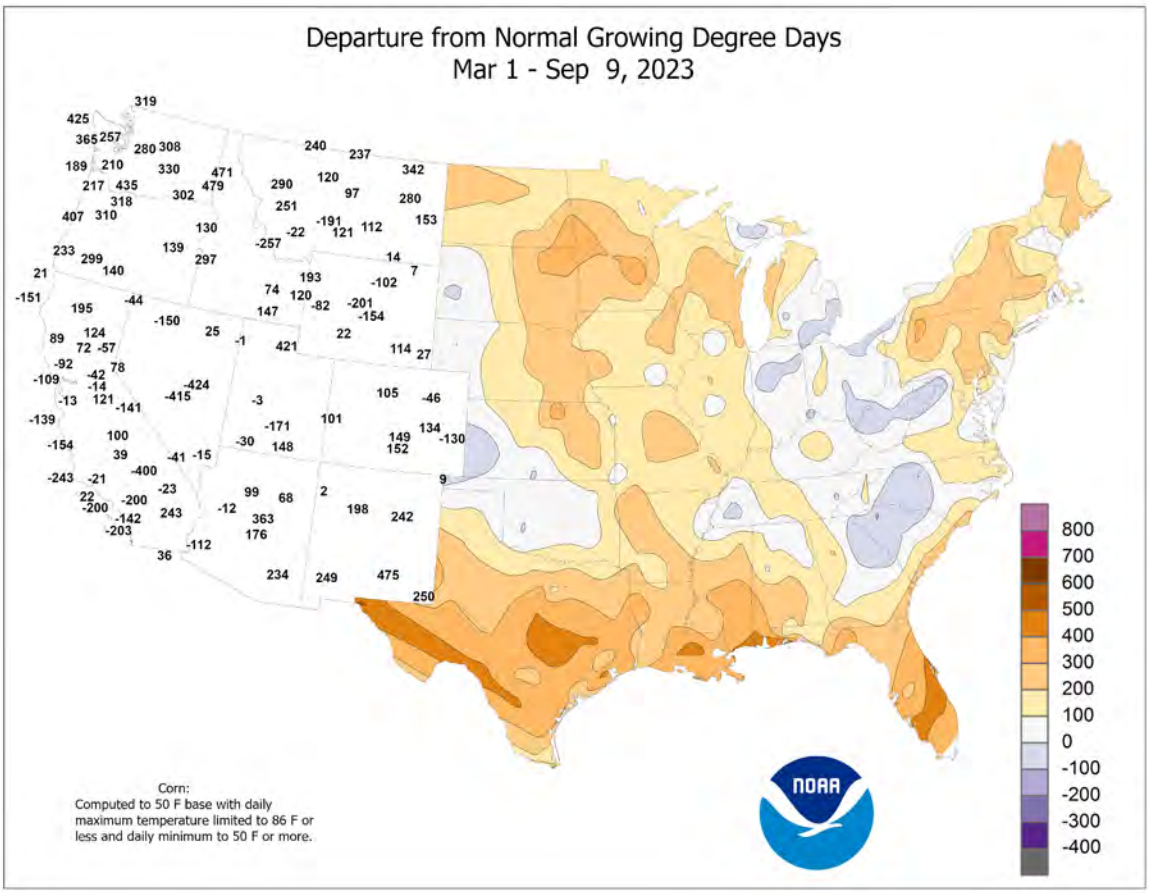
As the week began, heavy rain lingered in the **Great Basin**. In **Nevada**, daily-record totals for September 3 reached 1.00 inch in **Winnemucca**; 0.43 inch in **Elko**; and 0.34 inch in **Reno**. The following day, September 4, was the seventh-wettest day on record in **Worland, WY**, where 1.39 inches fell. Rainfall on the 4th also topped an inch (1.01 inches) at **Montana State University in Bozeman**. As showers swept eastward, high winds raked parts of the **northern Plains** and **upper Midwest**. In **South Dakota**, peak gusts on September 4 were clocked to 71 mph in **Buffalo** and 69 mph at **Ellsworth Air Force Base**. On the night of September 4-5, winds reached 77 mph in **Grand Forks, ND**, and 76 mph in **North Platte, NE**. Heavy rain reached the **upper Great Lakes region** on September 5, when daily-record totals included 2.77 inches in **Duluth, MN**, and 1.74 inches in **Ashland, WI**. **Traverse City, MI**, notched a daily-record sum (2.48 inches) on September 6. During the second half of the week, locally heavy showers dotted the **East**. In **Vermont**, record-setting totals for September 7 reached 1.19 inches in **Burlington** and 1.03 inches in **Montpelier**. **Beckley, WV**, collected a daily-record sum (1.82 inches) on September 8. Additional **Eastern** daily-record amounts on September 9 reached 4.41 inches in **Blacksburg, VA**, and 1.70 inches in **Columbia, SC**. For **Blacksburg**, it was the wettest September day on record (previously, 4.39 inches on September 29, 2015), as well as the second-wettest day during any month, with the standard remaining 4.48 inches on August 14, 1940.

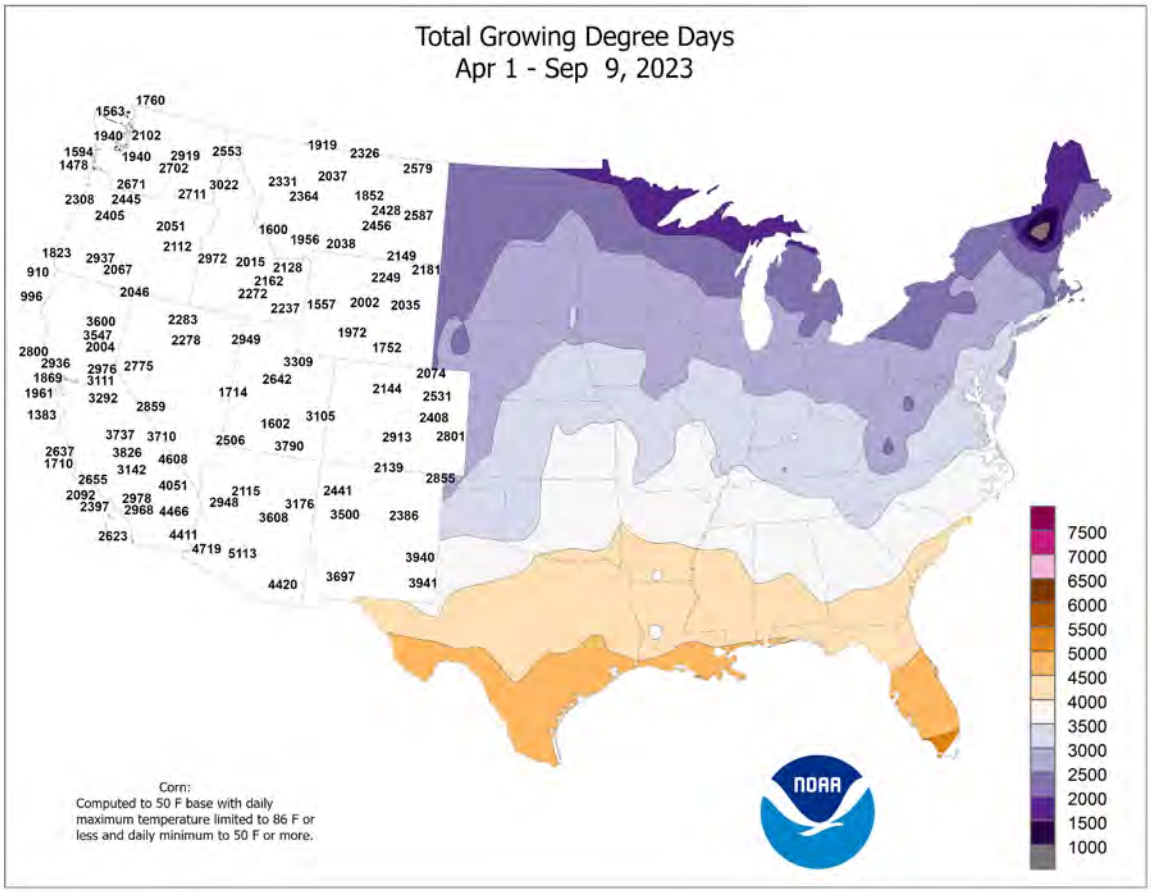
Cooler-than-normal conditions (temperatures as much as 5°F below normal) across **western Alaska** contrasted with near-normal temperatures across the remainder of the state. Meanwhile, showery weather continued across much of the state, although some areas in **eastern Alaska** received minimal precipitation. On **Norton Sound of the Bering Sea**, **Nome** received precipitation totaling 2.53 inches (342 percent of normal) during the first 9 days of September, aided by a daily-record sum of 1.00 inch on the 4th. Similarly, **Kotzebue** netted 2.22 inches (483 percent of normal) from September 1-9. Meanwhile in **Yakutat**, measurable rain fell on each of the first 9 days of September, totaling 6.80 inches (131 percent of normal). In **southeastern Alaska**, however, September 1-9 rainfall in **Ketchikan** totaled just 1.15 inches (27 percent of normal). Farther south, **Hawaii** continued to experience drier-than-normal weather, with September 1-9 rainfall at the state's major airport observation sites ranging from a trace in **Kahului, Maui**, to 0.43 inch (15 percent of normal) in **Hilo**, on the **Big Island**. Amid the dry regime, **Kahului** posted a daily-record low of 63°F on September 4.

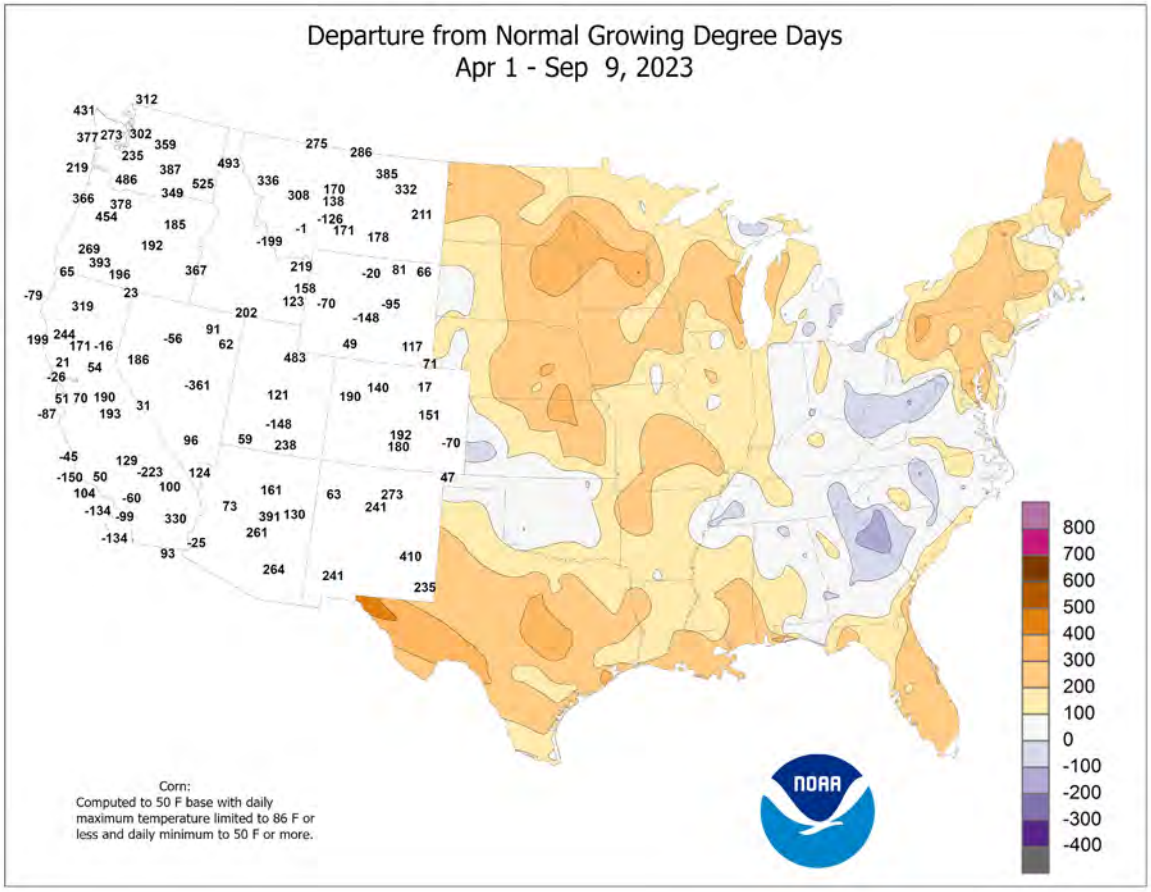

U.S. Drought Monitor
September 5, 2023
(Released Thursday, Sep. 7, 2023)
Valid 8 a.m. EDT
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
droughtmonitor.unl.edu


Average Pan Evaporation (inches/day)
September 03 - 09, 2023
Based on preliminary data
USDA Agricultural Weather Assessments
Data obtained from the NWS Cooperative Observer Network.


Total Growing Degree Days
Mar 1 - Sep 9, 2023
Corn:
Computed to 50 F base with daily maximum temperature limited to 86 F or less and daily minimum to 50 F or more.
NOAA
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000


Departure from Normal Growing Degree Days
Mar 1 - Sep 9, 2023
Corn:
Computed to 50 F base with daily maximum temperature limited to 86 F or less and daily minimum to 50 F or more.
NOAA
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400


Total Growing Degree Days
Apr 1 - Sep 9, 2023
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
Corn:
Computed to 50 F base with daily maximum temperature limited to 86 F or less and daily minimum to 50 F or more.
NOAA


Departure from Normal Growing Degree Days
Apr 1 - Sep 9, 2023
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400
Corn:
Computed to 50 F base with daily maximum temperature limited to 86 F or less and daily minimum to 50 F or more.
NOAA

National Weather Data for Selected Cities

Weather Data for the Week Ending September 9, 2023

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AK	ANCHORAGE	57	47	61	41	52	-1	1.13	0.40	0.37	1.25	133	15.45	153	93	66	0	0	7	0
	BARROW	40	36	45	34	38	0	0.00	-0.19	0.00	0.00	0	4.59	126	93	82	0	0	0	0
	FAIRBANKS	58	43	70	39	51	1	0.34	-0.02	0.20	0.60	129	7.50	86	92	59	0	0	3	0
	JUNEAU	57	48	63	41	53	1	1.06	-0.95	0.41	1.76	69	35.87	92	100	74	0	0	6	0
	KODIAK	58	43	66	36	51	-3	0.11	-1.44	0.06	0.11	5	42.87	89	92	57	0	0	3	0
	NOME	50	38	56	28	44	-3	1.76	1.19	0.59	2.48	334	16.87	145	97	67	0	1	5	3
AL	BIRMINGHAM	90	69	94	61	79	1	0.00	-0.98	0.00	0.45	36	40.82	98	86	45	4	0	0	0
	HUNTSVILLE	89	66	91	59	78	0	0.37	-0.41	0.32	0.86	87	35.86	94	93	50	4	0	3	0
	MOBILE	95	73	99	67	84	4	0.32	-0.96	0.32	0.89	53	41.70	84	87	38	7	0	1	0
	MONTGOMERY	92	70	95	65	81	1	0.00	-0.89	0.00	2.18	192	37.78	102	93	44	7	0	0	0
AR	FORT SMITH	98	71	102	66	85	7	0.51	-0.44	0.51	0.51	41	30.20	92	83	30	7	0	1	1
	LITTLE ROCK	95	71	102	65	83	6	0.09	-0.62	0.09	0.09	9	43.10	126	86	43	6	0	1	0
AZ	FLAGSTAFF	79	45	84	40	62	0	0.00	-0.53	0.00	0.15	21	21.87	151	74	23	0	0	0	0
	PHOENIX	108	82	114	78	95	3	0.00	-0.16	0.00	0.07	33	2.94	59	37	12	7	0	0	0
	PRESCOTT	88	56	94	51	72	0	0.10	-0.28	0.10	0.43	84	8.84	92	69	19	3	0	1	0
	TUCSON	103	74	108	71	89	3	0.00	-0.39	0.00	0.00	0	7.84	102	45	14	7	0	0	0
CA	BAKERSFIELD	90	68	98	61	79	-1	0.00	-0.01	0.00	0.00	0	8.26	186	66	30	5	0	0	0
	EUREKA	63	51	66	48	57	-1	0.05	-0.05	0.05	0.21	176	21.12	86	95	81	0	0	1	0
	FRESNO	91	67	98	61	79	-1	0.00	0.00	0.00	0.00	0	12.62	163	69	28	5	0	0	0
	LOS ANGELES	76	65	81	62	71	0	0.00	-0.02	0.00	0.02	100	21.65	251	90	59	0	0	0	0
	REDDING	91	63	94	62	77	-1	0.00	-0.07	0.00	1.37	900	29.87	139	79	21	5	0	0	0
	SACRAMENTO	88	60	92	58	74	0	0.01	0.00	0.01	0.02	200	13.31	109	81	29	2	0	1	0
	SAN DIEGO	77	67	82	64	72	-1	0.00	-0.02	0.00	0.01	60	12.90	191	88	62	0	0	0	0
	SAN FRANCISCO	73	58	75	57	65	0	0.00	0.00	0.00	0.00	0	19.93	158	88	55	0	0	0	0
	STOCKTON	89	59	94	56	74	-1	0.00	-0.01	0.00	0.00	0	13.27	149	79	28	4	0	0	0
CO	ALAMOSA	84	38	87	33	61	2	0.00	-0.27	0.00	0.00	0	2.53	46	72	13	0	0	0	0
	CO SPRINGS	88	55	91	51	72	5	0.00	-0.41	0.00	0.00	0	22.43	163	61	15	3	0	0	0
	DENVER INTL	89	55	93	48	72	4	0.03	-0.28	0.03	0.03	7	17.11	148	66	18	4	0	1	0
	GRAND JUNCTION	88	58	93	52	73	2	0.01	-0.26	0.01	0.06	15	5.61	93	46	15	4	0	1	0
	PUEBLO	93	56	97	52	75	4	0.00	-0.18	0.00	0.00	0	9.72	96	60	14	6	0	0	0
CT	BRIDGEPORT	87	71	93	67	79	8	0.02	-0.85	0.02	0.02	1	29.55	97	92	56	1	0	1	0
	HARTFORD	90	67	95	63	79	10	0.76	-0.13	0.61	0.76	66	40.38	127	94	53	3	0	2	1
DC	WASHINGTON	96	73	99	68	85	9	1.13	0.23	0.78	1.13	98	23.42	80	84	42	6	0	2	1
DE	WILMINGTON	94	71	98	65	83	10	0.24	-0.70	0.15	0.24	19	34.56	109	88	45	6	0	2	0
FL	DAYTONA BEACH	89	72	94	68	80	-1	0.98	-0.64	0.96	0.98	47	35.04	96	92	57	2	0	2	1
	JACKSONVILLE	90	68	95	63	79	-2	0.15	-1.59	0.15	0.15	6	30.42	77	94	48	3	0	1	0
	KEY WEST	90	82	92	77	86	1	0.69	-1.01	0.47	0.81	37	15.08	59	81	60	4	0	3	0
	MIAMI	92	79	93	76	85	2	0.33	-2.10	0.33	0.59	18	46.80	100	75	48	7	0	1	0
	ORLANDO	92	72	95	70	82	0	0.89	-0.67	0.89	2.59	128	32.94	83	92	47	6	0	1	1
	PENSACOLA	92	75	96	66	84	2	0.17	-1.37	0.12	1.19	59	45.20	91	82	43	6	0	2	0
	TALLAHASSEE	93	71	96	68	82	1	1.06	-0.20	0.64	1.11	67	38.40	85	96	48	6	0	3	1
	TAMPA	91	76	93	73	83	0	0.41	-1.28	0.41	0.41	18	24.20	61	84	51	5	0	1	0
	WEST PALM BEACH	90	77	90	73	83	1	2.53	0.52	2.40	3.29	125	49.65	114	85	54	4	0	2	1
GA	ATHENS	91	64	95	60	77	1	0.00	-0.82	0.00	0.00	0	41.92	121	98	43	3	0	0	0
	ATLANTA	89	70	92	66	79	2	0.00	-0.88	0.00	0.00	0	31.99	89	81	43	4	0	0	0
	AUGUSTA	91	64	95	57	77	-2	0.60	-0.22	0.47	0.60	56	46.63	143	99	43	4	0	3	0
	COLUMBUS	92	68	95	64	80	0	0.00	-0.76	0.00	0.12	12	37.63	107	88	36	7	0	0	0
	MACON	92	65	94	62	78	-1	0.17	-0.70	0.17	0.18	16	36.44	107	98	45	6	0	1	0
	SAVANNAH	91	69	94	67	80	1	0.00	-1.10	0.00	0.02	1	32.98	91	90	45	5	0	0	0
HI	HILO	85	69	87	67	77	1	0.24	-1.91	0.08	0.59	21	75.28	96	92	61	0	0	4	0
	HONOLULU	89	75	91	73	82	0	0.00	-0.24	0.00	0.02	7	9.80	99	83	49	4	0	0	0
	KAHULUI	88	70	89	64	79	-2	0.00	-0.12	0.00	0.00	0	9.46	90	81	52	0	0	0	0
	LIHUE	86	73	87	72	79	-1	0.12	-0.35	0.12	0.12	19	31.68	139	92	64	0	0	1	0
IA	BURLINGTON	81	60	92	51	70	0	0.02	-0.86	0.02	0.02	1	21.49	76	96	58	2	0	1	0
	CEDAR RAPIDS	84	58	97	48	71	5	0.00	-0.84	0.00	0.00	0	12.99	48	89	44	2	0	0	0
	DES MOINES	87	60	96	50	74	4	0.00	-0.79	0.00	0.00	0	18.68	66	83	35	3	0	0	0
	DUBUQUE	80	60	93	50	70	4	0.10	-0.81	0.08	0.10	8	21.18	74	90	36	2	0	2	0
	SIOUX CITY	88	56	99	43	72	5	0.08	-0.63	0.08	0.08	8	16.70	73	87	34	2	0	1	0
	WATERLOO	87	59	100	48	73	5	0.12	-0.66	0.12	0.12	11	16.05	57	88	38	3	0	1	0
ID	BOISE	83	59	90	57	71	2	0.19	0.12	0.11	0.19	204	7.26	95	72	28	2	0	3	0
	LEWISTON	83	58	91	54	71	1	0.15	0.02	0.08	0.15	90	5.46	60	76	29	1	0	3	0
	POCATELLO	77	49	84	43	63	0	1.45	1.27	0.82	1.45	645	9.04	111	94	40	0	0	4	1
IL	CHICAGO/O_HARE	83	66	94	56	74	5	0.10	-0.68	0.04	0.10	10	23.99	86	88	49	3	0	4	0
	MOLINE	83	61	94	50	72	3	0.01	-0.85	0.01	0.01	1	17.50	60	89	49	2	0	1	0
	PEORIA	82	66	92	58	74	3	0.00	-0.90	0.00	0.00	0	24.46	90	94	54	2	0	0	0
	ROCKFORD	81	62	92	49	71	3	0.06	-0.86	0.06	0.06	4	21.19	75	95	50	2	0	1	0
	SPRINGFIELD	82	64	92	53	73	2	0.00	-0.72	0.00	0.00	0	24.17	86	96	55	2	0	0	0
IN	EVANSVILLE	85	66	91	60	76	2	0.06	-0.67	0.06	0.06	6	33.46	97	92	52	3	0	1	0
	FORT WAYNE	83	63	92	54	73	5	0.06	-0.67	0.06	0.06	6	25.84	89	93	60	1	0	1	0
	INDIANAPOLIS	83	66	90	61	75	3	0.14	-0.58	0.14	0.14	15	28.00	88	92	58	2	0	1	0
	SOUTH BEND	82	64	93	54	73	6	0.60	-0.22	0.58	0.60	56	28.68	102	91	53	3	0	2	1
KS	CONCORDIA	93	62	102	54	78	6	0.00	-0.64	0.00	0.00	0	17.17	77	73	23	6	0	0	0
	DODGE CITY	96	61	105	52	78	5	0.00	-0.36	0.00	0.00	0	17.70	101	69	21	6	0	0	0
	GOODLAND	90	55	99	46	73	3	0.00	-0.35	0.00	0.00	0	19.10	121	75	24	3	0	0	0
	TOPEKA	93	60	101	52	77	4	0.00	-0.87	0.00	0.00	0	16.87	60	82	26	6	0	0	0

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

Weather Data for the Week Ending September 9, 2023

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	95	65	99	59	80	5	0.00	-0.73	0.00	0.00	0	17.85	66	67	23	7	0	0	0
KY	LEXINGTON	86	66	95	62	76	4	0.00	-0.76	0.00	0.00	0	33.48	92	87	49	3	0	0	0
	LOUISVILLE	86	69	93	63	77	2	0.02	-0.72	0.02	0.02	2	31.70	92	85	53	3	0	1	0
	PADUCAH	85	65	91	60	75	1	1.62	0.90	1.03	1.62	178	47.90	135	96	59	1	0	2	2
LA	BATON ROUGE	97	74	100	71	86	5	2.24	1.08	2.11	2.98	197	37.18	82	96	47	7	0	4	1
	LAKE CHARLES	96	76	99	73	86	4	0.24	-1.11	0.20	0.48	27	31.02	72	95	47	7	0	2	0
	NEW ORLEANS	93	76	98	75	84	2	0.87	-0.60	0.46	1.57	82	23.53	49	93	51	6	0	3	0
	SHREVEPORT	98	75	106	72	87	6	0.00	-0.70	0.00	0.00	0	0.00	0	89	37	7	0	0	0
MA	BOSTON	86	70	93	64	78	9	0.13	-0.61	0.13	0.13	13	35.05	120	90	60	1	0	1	0
	WORCESTER	85	68	90	61	77	12	0.19	-0.72	0.18	0.19	16	42.24	131	88	57	1	0	2	0
MD	BALTIMORE	96	71	100	64	84	11	1.71	0.73	1.60	1.71	136	26.42	85	88	41	6	0	2	1
ME	CARIBOU	82	60	86	54	71	10	0.06	-0.72	0.04	0.06	6	26.26	96	97	57	0	0	3	0
	PORTLAND	84	63	88	57	74	8	0.31	-0.45	0.31	0.31	31	37.94	121	100	63	0	0	1	0
MI	ALPENA	80	56	94	44	68	5	0.09	-0.57	0.09	0.09	10	22.72	109	100	59	2	0	1	0
	GRAND RAPIDS	80	62	91	51	71	5	0.17	-0.59	0.16	0.17	17	25.22	92	94	56	3	0	2	0
	HOUGHTON LAKE	74	54	89	40	64	3	0.32	-0.10	0.31	0.32	75	15.60	108	97	65	0	0	2	0
	LANSING	80	62	91	50	71	5	0.63	-0.01	0.53	0.63	76	26.05	109	90	60	2	0	2	1
	MUSKEGON	82	66	92	51	74	7	0.63	-0.11	0.63	0.63	66	21.37	90	83	52	1	0	1	1
	TRAVERSE CITY	80	61	94	43	71	5	1.83	1.04	1.80	1.89	184	17.75	92	86	50	2	0	2	1
MN	DULUTH	76	58	97	50	67	6	3.09	2.25	2.77	3.09	287	21.65	96	90	58	1	0	3	1
	INT_L FALLS	73	50	86	41	62	4	1.55	0.83	1.18	1.55	167	18.38	98	96	57	0	0	3	1
	MINNEAPOLIS	83	64	98	52	73	6	0.06	-0.65	0.05	0.06	6	16.97	70	80	44	3	0	2	0
	ROCHESTER	81	58	94	47	70	5	0.32	-0.50	0.31	0.32	30	20.15	75	94	50	2	0	2	0
	ST. CLOUD	80	58	96	44	69	6	0.07	-0.71	0.07	0.07	6	17.82	82	91	51	2	0	1	0
MO	COLUMBIA	85	62	94	52	73	0	0.00	-0.92	0.00	0.00	0	26.31	86	92	42	2	0	0	0
	KANSAS CITY	88	61	96	53	75	3	0.13	-0.87	0.12	0.13	10	26.52	89	85	38	3	0	2	0
	SAINT LOUIS	86	68	95	59	77	2	0.25	-0.50	0.25	0.25	26	24.34	79	83	48	2	0	1	0
	SPRINGFIELD	88	63	94	53	76	2	0.15	-0.85	0.09	0.15	11	32.70	102	92	40	3	0	3	0
MS	JACKSON	96	72	99	65	84	5	0.07	-0.76	0.06	0.07	6	33.91	81	88	38	7	0	2	0
	MERIDIAN	92	69	95	62	81	1	0.20	-0.56	0.20	0.62	64	48.14	116	96	47	7	0	1	0
	TUPELO	90	69	95	62	80	1	0.50	-0.29	0.47	1.28	128	41.92	102	94	51	3	0	2	0
MT	BILLINGS	79	55	90	50	67	2	0.11	-0.18	0.05	0.11	31	14.04	130	83	33	1	0	5	0
	BUTTE	68	45	73	40	57	1	1.90	1.62	0.75	1.90	541	15.10	149	95	44	0	0	6	2
	CUT BANK	72	46	79	40	59	2	0.13	-0.14	0.12	0.13	37	6.41	73	86	33	0	0	2	0
	GLASGOW	79	53	97	45	66	2	0.32	0.05	0.24	0.32	92	10.85	99	80	34	1	0	3	0
	GREAT FALLS	77	50	87	44	63	3	0.85	0.52	0.47	0.85	200	13.37	115	92	34	0	0	3	0
	HAVRE	78	50	92	40	64	3	0.30	0.05	0.28	0.30	95	8.24	87	83	32	1	0	2	0
	MISSOULA	77	52	81	45	64	3	0.57	0.33	0.29	0.57	192	9.91	98	87	39	0	0	4	0
NC	ASHEVILLE	86	62	90	58	74	3	0.04	-0.89	0.04	0.04	3	28.47	80	97	47	1	0	1	0
	CHARLOTTE	91	68	96	61	79	4	0.47	-0.36	0.39	0.47	44	35.15	113	91	47	5	0	2	0
	GREENSBORO	90	67	95	62	79	5	0.15	-0.94	0.15	0.15	10	30.29	97	88	44	5	0	1	0
	HATTERAS	88	74	92	63	81	2	0.15	-1.73	0.15	0.15	6	30.40	74	97	68	1	0	1	0
	RALEIGH	96	69	102	61	82	7	2.30	1.06	1.87	2.30	145	30.73	94	92	42	6	0	2	1
	WILMINGTON	92	72	96	61	82	4	0.04	-2.12	0.04	0.04	1	41.81	98	94	51	5	0	1	0
ND	BISMARCK	79	53	94	44	66	3	1.03	0.59	0.65	1.03	180	16.15	106	95	41	2	0	4	1
	DICKINSON	76	50	91	42	63	1	1.56	1.17	0.76	1.56	313	12.46	98	94	46	1	0	4	2
	FARGO	83	56	97	42	69	6	0.13	-0.56	0.11	0.13	14	15.26	84	87	42	2	0	2	0
	GRAND FORKS	79	53	95	43	66	4	1.10	0.51	0.67	1.10	145	10.02	59	90	40	2	0	2	1
	JAMESTOWN	77	52	95	44	65	2	0.66	0.13	0.43	0.66	95	12.81	80	92	49	2	0	4	0
NE	GRAND ISLAND	88	58	99	51	73	3	0.00	-0.45	0.00	0.00	0	11.18	52	80	30	2	0	0	0
	LINCOLN	89	58	98	48	73	3	0.20	-0.54	0.18	0.20	21	16.04	70	81	34	2	0	3	0
	NORFOLK	87	56	99	45	72	4	0.12	-0.43	0.08	0.12	16	15.64	74	83	34	2	0	2	0
	NORTH PLATTE	89	51	101	42	70	2	0.14	-0.21	0.08	0.14	31	18.22	105	89	31	4	0	2	0
	OMAHA	88	59	97	49	73	2	0.13	-0.60	0.12	0.13	13	19.63	78	84	33	2	0	2	0
	SCOTTSBLUFF	83	53	96	48	68	0	0.66	0.39	0.43	0.66	192	16.98	136	88	37	3	0	2	0
	VALENTINE	86	53	102	40	69	1	0.62	0.27	0.42	0.62	142	24.00	139	90	30	3	0	3	0
NH	CONCORD	89	63	93	58	76	11	0.24	-0.53	0.24	0.24	23	26.23	94	100	49	3	0	1	0
NJ	ATLANTIC_CITY	92	71	97	64	82	10	0.00	-0.79	0.00	0.00	0	23.00	73	93	47	6	0	0	0
	NEWARK	93	73	97	66	83	11	0.00	-0.87	0.00	0.00	0	30.83	94	82	46	6	0	0	0
NM	ALBUQUERQUE	92	65	97	62	79	6	0.04	-0.24	0.04	0.04	11	2.13	35	44	13	6	0	1	0
NV	ELY	75	43	81	39	59	-3	0.39	0.23	0.35	0.58	282	10.06	146	88	29	0	0	3	0
	LAS VEGAS	96	73	103	68	85	-3	0.00	-0.09	0.00	0.83	727	3.62	124	49	16	6	0	0	0
	RENO	81	54	88	47	67	-3	0.34	0.31	0.34	0.54	900	9.69	194	73	23	0	0	1	0
	WINNEMUCCA	80	48	88	43	64	-2	1.00	0.93	1.00	1.14	900	6.63	136	87	29	0	0	1	1
NY	ALBANY	89	68	93	64	78	11	0.93	0.11	0.51	0.95	91	33.97	121	92	52	3	0	3	1
	BINGHAMTON	84	65	88	62	74	11	0.96	0.06	0.66	0.96	83	31.90	109	93	58	0	0	4	1
	BUFFALO	80	67	90	63	73	7	1.81	1.02	1.02	1.81	174	28.50	108	92	63	1	0	2	2
	ROCHESTER	83	66	92	62	75	8	0.56	-0.14	0.34	0.56	61	28.54	118	90	57	2	0	3	0
	SYRACUSE	85	66	92	63	76	10	1.16	0.40	0.89	1.16	117	32.64	120	88	54	2	0	2	1
OH	AKRON-CANTON	81	64	88	58	72	3	0.00	-0.81	0.00	0.00	0	29.91	100	99	64	0	0	0	0
	CINCINNATI	85	66	93	63	75	4	0.00	-0.69	0.00	0.00	0	31.06	94	96	53	3	0	0	0
	CLEVELAND	82	68	91	64	75	6	0.34	-0.55	0.24	0.34	29	33.55	118	87	60	1	0	2	0
	COLUMBUS	84	67	92	61	76	5	0.02	-0.76	0.02	0.02	2	32.15	105	99	59	2	0	1	0
	DAYTON	84	66	93	59	75	4	0.13	-0.63	0.12	0.13	13	27.97	93	87	54	2	0	2	0
	MANSFIELD	81	66	88	60	73	6	0.12	-0.66	0.04	0.12	11	34.10	110	88	61	0	0	3	0

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Weather Data for the Week Ending September 9, 2023

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	82	66	93	61	74	4	0.63	-0.06	0.51	0.63	70	24.31	96	90	59	3	0	3	1
	YOUNGSTOWN	84	63	90	57	73	7	0.14	-0.78	0.10	0.14	11	27.23	93	95	57	1	0	2	0
OK	OKLAHOMA CITY	98	69	104	62	84	8	0.03	-0.87	0.03	0.03	2	25.44	94	74	28	7	0	1	0
	TULSA	96	67	100	61	82	4	0.02	-0.85	0.02	0.02	1	25.61	87	83	32	7	0	1	0
OR	ASTORIA	67	51	73	47	59	-1	0.32	-0.15	0.31	0.32	54	30.78	77	95	63	0	0	2	0
	BURNS	78	42	83	38	60	-1	0.00	-0.07	0.00	0.13	137	10.40	152	83	26	0	0	0	0
	EUGENE	80	50	88	46	65	-1	0.01	-0.24	0.01	0.08	27	14.62	62	89	36	0	0	1	0
	MEDFORD	85	57	92	51	71	0	0.00	-0.08	0.00	0.27	272	5.96	55	75	26	2	0	0	0
	PENDLETON	81	54	88	45	67	1	0.01	-0.09	0.01	0.02	18	4.80	56	72	28	0	0	1	0
	PORTLAND	78	58	89	54	67	0	0.03	-0.24	0.03	0.04	13	17.76	84	82	39	0	0	1	0
	SALEM	77	54	87	48	65	-1	0.01	-0.24	0.01	0.24	77	18.30	81	86	39	0	0	1	0
PA	ALLENTOWN	89	65	92	60	77	8	0.94	-0.09	0.56	0.94	71	29.83	91	93	50	4	0	3	1
	ERIE	81	69	91	65	75	7	0.38	-0.52	0.27	0.38	33	30.67	111	87	60	1	0	2	0
	MIDDLETOWN	92	69	97	66	81	9	1.74	0.67	1.69	1.74	126	24.70	80	89	44	5	0	3	1
	PHILADELPHIA	94	73	97	67	83	10	0.66	-0.39	0.36	0.66	49	25.25	82	88	39	7	0	2	0
	PITTSBURGH	86	67	91	63	76	8	1.23	0.45	1.14	1.23	121	23.43	81	87	51	3	0	3	1
	WILKES-BARRE	88	65	92	59	76	8	1.77	0.86	0.79	1.77	153	28.52	108	94	55	2	0	3	2
	WILLIAMSPORT	89	66	93	62	78	10	0.79	-0.26	0.46	0.79	58	30.33	101	94	50	5	0	3	0
RI	PROVIDENCE	88	68	92	62	78	9	0.00	-0.89	0.00	0.00	0	37.66	119	99	57	1	0	0	0
SC	CHARLESTON	92	71	96	64	81	2	2.19	0.70	2.19	2.19	114	36.80	96	90	44	5	0	1	1
	COLUMBIA	92	66	96	58	79	1	1.83	0.96	1.70	1.83	163	42.93	130	97	45	5	0	2	1
	FLORENCE	92	68	97	59	80	1	0.91	-0.18	0.91	0.91	64	32.83	100	91	45	5	0	1	1
	GREENVILLE	90	66	95	61	78	3	0.04	-0.81	0.04	0.04	3	43.03	122	91	44	4	0	1	0
SD	ABERDEEN	82	53	98	41	68	3	0.72	0.26	0.57	0.72	119	17.73	104	91	47	2	0	2	1
	HURON	85	55	103	48	70	4	0.15	-0.40	0.08	0.15	21	11.35	62	90	38	2	0	3	0
	RAPID CITY	84	53	99	44	68	3	0.48	0.20	0.28	0.48	135	17.21	119	88	34	2	0	4	0
	SIOUX FALLS	86	58	100	44	72	5	0.02	-0.61	0.02	0.02	2	13.81	64	80	37	2	0	1	0
TN	BRISTOL	89	64	91	58	76	5	0.64	0.00	0.41	0.64	76	32.99	101	100	46	2	0	3	0
	CHATTANOOGA	89	69	93	66	79	2	0.02	-0.88	0.02	0.02	1	37.50	98	93	48	3	0	1	0
	KNOXVILLE	88	67	91	66	78	3	0.16	-0.58	0.15	0.16	17	37.65	100	96	48	1	0	2	0
	MEMPHIS	90	70	97	66	80	1	1.09	0.42	0.96	1.09	128	46.59	120	89	49	4	0	3	1
	NASHVILLE	88	69	94	63	79	3	0.93	0.08	0.69	0.93	86	30.79	85	85	45	3	0	2	1
TX	ABILENE	105	78	108	76	92	12	0.01	-0.62	0.01	0.01	1	15.74	88	55	19	7	0	1	0
	AMARILLO	98	64	105	59	81	7	0.00	-0.37	0.00	0.00	0	14.31	93	60	18	7	0	0	0
	AUSTIN	104	77	107	76	91	8	0.00	-0.92	0.00	0.00	0	13.26	54	83	24	7	0	0	0
	BEAUMONT	100	76	103	73	88	6	0.29	-1.55	0.25	0.29	12	27.20	62	92	40	7	0	3	0
	BROWNSVILLE	100	80	102	78	90	5	0.00	-1.31	0.00	0.00	0	13.57	85	89	46	7	0	0	0
	CORPUS CHRISTI	98	76	99	73	87	4	0.00	-1.38	0.00	0.00	0	17.30	82	98	51	7	0	0	0
	DEL RIO	104	79	106	75	91	8	0.00	-0.66	0.00	0.00	0	11.57	80	69	24	7	0	0	0
	EL PASO	103	72	106	68	87	8	0.00	-0.41	0.00	0.00	0	2.43	39	34	11	7	0	0	0
	FORT WORTH	103	79	110	77	91	10	0.23	-0.45	0.20	0.23	26	14.12	55	71	28	7	0	2	0
	GALVESTON	94	82	96	78	88	4	0.64	-1.22	0.60	0.82	35	16.43	56	84	58	7	0	3	1
	HOUSTON	101	79	106	71	90	7	0.45	-0.81	0.34	0.45	28	29.59	83	90	37	7	0	2	0
	LUBBOCK	101	70	107	61	86	10	0.00	-0.60	0.00	0.00	0	9.00	66	59	17	7	0	0	0
	MIDLAND	101	74	106	68	88	9	0.00	-0.39	0.00	0.00	0	1.76	17	56	15	7	0	0	0
	SAN ANGELO	104	72	106	66	88	8	0.75	0.13	0.75	0.75	94	9.87	66	70	20	7	0	1	1
	SAN ANTONIO	102	78	104	74	90	8	0.38	-0.56	0.38	0.38	31	13.99	64	82	27	7	0	1	0
	VICTORIA	103	77	106	73	90	8	0.01	-1.17	0.01	0.01	0	18.02	64	96	37	7	0	1	0
	WACO	104	78	108	76	91	10	0.16	-0.54	0.16	0.16	17	15.83	64	76	24	7	0	1	0
	WICHITA FALLS	106	74	112	70	90	11	0.12	-0.56	0.06	0.12	13	14.63	74	71	22	7	0	2	0
UT	SALT LAKE CITY	85	60	92	55	73	0	0.51	0.30	0.51	0.53	203	12.89	120	75	23	2	0	1	1
VA	LYNCHBURG	91	65	95	58	78	6	0.53	-0.33	0.52	0.53	48	31.81	106	97	45	6	0	2	1
	NORFOLK	91	73	96	62	82	5	0.28	-1.09	0.28	0.28	16	36.22	102	90	51	4	0	1	0
	RICHMOND	96	69	101	60	83	9	0.59	-0.57	0.41	0.59	39	26.25	81	88	37	6	0	2	0
	ROANOKE	92	67	96	63	79	7	1.48	0.59	1.29	1.48	130	24.65	80	87	43	5	0	2	1
	WASH/DULLES	97	69	100	64	83	11	1.24	0.39	0.81	1.24	113	20.33	67	87	37	7	0	3	1
VT	BURLINGTON	86	67	92	63	77	10	1.55	0.76	1.19	1.55	153	28.09	108	92	53	3	0	2	1
WA	OLYMPIA	73	48	84	41	61	-1	0.00	-0.39	0.00	0.00	0	18.56	66	94	44	0	0	0	0
	QUILLAYUTE	70	52	76	46	61	3	0.14	-0.71	0.13	0.14	13	40.88	70	87	55	0	0	2	0
	SEATTLE-TACOMA	72	55	81	53	64	-1	0.12	-0.19	0.07	0.12	31	14.26	64	86	45	0	0	2	0
	SPOKANE	76	55	83	50	65	1	0.02	-0.09	0.01	0.04	23	7.45	72	77	31	0	0	2	0
	YAKIMA	82	49	88	46	66	0	0.00	-0.05	0.00	0.02	29	4.25	86	78	26	0	0	0	0
WI	EAU CLAIRE	83	61	100	48	72	7	0.04	-0.81	0.03	0.04	3	18.79	75	87	47	3	0	2	0
	GREEN BAY	80	60	92	46	70	5	0.28	-0.49	0.28	0.28	27	20.28	88	88	56	2	0	1	0
	LA CROSSE	84	64	99	52	74	6	0.00	-0.85	0.00	0.00	0	17.03	63	84	45	3	0	0	0
	MADISON	81	61	94	46	71	6	0.04	-0.77	0.02	0.04	4	21.20	75	87	53	2	0	2	0
	MILWAUKEE	81	65	95	55	73	5	0.04	-0.69	0.02	0.04	4	22.08	86	86	55	2	0	2	0
WV	BECKLEY	82	61	85	60	72	4	2.07	1.33	1.82	2.07	219	31.07	95	96	56	0	0	3	1
	CHARLESTON	88	65	92	64	76	5	1.67	0.84	1.67	1.67	157	27.61	80	100	52	3	0	1	1
	ELKINS	0	0	0	0	0	0	0.00	-0.79	0.00	0.00	0	31.66	90	100	100	0	0	0	0
	HUNTINGTON	89	65	94	61	77	5	0.39	-0.40	0.39	0.39	38	26.56	79	94	47	4	0	1	0
WY	CASPER	81	47	88	43	64	1	0.22	0.05	0.17	0.22	103	12.54	138	86	25	0	0	3	0
	CHEYENNE	82	53	87	47	67	4	0.00	-0.36	0.00	0.00	0	16.72	135	74	23	0	0	0	0
	LANDER	78	51	87	48	64	1	0.45	0.30	0.37	0.45	244	13.70	142	79	32	0	0	3	0
	SHERIDAN	79	52	94	48	65	3	1.55	1.28	1.38	1.55	447	17.50	159	89	39	1	0	3	1

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

August Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: A series of extreme and sometimes tragic weather and climate events unfolded during an active month. First, devastating Hawaiian infernos on August 8-9 included West Maui's 2,170-acre Lahaina Fire, the deadliest single U.S. wildfire—with 115 confirmed fatalities—in more than 100 years. Fires on Maui and the Big Island were driven by easterly winds (clocked at 40 to 80 mph or higher) that were generated in part due to the interaction between a ridge of high pressure north of the Hawaiian Islands and Category 4 Hurricane Dora passing less than 700 miles south of Honolulu on August 8. Well over 2,000 mostly residential buildings were incinerated by the Lahaina Fire.

Later in the month across Washington, the Oregon and Gray Fires collectively burned about 21,000 acres of vegetation and destroyed more than 700 structures. In western Louisiana, amid the backdrop of persistent heat and worsening drought, the Tiger Island Fire—largest in modern state history—grew to more than 31,000 acres in less than a week, after being ignited on August 22. Still, only about 2 million acres of vegetation had burned nationally by the end of August, less than 40 percent of the 10-year average. For comparison, Canadian wildfires scorched more than 40 million acres—mostly boreal forest—during the first 8 months of the year, more than doubling that country's modern annual record of just under 17.6 million acres set in 1995.

On August 20, Hurricane Hilary—after making landfall in northwestern Mexico—made an historic traversal of southern California, becoming the first Eastern Pacific tropical cyclone since September 1939 to achieve an inland U.S. tropical-storm position. In parts of southern California, August 20-21 rainfall totals of 4 to 8 inches, with isolated amounts near 12 inches, led to flash flooding and debris flows. Despite Hilary's rapid demise over land, tropically enhanced showers spread as far north as the northern Rockies. Just 2 days later, on the 22nd, Tropical Storm Harold made landfall on Padre Island, Texas, with sustained winds near 50 mph, delivering gusty winds and mostly beneficial rain. Finally, just after daybreak on August 30, Idalia became the first major hurricane in modern history to make landfall in the Big Bend of Florida. While moving ashore, Category 3 Idalia packed maximum sustained winds near 125 mph. Most of the major damage caused by Hurricane Idalia was related to a record storm surge along the Gulf Coast, from where landfall occurred (near Keaton Beach, FL) southward to Tampa Bay. However, damage also occurred along a narrow swath of hurricane-force winds (74 mph or greater) extending from north-central Florida into southeastern Georgia. Additionally, Idalia produced heavy rain, totaling 4 to 8 inches or more, although freshwater flooding in the southern Atlantic States was limited by antecedent dryness.

Despite the tropical activity, record-breaking heat persisted through the end of meteorological summer across much of the Deep South. For numerous communities in the western Gulf Coast region, it was not only the hottest August, but also the hottest month on record. Many of the same locations reported a record-hot summer, eclipsing standards that had been largely set in 2010, 2011, or 2020. In the western Gulf Coast region, the chronically hot, dry conditions hastened summer crop maturation and degraded pasture conditions. By September 3, Texas led the nation with rangeland and pastures rated 72 percent very poor to poor, according to USDA/NASS, followed by Louisiana at 63 percent.

Farther north, drought also worsened during August in much of the upper Midwest, with Minnesota also reporting 63 percent of its pastures in very poor to poor condition on September 3. Elsewhere in the nation's mid-section, rangeland and pastures were nearly one-half very poor to poor on that date in Kansas (47 percent), Iowa (46 percent), and Missouri (43 percent). Summer dryness also plagued parts of the Northwest, where Washington's rangeland and pastures were rated 60 percent very poor to poor on September 3. In contrast, more than one-half of the rangeland and pastures were rated in good to excellent condition by summer's end in several states, including Wyoming (89 percent), Colorado (64 percent), and Utah (57 percent). A separate area of relatively lush pastures encompassed much of the East, with more than two-thirds rated good to excellent in New Jersey (77 percent), Ohio (73 percent), Tennessee (70 percent), and Pennsylvania (68 percent), as well as New England, except Connecticut and Maine.

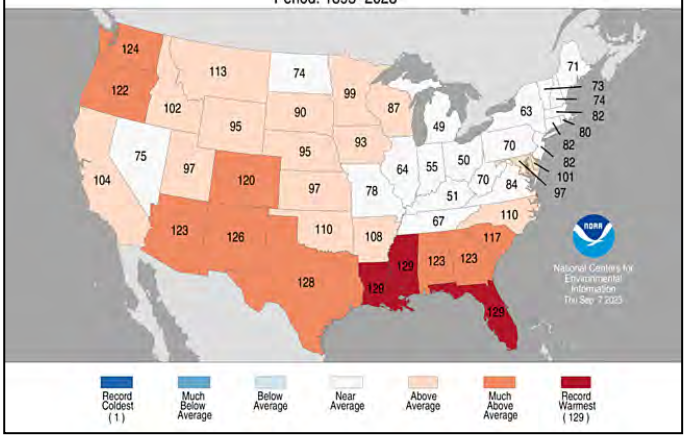
According to the *U.S. Drought Monitor*, drought coverage across the Lower 48 States increased from 28.08 to 34.28 percent during the 4-week period ending August 29. Near the end of August, extreme to exceptional drought (D3 to D4) covered parts of fifteen states, including 74 percent of Louisiana, 32 percent of Texas, and 10 to 20 percent of Iowa, Kansas, Minnesota, Mississippi, Nebraska, New Mexico, and Wisconsin. During August, worsening drought in much of the Deep South and parts of the nation's northern tier contrasted with improving conditions across the central Plains, lower Midwest, and Western areas affected by heavy rain from the remnants of Hurricane Hilary. By September 3, USDA/NASS reported topsoil moisture was a season-high 58 percent very short to short, nationally, led by Texas (95 percent). On that date, topsoil moisture was at least one-half very short to short in 20 additional states—one in the Southeast, two in the Northwest, four in the mid-Atlantic, six across the Rockies and Plains, and seven bordering the Mississippi River.

Dryness and periods of extreme heat led to rapid summer crop maturation in many areas. By September 3, the nation's corn was 18 percent fully mature, while 16 percent of the soybeans were dropping leaves. Five-year averages were 16 and 13 percent, respectively. Similarly, 34 percent of the U.S. rice had been harvested on that date, versus the 5-year average of 26 percent. However, hot, dry conditions also stressed immature crops, with a substantial portion of the cotton rated in very poor to poor condition by September 3 in Oklahoma (79 percent) and Texas (61 percent). Meanwhile, at least one-quarter of the corn was rated very poor to poor on September 3 in Missouri (40 percent), Kansas (33 percent), Minnesota (25 percent), and Nebraska (25 percent), compared to the national value of 18 percent.

Historical Perspective: According to preliminary data provided by the National Centers for Environmental Information, the contiguous U.S. experienced its ninth-hottest, 48th-wettest August during the 129-year period of record. Across the Lower 48 States, the August average temperature of 74.35°F was 2.25°F above the 1901-2000 mean, while precipitation averaged 2.74 inches—105 percent of normal. Following the third-hottest August in 2020 and eighth-hottest August in 2022, it was the third time in the last 4 years that there was a top-ten national August heat ranking.

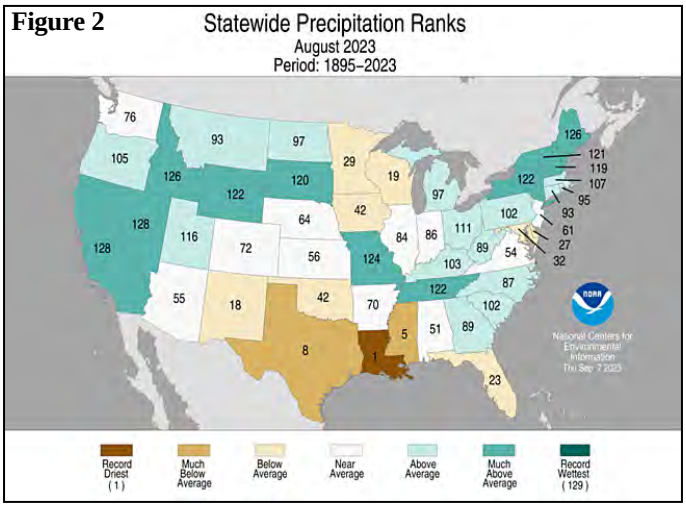
State temperature rankings ranged from the 49th-coolest August in Michigan to the hottest August on record in Florida, Louisiana, and Mississippi (figure 1). In addition, it was among the ten hottest Augusts on record in Oregon, Washington, Arizona, Colorado, New Mexico, Texas, Alabama, and Georgia. Meanwhile, state precipitation rankings ranged from the driest August on record in Louisiana to the second-wettest August in California and Nevada (figure 2). Top-ten August rankings for August dryness extended to Mississippi and Texas, while top-ten wetness also affected Idaho, South Dakota, Wyoming, Missouri, Tennessee, Maine, New York, and Vermont.

Figure 1 Statewide Average Temperature Ranks
August 2023
Period: 1895–2023



Summary: The Lahaina Fire surpassed California's Camp Fire (85 fatalities in November 2018) as the nation's deadliest modern wildfire. Not since October 1918, when multiple fires across Wisconsin and Minnesota claimed more than 450 lives, had such a deadly wildfire rampage unfolded on U.S. soil. In the historic West Maui community of Lahaina, most of the catastrophic loss of life and property occurred late August 8 into

Figure 2 Statewide Precipitation Ranks
August 2023
Period: 1895–2023



the early hours of the following day, when wind gusts of at least 40 to 80 mph raked parts of Maui, Honolulu, and Hawaii Counties. Additional wildfires flared around the same time elsewhere on Maui, as well as the Big Island. Official gusts on the afternoon of the 8th were clocked to 82 mph on the Big Island near Kawaihae and on Oahu at the Oahu Forest National Wildlife Refuge. Meanwhile, winds of 50 to 70 mph were observed on Maui, with a gust to 51 mph reported at the airport in Kahului. Drier-than-normal Hawaiian weather persisted for the remainder of the month, as assessment and recovery efforts proceeded in fire-affected areas. By August 29, drought covered 61 percent of Hawaii, according to the *U.S. Drought Monitor*, up from 6 percent at the beginning of the month. At the state's major airport observation sites, August rainfall ranged from 0.11 inch (13 percent of normal) in Honolulu, Oahu, to 5.35 inches (47 percent) at Hilo, on the Big Island.

Back on the U.S. mainland, August started featuring active weather from the northern Plains into the middle Mississippi Valley, with 2- to 6-inch rainfall totals common along an axis stretching from South Dakota to Missouri. Daily-record totals for August 3 included 3.77 inches in Columbia, MO, and 1.50 inches in North Platte, NE. It was the wettest August day in Columbia since August 18, 2002, when 4.06 inches fell. Subsequently, downpours spread into the Southeast, where record-setting rainfall totals for August 4 reached 2.61 inches in Alma, GA, and 2.43 inches in Jackson, TN. The Northeast also weathered some wet weather on August 4, with daily-record rainfall in New York totaling 2.00 inches in Saranac Lake and 1.61 inches—along with some hail—in Binghamton. Heavy showers and locally severe thunderstorms also dotted the Southwest, where Logan, UT, received 1.31 inches of rain in a 24-hour period no August 3-4. That rain occurred shortly after a wind gust was clocked to 64 mph on August 2 in Provo, UT. Later, heavy rain returned across parts of the Midwest, where record-breaking amounts for August 5 reached 6.14 inches in Burlington, IA; 3.29 inches in Peoria, IL; and 2.33 inches in Aberdeen, SD. For Burlington, it was the wettest August day on record (previously, 4.21 inches on August 15, 1952) and the second-wettest day in any month, behind only 6.28 inches on June 29, 1933.

Heat that had been building in parts of the South since June expanded and intensified in August. Some of the hottest

weather affected the western and central Gulf Coast States, with even the overnight hours providing minimal relief. For example, Palacios, TX, recorded low temperatures of 87°F each day from August 4-7 and 9-11, tying a station record for highest minimum temperature. Maximum temperatures were equally impressive. For example, Baton Rouge, LA, reported triple-digit temperatures (highs ranging from 101 to 104°F) each day from July 29 – August 7, breaking a station record of eight consecutive readings of 100°F or higher, originally set from August 19-26, 1921. Baton Rouge tied the new record with another streak of ten triple-digit readings, from August 18-27. Finally, Baton Rouge demolished monthly and annual records for 100-degree readings, with 24 and 31 such days, respectively; previous marks had been set in 1921, with 16 triple-digit days in August and 28 days for the year. Elsewhere in Louisiana, New Orleans (Louis Armstrong International Airport) set a host of records, including hottest day ever (105°F on August 27; previously, 102°F on August 22, 1980, and August 23 and 26, 2023) and greatest number of triple-digit readings in a month and a year. With 15 days of 100-degree heat in August 2023 and 17 days so far this year, New Orleans pulverized its 1981 annual standard of 5 such days. New Orleans had never experienced more than 3 triple-digit days in a month (in July 1980). Meanwhile in Texas, College Station reported high temperatures of 100°F or greater on 50 consecutive days from July 9 – August 27. On the last day of the streak, College Station—with a high of 112°F—tied an all-time station record that had been achieved only twice before, on September 4, 2000, and August 20, 2023. Prior to this year, College Station's longest stretch of triple-digit weather, 30 consecutive days, occurred from July 6 – August 4, 1998. Earlier in the month, extreme heat also returned across the Southwest, where daily-record highs for August 5 included 116°F in Phoenix, AZ, and 102°F in Albuquerque, NM. Albuquerque's reading was also a monthly record, edging the standard of 101°F set on August 1, 1934; August 1, 1938; and August 2, 1979. In contrast, a few daily-record lows were set in the eastern U.S. For example, record-setting lows for August 2 included 49°F in St. Johnsbury, VT, and 50°F in Martinsburg, WV. The following day in North Carolina, daily-record lows for the 3rd dipped to 59°F in Elizabeth City and 61°F in New Bern.

As the middle of the month approached, there were few changes in the overall weather pattern, with blazing heat in the South and generally mild, wet conditions in the central and eastern U.S. During that time, there were several streaks of 2- to 4-inch rainfall totals, with locally higher amounts, leading to pockets of flash flooding. Some of the heaviest rain fell in the Northeast and portions of the mid-South and interior Southeast. On August 6-7, a large-scale severe weather outbreak—with hundreds of wind-damage reports and isolated tornadoes—affected much of the eastern one-third of the country. Fort Lauderdale, FL, netted a daily-record sum of 2.07 inches on August 6, followed on the 7th by daily records in Parkersburg, WV (2.94 inches), and Syracuse, NY (2.45 inches). Heavy rain lingered in the waterlogged Northeast through August 8, when daily-record amounts reached 3.56 inches in Bangor, ME, and 2.58 inches in Saranac Lake, NY. By August 9, the focus for heavy rain shifted to the Midwest, where daily-record amounts included 3.64 inches in Springfield, IL, and 1.30 inches in Kansas City, MO. Some of the heaviest rain fell on the 10th across the interior Southeast; Batesville, AR, received 5.99 inches, while totals topped the 2-inch mark in Crossville, TN (2.88 inches), and London, KY (2.02 inches). Farther west, spotty monsoon showers led to a daily-record total (0.15 inch) for August 12 in Bishop, California. However, Phoenix, Arizona, remained dry for 147 consecutive days through August 16, with measurable rain having last occurred on March 22. Even with a few mid- to late-month showers, Phoenix completed its driest summer on record, with a sum of 0.12 inch (previously, 0.23 inch in June-August 1924). Additionally, Phoenix had never experienced such a delayed "monsoon onset," with the previous latest date on the summer's first measurable rainfall occurring on August 14, 1995.

Meanwhile, a stunning array of temperature records continued to fall across the South. All-time records for the highest daily minimum temperature were tied or broken in several locations, including Key West, FL (88°F on August 9); Baton Rouge, LA (85°F on August 10); and Shreveport, LA (83°F on August 10 and 11). Additionally, several August maximum temperature records were set or tied across the Deep South, starting on August 6 in Texas locations such as El Paso (112°F) and Del Rio (110°F). (Del Rio topped that reading with a high of 111°F on August 10.) El Paso's former record of 108°F had been set on August 2, 1980. Prior to this year, Del Rio's highest August reading of 109°F had occurred most recently on August 26, 2019. San Angelo, TX, logged a high of 111°F on the 10th, tying an August record originally set on August 4, 1943. Daily-record highs exceeding the 110-degree mark extended as far north as the Red River Valley, where Wichita Falls, TX, notched daily-record highs of 113 and 111°F, respectively, on August 9 and 12. Monthly record heat also spread to the southern Atlantic States. On August 8, monthly record highs soared to 102°F on St. Simons Island, GA, and 98°F in Naples, FL. Back in Texas, Houston's Hobby Airport experienced 100-degree heat each day from August 4-21, with that 18-day streak doubling the standard originally set from August 6-14, 1962. Improbably, heat continued to intensify as the month progressed. August 19 featured the highest temperature on record in Alexandria, LA (110°F; previously, 109°F on September 1, 2000). Additionally, an all-time station record was tied on the 19th in New Iberia, LA (104°F), while a monthly record was broken in Lafayette, LA (105°F). Farther west, Abilene, TX, attained 111°F on August 17, tying an all-time station record first established on August 3, 1943. Wichita Falls, TX, tied August records with 6 days of 110-degree heat, as well as highs of 113°F on August 9 and 17.

Hours after moving ashore in northwestern Mexico on August 20, Hilary arrived in southern California as a tropical storm. On August 20, Hilary single-handedly resulted in the wettest August on record in numerous southern California communities, boosting month-to-date rainfall to 4.92 inches in Sandberg; 4.65 inches in Woodland Hills; 3.94 inches in Palmdale; 3.66 inches in Lancaster; 3.57 inches in Burbank; and 2.99 inches in downtown Los Angeles. Palmdale's daily total (3.93 inches on the 20th) more than doubled its record for wettest August (1.76 inches in 1968) and wettest August day (1.55 inches on August 6, 1968). Also on the 20th, calendar-day totals topped 3 inches on an August day for the first time in locations such as Sandberg (4.62 inches), Lancaster (3.59 inches), Burbank (3.28 inches), and Palm Springs (3.18 inches). Death Valley, CA, also noted its wettest August day (2.20 inches on the 20th; previously, 1.70 inches on August 5, 2022). High-elevation event totals of 6 to

12 inches were reported in southern California locations such as Mt. San Jacinto (11.74 inches), Mt. Wilson (8.56 inches), and Mt. Laguna (7.11 inches). In southern Nevada, at elevations above 8,000 feet, storm-total rainfall reached 9.20 inches in Lee Canyon and 7.80 inches near Mt. Charleston. Meanwhile, hurricane-force wind gusts (74 mph or greater) were reported at a few high-elevation sites in southern California, including Black Mountain (84 mph) and Palomar Mountain (79 mph). Lower-elevation wind gusts on August 20 included 69 mph in Yuma, AZ, and 66 mph in Imperial, CA. Farther north, daily-record totals topped an inch on August 21 in McCall, ID (2.28 inches), and Ontario, OR (1.51 inches). Previously, McCall's wettest calendar day had been July 28, 1984, with 2.00 inches.

In mid-August, prior to the arrival of Tropical Storm Harold in southern Texas, separate areas of heavy rain affected the Midwest. On August 13, daily-record rainfall totals topped the 2-inch mark in St. Joseph, MO (3.26 inches), and Kansas City, MO (2.72 inches), as well as South Dakota locations such as Sisseton (2.58 inches), Aberdeen (2.39 inches), and Watertown (2.10 inches). A day later, on the 14th, additional daily-record amounts reached 3.09 inches in Cape Girardeau, MO; 3.20 inches in Dubuque, IA; 2.69 inches in Holland, MI; and 2.08 inches in Milwaukee, WI. By August 15, Northeastern daily-record amounts totaled 1.54 inches at New York's LaGuardia Airport and 1.13 inches in Bridgeport, CT. LaGuardia Airport collected another record-setting total, 1.57 inches, on August 18. Meanwhile, heavy showers in the southern Atlantic States led to record-setting totals for August 16 in Brooksville, FL (3.48 inches), and downtown Charleston, SC (2.42 inches). Elsewhere in Florida, Tampa (2.62 inches) and Jacksonville (1.71 inches) netted record-setting totals for August 17. By August 22, the focus for heavy rain shifted to southern Texas, where Tropical Storm Harold moved ashore. Harold made landfall on Padre Island, TX, with sustained winds near 50 mph. Record-setting rainfall amounts for that date reached 4.74 inches in Corpus Christi and 3.98 inches in Laredo; it was the month's first measurable rain in both locations, and the first rain in Laredo since June 8. As Harold moved ashore, easterly winds gusted to 62 mph in Corpus Christi and 52 mph in Rockport and Alice, TX. Some of Harold's residual moisture was eventually absorbed into the Southwestern monsoon circulation; Boise, ID, measured 1.00 inch of rain (associated with Hilary) from August 20-22 and 1.46 inches on August 26.

Mid-month heat briefly affected the Pacific Northwest. For example, August 14 featured monthly record high temperatures in Oregon locations such as Troutdale (110°F), Portland (108°F), and Hillsboro (107°F). Vancouver, WA (108°F on the 14th) also posted an August record high. Portland recorded triple-digit heat each day from August 13-16, second only to a 5-day streak from July 13-17, 1941, and tied with August 7-10, 1981. By August 19, 110-degree heat surged across the Plains as far north as Kansas, where daily-record highs included 113°F in Salina and 111°F in Wichita and Topeka. For all three Kansas locations, it marked the highest temperatures in more than a decade, since 2011 or 2012. In stark contrast, scattered daily-record lows were reported across the north-central U.S., especially in mid-August. Record-setting lows for August 14 dipped to 39°F in Casper, WY, and 45°F in Yuma, CO. A day later in Nebraska, daily-record lows for the 15th included 48°F in Imperial and 50°F in McCook. A surge of cool air into the East delivered daily-record lows for August 19 to Parkersburg, WV (51°F), and Lynchburg, VA (54°F). Farther south, however, the epic heat wave reached a crescendo in late August. In Texas, all-time station records included 111°F in Lufkin (on August 27); 109°F (on August 24 and 27) in Houston; and 108°F (on August 24) in Beaumont-Port Arthur. In Louisiana, never-before-seen temperatures were observed in Alexandria (110°F on August 19 and 24) and New Iberia (109°F on August 27). Shreveport, LA (110°F on August 25 and 26), tied an all-time station record originally set on August 18, 1909. Record-shattering heat extended to other Gulf Coast communities, including Gulfport, MS (107°F on August 26), and Mobile, AL (106°F on August 26). The previous all-time station record in Gulfport had been 104°F, set on August 23, 1924; August 5, 1947; and August 30, 1951. Mobile's previous standard had been 105°F, established on August 29, 2000. Dallas-Fort Worth, TX, attained 110°F on at least 2 consecutive days (August 25-26) for only the third time on record, along with August 10-11, 1936, and June 26-28, 1980. Meanwhile, the Midwestern cool spell was quickly replaced by several days of extreme heat. The 23rd was the hottest day in Waterloo, IA (105°F), since August 17, 1988, and the hottest in La Crosse, WI (104°F), since July 13, 1995. Unusual heat extended into the overnight hours, when the August 22 minimum temperature of 81°F in Sioux Falls, SD, tied July 12, 1936, and August 14, 1938, for an all-time station record. On August 22-23, Sioux Falls experienced consecutive days with lows of 80°F or greater for the first time on record. In the Midwest, however, heat was soon broken by the passage of cold fronts, which also provided some rain. Columbus, OH, netted a daily-record total of 2.44 inches on August 24. The following day, record-setting totals for the 25th included 2.66 inches in Sidney, NE, and 1.50 inches in Worcester, MA. On August 26, Lincoln, NE, collected a daily-record sum of 2.24 inches, shortly after registering its highest readings (105°F on August 22 and 24) since July 22, 2012.

While moving ashore on August 30 at 7:45 am EDT, Category 3 Idalia was packing maximum sustained winds near 125 mph and had a central barometric pressure of 949 millibars (28.02 inches). Ironically, Idalia's strike occurred during a period of relatively tranquil weather nearly nationwide. In Valdosta, GA, where 7.04 inches fell on the 30th, it was the wettest August day and the wettest day at any time of year since September 6, 2000, when 7.10 inches fell. Also on August 30, daily-record totals associated with Idalia included 5.81 inches in Alma, GA; 4.81 inches in North Myrtle Beach, SC; and 3.59 inches in Lumberton, NC. East of Idalia's path, southerly winds were clocked (on the 30th) to 70 mph in Sarasota-Bradenton, FL, and 67 mph in Brunswick, GA. Elsewhere in Georgia, Valdosta clocked a northeasterly gust to 67 mph. Meanwhile, Florida crest (storm-surge) records set by Category 1 Hurricane Hermine on September 2, 2016, were broken on Cedar Key and along the lower reaches of the Steinhatchee River. A storm-surge record (from March 13, 1993) was broken at Clearwater Beach, FL. Even on the Atlantic Coast, Charleston, SC, reported its fifth-highest water level on record, just 3.29 feet below Hurricane Hugo's high-water mark on September 22, 1989. Farther north, a cold front—which helped to steer Idalia's remnants out to sea—produced its own area of locally heavy showers. Crossville, TN, netted 3.24 inches on August 29, followed the next day by daily-record amounts in West Virginia

locations such as Elkins (2.24 inches) and Clarksburg (1.67 inches). Rain fell in the Northeast through August 30, when daily-record amounts reached 1.91 inches in Caribou, ME, and 1.62 inches in Montpelier, VT. Late in the month, downpours dotted the West, as moisture surged northward in advance of a cold front. St. George, UT, received 3.47 inches of rain in a 48-hour period from August 31 – September 2. Rain reached into the Pacific Northwest, where daily-record totals in Oregon for August 31 included 0.72 inch in McMinnville and 0.55 inch in Portland. August 31 featured the month's first measurable rain (0.34 inch) in Dallesport, WA—the first time a daily amount topped one-tenth of an inch in that location since April 20.

As August ended, some of the extraordinary Southern heat began to fade. However, extreme heat persisted in the western Gulf Coast region, where Palacios, TX (102°F on August 30) set a monthly record high. The lingering heat capped the hottest month on record in various towns and cities, with Louisiana locations such as Baton Rouge (90.1°F) and Lafayette (90.3°F) reporting a monthly average temperature above the 90-degree mark for the first time. Hottest-month-on-record standards were eclipsed as far east as Florida locations such as Tallahassee (86.4°F), Orlando (85.9°F), and Daytona Beach (85.0°F). Additionally, it was also the driest August on record in Mississippi locations such as Vicksburg (0.05 inch) and Jackson (0.07 inch). Furthermore, it was the hottest summer on record in a host of towns and cities from Louisiana to the southern Atlantic Coast. Hottest-summer records were toppled by a stunning margin in some places, including Baton Rouge, LA, where the June-August average temperature of 87.5°F was nearly 3°F above the 2011 record of 84.7°F. In late August, extreme heat resurfaced in the West, where triple-digit, daily-record highs for the 28th reached 104°F in Hermiston, OR, and 103°F in Pasco, WA. Palm Springs, CA, posted a pair of daily-record highs of 118°F on August 28 and 29. Similarly, Phoenix, AZ, tallied a trio of daily-record highs (114, 117, and 116°F) from August 27-29. With 22 days of 115-degree heat during the first eight months of the year, Phoenix already surpassed its 2020 annual record of 14 such days. Elsewhere, heat crept back at month's end into the nation's mid-section, where Rapid City, SD, collected a daily-record high (102°F) for August 30. The last day of August featured daily-record highs in Colorado locations such as Pueblo (101°F) and Grand Junction (98°F).

During August, warmer-than-normal weather dominated northern and eastern Alaska, while near-normal temperatures generally prevailed in southern and western sections of the state. Alaskan precipitation was generally abundant, although dryness was observed at some interior locations. Near Juneau, however, an outburst flood (unrelated to any recent precipitation) below Mendenhall Glacier led to record flooding, with the Mendenhall River near Auke Bay cresting 5.97 feet above flood stage on August 5 (previously, 2.99 feet above flood stage on July 1, 2016). Farther north, Deadhorse, AK, near the Arctic Coast, experienced its warmest-ever August day with a high of 84°F on the 5th. On the same day, Utqiaġvik registered 76°F, a record for the date that also tied the monthly record originally set on August 8, 1968. A few days later in southeastern Alaska, daily-record rainfall totals included 3.18 inches (on August 7) in Ketchikan and 4.42 inches (on August 12) in Sitka. In the interior, McGrath received measurable rain each day from August 7-11, totaling 1.42 inches. Similarly, Anchorage received rainfall totaling 2.03 inches from August 14-16, aided by a daily-record sum of 1.10 inches on the 16th. Late in the month, showery weather returned or continued across many mainland communities. In King Salmon, August precipitation totaled 4.73 inches (145 percent of normal), with measurable rain falling on each of the last 9 days of the month. Similarly, McGrath netted an August sum of 4.61 inches (158 percent of normal), with measurable amounts falling each day from August 20-31. In the Aleutians, Cold Bay notched a daily record-tying low of 36°F on August 29. Elsewhere, August temperatures averaged more than 4°F above normal in locations such as Bettles, Delta Junction, Fairbanks, and Utqiaġvik.

Fieldwork

Fieldwork summary provided by USDA/NASS

August was warmer than average for much of the nation. Large parts of the lower Mississippi Valley and southern Plains recorded temperatures 6°F or more above normal for the month. In contrast much of the Great Basin, southern California, Great Lakes, Northeast, and Ohio Valley were cooler than normal. Meanwhile, much of the lower Mississippi Valley and southern Plains remained drier than normal, but the effects of Tropical Storm Hilary brought at least eight times the normal amount of August precipitation to much of the Great Basin and California. In addition, at least twice the normal amount of precipitation fell on parts of the Great Lakes, middle Mississippi Valley, Northeast, Pacific Northwest, northern Plains, Rockies, Southeast, and Southwest. Due in large part to the effects of Hurricane Idalia at the end of the month, August rainfall totaling at least 10 inches was recorded in parts of the Carolinas, Florida, and Georgia.

By August 6, ninety-three percent of the nation's corn acreage had reached the silking stage, 4 percentage points ahead of last year and 2 points ahead of the 5-year average. By August 6, forty-seven percent of the corn was at or beyond the dough stage, 5 percentage points ahead of last year and 1 point ahead of the average. By August 6, eight percent of the corn was denting, 2 percentage points ahead of last year but equal to the average. By August 20, seventy-eight percent of the corn was at or beyond the dough stage, 5 percentage points ahead of last year and 1 point ahead of average. By August 20, thirty-five percent of the corn was denting, 6 percentage points ahead of last year and 2 points ahead of average. Four percent of the nation's corn was mature by August 20, equal to both last year and the 5-year average. By September 3, ninety-three percent of the corn was at or beyond the dough stage, 2 percentage points ahead of last year and 1 point ahead of average. By September 3, sixty-seven percent of the corn was denting, 6 percentage points ahead of last year and 2 points ahead of average. Eighteen percent of the corn was mature by September 3, four percentage points ahead of last year and 2 points ahead of average. On September 3, fifty-three percent of the corn acreage was rated in good to excellent condition, 1 percentage point below the same time last year.

By August 6, ninety percent of the nation's soybean acreage had reached the blooming stage, 2 percentage points ahead of last year and 3 points ahead of the 5-year average. Nationally, 66 percent of the soybeans had begun setting pods, 7 percentage points ahead of last year and 3 points ahead of

average. By August 20, ninety-six percent of the soybeans had reached the blooming stage, equal to both last year and the 5-year average. Nationally, 86 percent of the soybeans had begun setting pods, 3 percentage points ahead of last year and 2 points ahead of average. By September 3, ninety-five percent of the soybeans had begun setting pods, 1 percentage point ahead of both last year and the average. Nationally, leaf drop was 16 percent complete by September 3, seven percentage points ahead of last year and 3 points ahead of average. On September 3, fifty-three percent of the nation's soybean acreage was rated in good to excellent condition, 4 percentage points below the same time last year.

Eighty-seven percent of the 2023 winter wheat acreage had been harvested by August 6, two percentage points ahead of last year but 1 point behind the 5-year average. Ninety-six percent of the 2023 winter wheat had been harvested by August 20, two percentage points ahead of last year but equal to the average. Winter wheat harvest progress was complete or nearing completion on that date in all estimating states except Idaho, Montana, and Washington. Nationwide, producers had sown 1 percent of the intended 2024 winter wheat acreage by September 3, two percentage points behind both last year and the 5-year average. Planting progress was most advanced on that date in Washington and South Dakota, with 9 and 8 percent planted, respectively.

Ninety-two percent of the nation's cotton acreage had reached the squaring stage by August 6, two percentage points behind last year and 1 point behind the 5-year average. By August 6, sixty-three percent of the cotton had begun setting bolls, 4 percentage points behind last year but equal to the average. By August 6, eight percent of the cotton had open bolls, 1 percentage point behind both last year and the average. By August 20, eighty-one percent of the cotton had begun setting bolls, 6 percentage points behind last year and 3 points behind average. By August 20, eighteen percent of the cotton had open bolls, equal to last year but 1 percentage point behind the average. By September 3, ninety-four percent of the cotton had begun setting bolls, 3 percentage points behind last year and 1 point behind the average. By September 3, thirty-two percent of the cotton had open bolls, 5 percentage points behind last year and 1 point behind average. On September 3, thirty-one percent of the cotton was rated in good to excellent condition, 4 percentage points below the same time last year.

By August 6, fifty-nine percent of the sorghum had reached the headed stage, 6 percentage points ahead of last year but 1 point behind the 5-year average. Twenty-six percent of the sorghum was at or beyond the coloring stage by August 6, two percentage points ahead of last year but equal to the average. By August 20, eighty-one percent of the sorghum had reached the headed stage, 4 percentage points ahead of last year but 3 points behind average. Thirty-eight percent of the sorghum was at or beyond the coloring stage by August 20, two percentage points ahead of last year but 2 points behind average. By August 20, eighteen percent of the sorghum was mature, 2 percentage points behind last year and 3 points behind average. By September 3, ninety-three percent of the sorghum had reached the headed stage, 2 percentage points ahead of last year but 3 points behind average. Sixty-one percent of the sorghum was at or beyond the coloring stage by September 3, one percentage point ahead of last year but 3 points behind average. By September 3, twenty-eight percent of the sorghum was mature, 1 percentage point ahead of last year but equal to the average. Nineteen percent of the 2023 sorghum acreage had been harvested by September 3, one percentage point behind last year and 2 points behind average. Forty-four percent of the sorghum was rated in good to excellent condition on September 3, twenty-three percentage points above the same time last year.

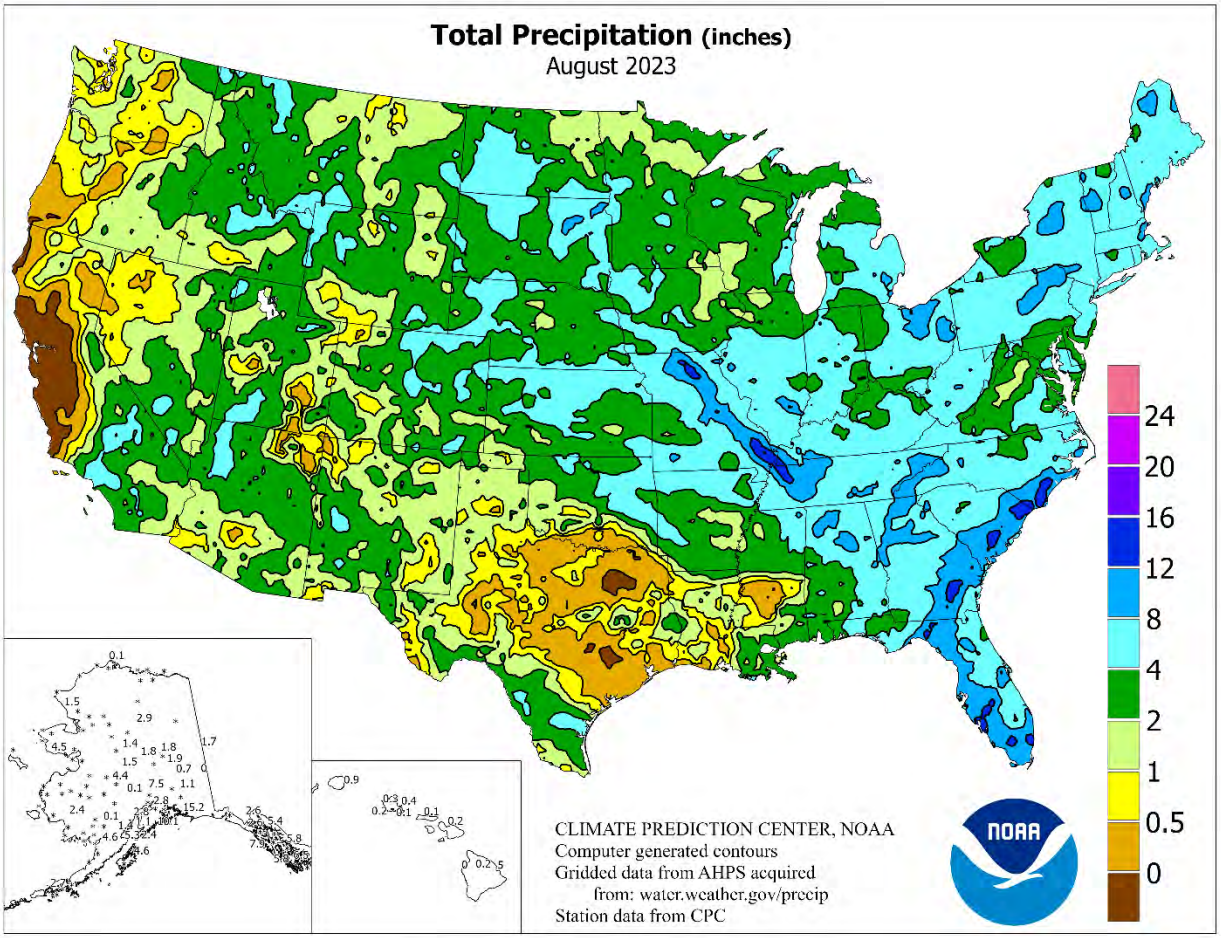
By August 6, seventy-four percent of the rice had reached the headed stage, 7 percentage points ahead of the previous year and 3 points ahead of the 5-year average. Nationally, 9 percent of the rice was harvested by August 6, four percentage points ahead of last year and 3 points ahead of average. By August 20, ninety-four percent of the rice had reached the headed stage, 2 percentage points ahead of both the previous year and the average. Nationally, 18 percent of the rice was harvested by August 20, four percentage points ahead of both last year and the average. Nationally, 34 percent of the rice was harvested by September 3, eleven percentage points ahead of last year and 8 points ahead of average. On September 3, seventy percent of the rice was rated in good to excellent condition, 2 percentage points below the same time last year.

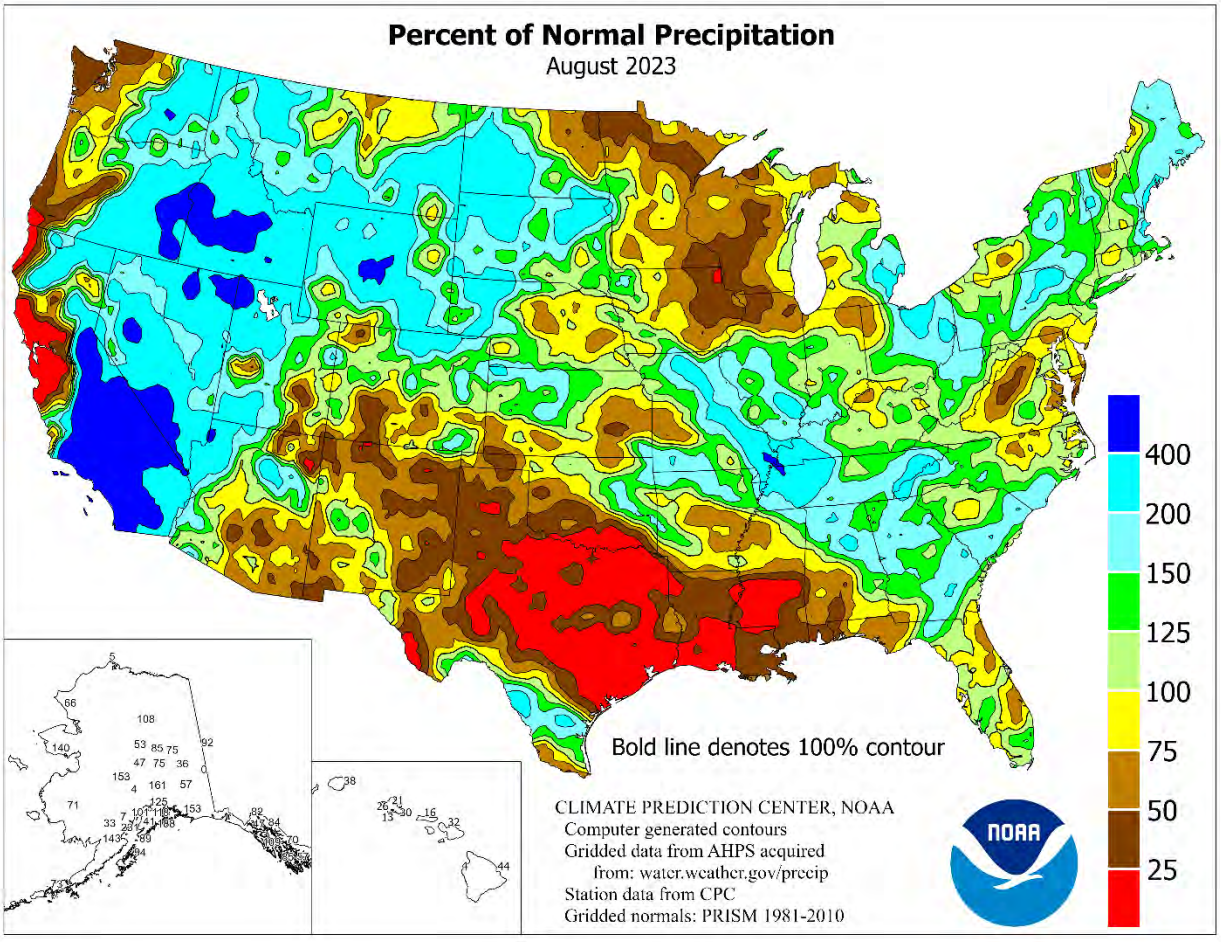
Forty-nine percent of the oats had been harvested by August 6, five percentage points ahead of last year but 1 point behind the 5-year average. On August 6, forty-four percent of the oats were rated in good to excellent condition, 9 percentage points below the same time last year. Seventy percent of the oats had been harvested by August 20, two percentage points ahead of last year but 6 points behind average. Ninety percent of the oats had been harvested by September 3, one percentage point ahead of last year but 2 points behind average.

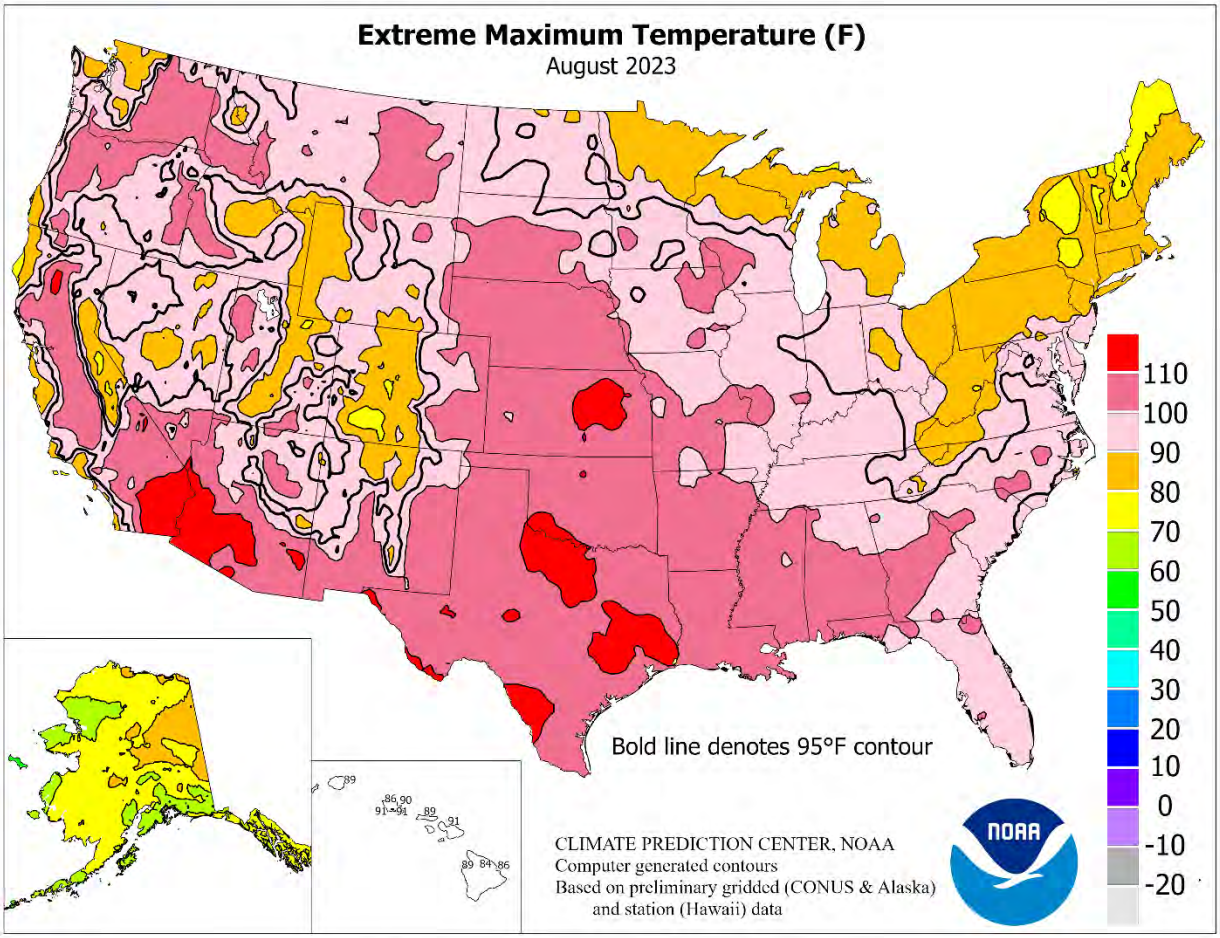
By August 6, producers had harvested 16 percent of the nation's barley, 4 percentage points ahead of last year but equal to the 5-year average. By August 20, producers had harvested 49 percent of the barley, 7 percentage points ahead of last year but 3 points behind average. On August 20, forty-nine percent of the barley was rated in good to excellent condition, 5 percentage points below the same time last year. By September 3, eighty percent of the barley had been harvested, 5 percentage points ahead of the previous year but 1 point behind average.

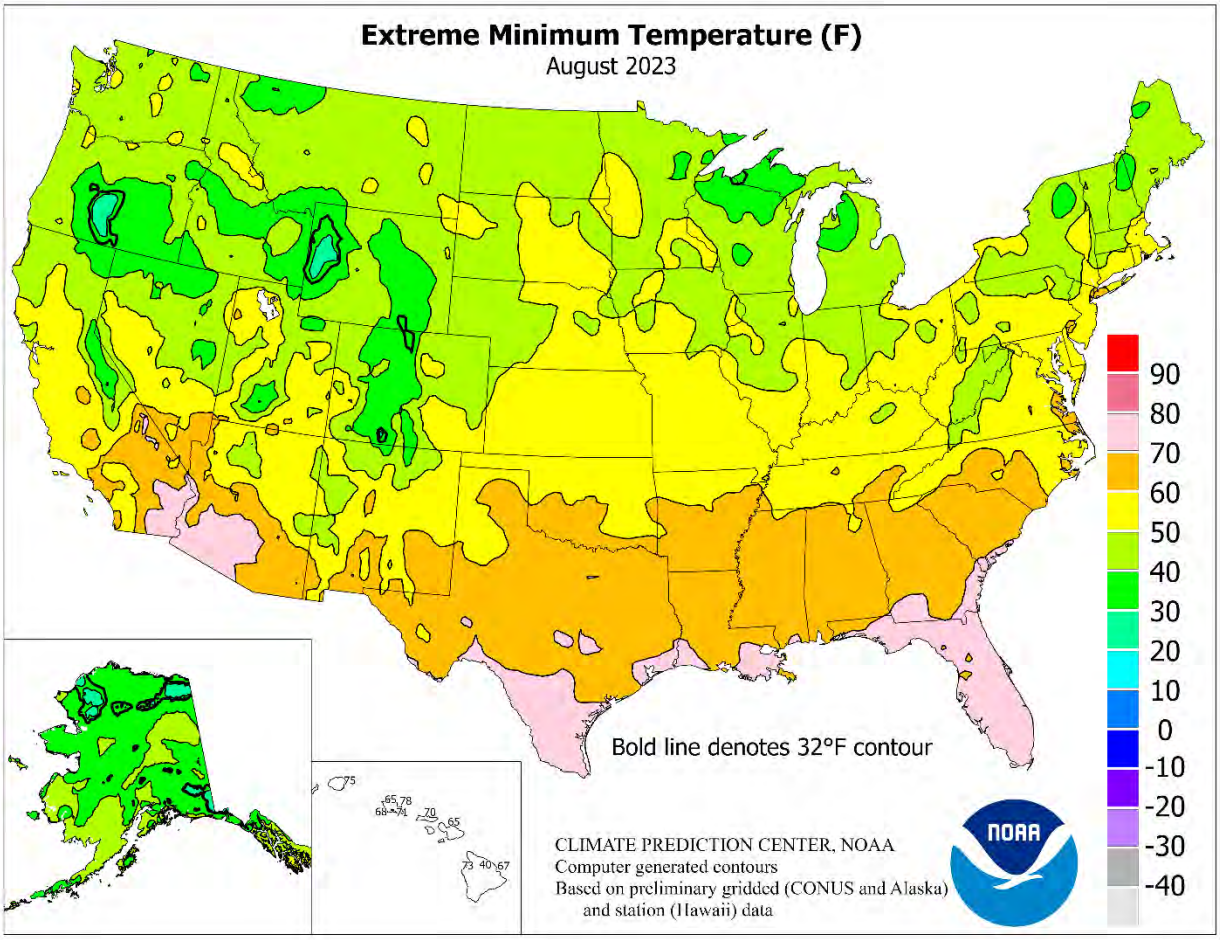
By August 6, eleven percent of the nation's spring wheat had been harvested, 3 percentage points ahead of the previous year but 3 points behind the 5-year average. By August 20, thirty-nine percent of the spring wheat had been harvested, 8 percentage points ahead of the previous year but 7 points behind average. On August 27, thirty-seven percent of the spring wheat was rated in good to excellent condition, 31 percentage points below the same time last year. By September 3, seventy-four percent of the spring wheat had been harvested, 6 percentage points ahead of the previous year but 3 points behind average.

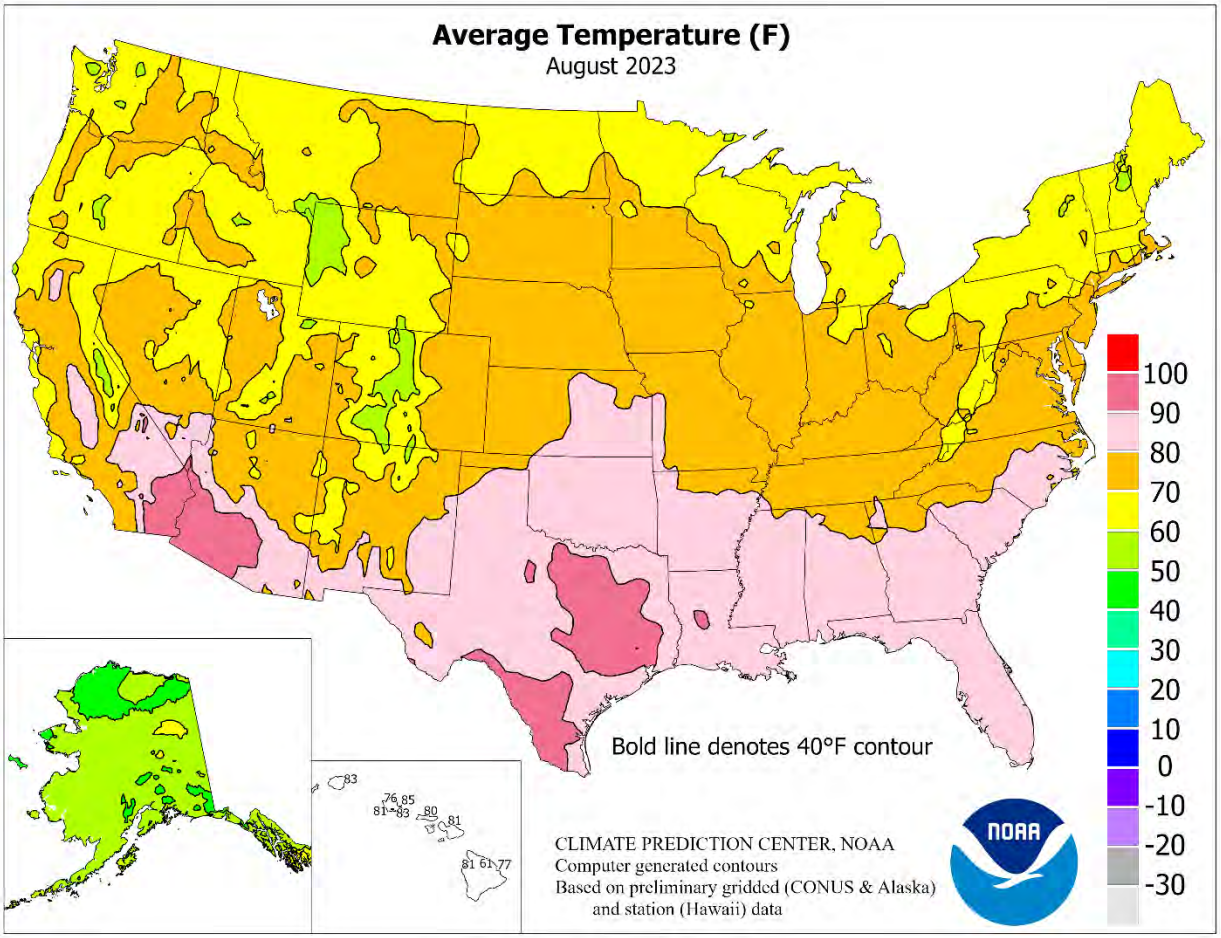
By August 13, ninety-five percent of the peanuts had reached the pegging stage, 1 percentage point behind the previous year but equal to the 5-year average. On September 3, fifty-six percent of the peanuts were rated in good to excellent condition, 14 percentage points below the same time last year.

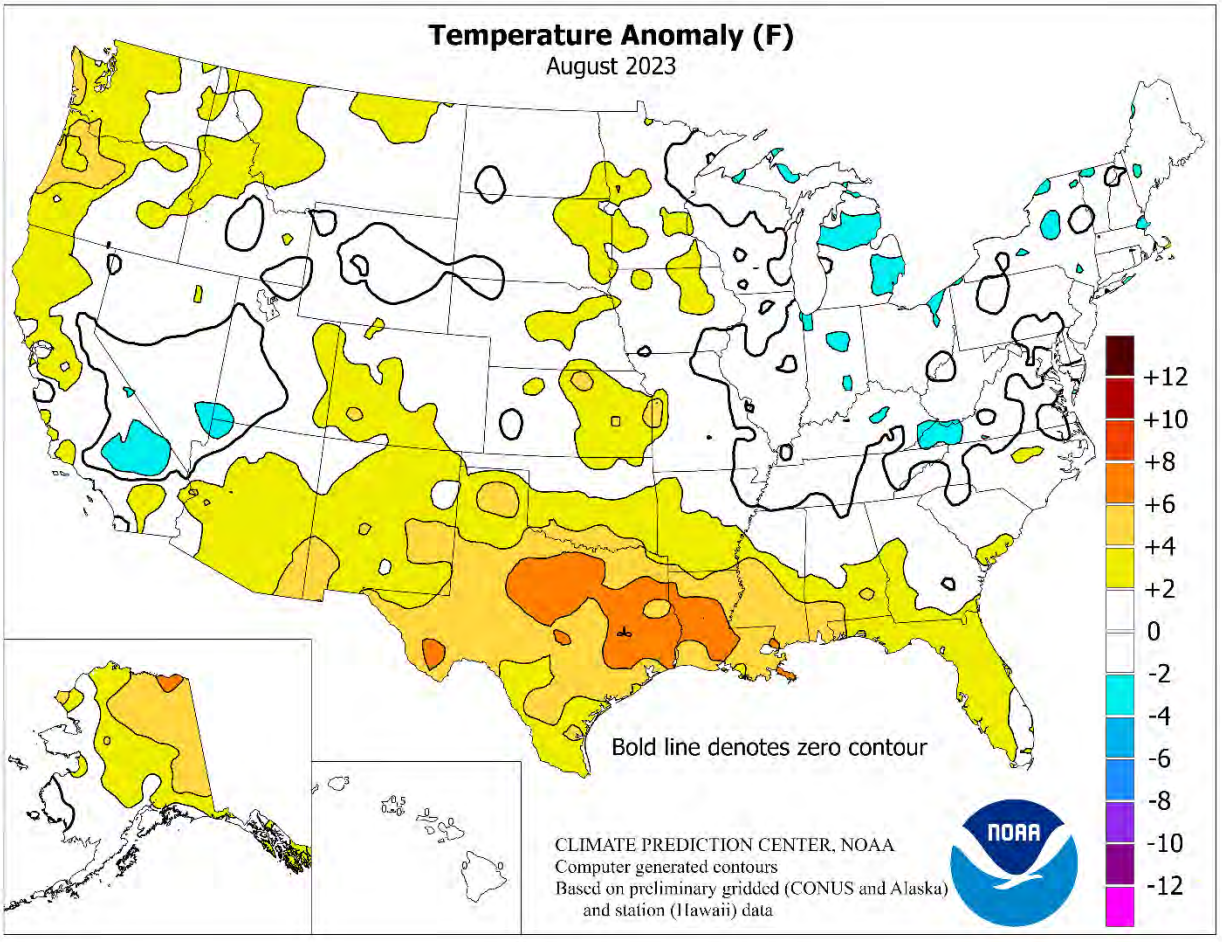

Total Precipitation (inches)
August 2023
24
20
16
12
8
4
2
1
0.5
0
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Gridded data from AHPS acquired
from: water.weather.gov/precip
Station data from CPC
NOAA


Percent of Normal Precipitation
August 2023
400
200
150
125
100
75
50
25
Bold line denotes 100% contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Gridded data from AHPS acquired
from: water.weather.gov/precip
Station data from CPC
Gridded normals: PRISM 1981-2010
NOAA


Extreme Maximum Temperature (F)
August 2023
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (F)
August 2023
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Average Temperature (F)
August 2023
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
Bold line denotes 40°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS & Alaska)
and station (Hawaii) data
NOAA


Temperature Anomaly (F)
August 2023
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
Bold line denotes zero contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

National Weather Data for Selected Cities

August 2023

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMP, ˚F		PRECIP.		STATES AND STATIONS	TEMP, ˚F		PRECIP.		STATES AND STATIONS	TEMP, ˚F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AK ANCHORAGE	58	1	3.66	0.72	WICHITA	82	2	2.34	-1.95	TOLEDO	71	-2	3.76	0.61
BARROW	45	0	0.05	-0.93	KY LEXINGTON	76	0	2.39	-1.31	YOUNGSTOWN	69	-1	3.82	0.35
FAIRBANKS	62	5	1.79	-0.31	LOUISVILLE	78	-1	2.67	-1.04	OK OKLAHOMA CITY	84	3	0.76	-2.85
JUNEAU	59	3	5.37	-1.05	PADUCAH	77	-1	7.17	4.06	TULSA	84	2	3.41	0.03
KODIAK	56	-1	4.59	-0.31	LA BATON ROUGE	90	7	1.53	-4.84	OR ASTORIA	65	4	0.81	-0.30
NOME	52	1	4.51	1.29	LAKE CHARLES	89	5	1.11	-5.08	BURNS	68	2	0.97	0.72
AL BIRMINGHAM	82	1	6.87	2.52	NEW ORLEANS	89	5	2.95	-3.96	EUGENE	73	5	0.26	-0.13
HUNTSVILLE	80	-1	5.13	1.58	SHREVEPORT	90	6	0.00	-2.91	MEDFORD	78	4	0.00	-0.33
MOBILE	88	6	2.00	-4.87	MA BOSTON	72	-1	6.39	3.16	PENDLETON	75	3	0.39	0.08
MONTGOMERY	85	3	3.43	-0.59	WORCESTER	69	-1	5.56	1.41	PORTLAND	76	5	0.60	0.06
AR FORT SMITH	86	3	2.62	-0.98	MD BALTIMORE	77	1	3.70	-0.38	SALEM	73	4	0.85	0.46
LITTLE ROCK	85	5	1.81	-1.35	ME CARIBOU	63	-2	6.24	2.64	PA ALLENTOWN	71	-2	4.74	0.18
AZ FLAGSTAFF	67	2	3.20	0.16	PORTLAND	67	-2	5.74	2.17	ERIE	69	-3	2.63	-0.73
PHOENIX	99	4	0.06	-0.87	MI ALPENA	65	-2	3.53	0.44	MIDDLETOWN	75	0	2.03	-1.74
PRESCOTT	76	2	0.77	-1.69	GRAND RAPIDS	69	-2	2.77	-0.78	PHILADELPHIA	77	0	3.20	-1.08
TUCSON	90	3	2.37	0.39	HOUGHTON LAKE	64	-2	2.44	0.32	PITTSBURGH	72	0	2.56	-0.97
CA BAKERSFIELD	85	1	1.09	1.08	LANSING	69	-1	4.26	0.78	WILKES-BARRE	70	-2	6.37	2.52
EUREKA	61	2	0.01	-0.17	MUSKEGON	71	0	2.97	-0.13	WILLIAMSPORT	71	0	7.36	3.19
FRESNO	84	2	0.18	0.18	TRAVERSE CITY	68	-2	2.93	-0.05	RI PROVIDENCE	71	-2	4.21	0.62
LOS ANGELES	70	-1	2.56	2.56	MN DULUTH	65	0	1.67	-2.06	SC CHARLESTON	84	2	4.98	-1.99
REDDING	84	3	0.25	0.12	INT_L FALLS	63	1	2.32	-0.50	COLUMBIA	82	1	5.48	0.83
SACRAMENTO	77	2	0.00	-0.04	MINNEAPOLIS	75	3	2.27	-2.07	FLORENCE	82	1	5.71	0.85
SAN DIEGO	72	-1	1.84	1.83	ROCHESTER	71	2	1.49	-2.63	GREENVILLE	79	0	5.09	0.44
SAN FRANCISCO	68	3	0.03	-0.01	ST. CLOUD	71	3	4.50	0.50	SD ABERDEEN	72	2	6.68	4.44
STOCKTON	80	2	0.00	0.00	MO COLUMBIA	77	0	9.52	5.38	HURON	74	2	2.10	-0.50
CO ALAMOSA	66	3	0.39	-0.90	KANSAS CITY	78	1	4.50	0.26	RAPID CITY	71	1	0.87	-0.72
CO SPRINGS	72	1	2.33	-0.62	SAINT LOUIS	80	1	3.55	0.17	SIOUX FALLS	75	3	4.52	1.18
DENVER INTL	74	1	0.92	-0.67	SPRINGFIELD	79	1	6.19	2.59	TN BRISTOL	75	0	6.06	2.30
GRAND JUNCTION	79	3	1.27	0.35	MS JACKSON	88	6	0.07	-4.61	CHATTANOOGA	80	0	6.72	3.05
PUEBLO	77	2	0.70	-1.41	MERIDIAN	85	3	0.65	-3.71	KNOXVILLE	78	0	6.89	3.26
CT BRIDGEPORT	73	-1	3.86	-0.12	TUPELO	82	1	3.82	-0.26	MEMPHIS	83	1	2.79	-0.59
HARTFORD	71	-1	3.87	-0.34	MT BILLINGS	73	2	1.27	0.40	NASHVILLE	80	0	3.09	-0.70
DC WASHINGTON	78	-1	3.70	0.44	BUTTE	63	1	2.37	1.09	TX ABILENE	91	7	0.46	-2.07
DE WILMINGTON	77	1	2.78	-1.21	CUT BANK	66	3	1.48	0.53	AMARILLO	82	3	0.43	-2.43
FL DAYTONA BEACH	85	3	5.70	-0.88	GLASGOW	74	3	0.45	-0.82	AUSTIN	91	5	0.11	-2.63
JACKSONVILLE	84	2	4.97	-1.91	GREAT FALLS	69	2	0.64	-0.58	BEAUMONT	89	6	0.36	-6.53
KEY WEST	87	2	6.26	0.89	HAVRE	71	2	0.87	-0.04	BROWNSVILLE	90	3	0.96	-1.20
MIAMI	87	2	9.19	-0.39	MISSOULA	71	3	2.32	1.49	CORPUS CHRISTI	89	3	3.75	1.00
ORLANDO	86	3	8.14	0.46	NC ASHEVILLE	75	1	4.10	-0.94	DEL RIO	93	6	1.62	-1.07
PENSACOLA	88	5	2.45	-5.04	CHARLOTTE	80	1	6.26	1.91	EL PASO	87	4	1.35	-0.32
TALLAHASSEE	86	4	5.15	-2.45	GREENSBORO	77	0	3.46	-0.90	FORT WORTH	93	7	0.00	-2.19
TAMPA	87	3	9.99	0.96	HATTERAS	81	0	5.61	-1.12	GALVESTON	89	3	0.27	-4.44
WEST PALM BEACH	85	2	5.66	-3.02	RALEIGH	81	2	1.82	-2.89	HOUSTON	91	6	0.01	-4.83
GA ATHENS	80	0	5.11	0.56	WILMINGTON	82	2	9.78	1.62	LUBBOCK	85	6	0.09	-1.65
ATLANTA	82	2	5.24	0.94	ND BISMARCK	71	1	3.04	0.54	MIDLAND	87	4	0.00	-1.72
AUGUSTA	81	-1	6.87	2.25	DICKINSON	68	0	2.46	0.93	SAN ANGELO	89	5	0.28	-2.14
COLUMBUS	84	2	3.26	-1.42	FARGO	72	3	3.98	1.37	SAN ANTONIO	91	5	0.94	-1.21
MACON	83	1	5.31	0.94	GRAND FORKS	68	1	1.14	-1.67	VICTORIA	90	5	0.29	-2.82
SAVANNAH	84	2	5.50	0.04	JAMESTOWN	68	1	1.33	-1.09	WACO	91	5	0.08	-1.97
HI HILO	77	0	5.01	-6.29	NE GRAND ISLAND	77	2	1.44	-1.77	WICHITA FALLS	91	6	0.11	-2.42
HONOLULU	83	0	0.11	-0.73	LINCOLN	77	2	3.75	0.44	UT SALT LAKE CITY	79	0	2.39	1.81
KAHULUI	81	0	0.17	-0.36	NORFOLK	75	3	2.88	-0.61	VA LYNCHBURG	75	0	1.97	-1.25
LIHUE	83	3	0.89	-1.44	NORTH PLATTE	74	1	2.70	0.14	NORFOLK	80	0	6.98	1.11
IA BURLINGTON	73	-1	1.37	-2.40	OMAHA	76	1	3.53	-1.07	RICHMOND	79	1	2.06	-2.84
CEDAR RAPIDS	73	2	1.46	-2.61	SCOTTSBLUFF	74	1	2.03	0.79	ROANOKE	77	1	1.13	-2.24
DES MOINES	76	2	2.37	-1.80	VALENTINE	74	0	3.20	1.16	WASH/DULLES	77	1	1.84	-1.70
DUBUQUE	71	2	4.00	0.04	NH CONCORD	67	-2	4.44	0.81	VT BURLINGTON	69	-2	4.65	1.11
SIOUX CITY	75	3	2.46	-1.48	NJ ATLANTIC_CITY	74	-1	2.17	-2.42	WA OLYMPIA	68	4	0.77	-0.19
WATERLOO	74	3	1.05	-3.11	NEWARK	76	0	4.22	0.07	QUILLAYUTE	66	6	1.13	-1.52
ID BOISE	78	2	1.89	1.71	NM ALBUQUERQUE	80	3	0.27	-1.04	SEATTLE-TACOMA	70	2	0.28	-0.70
LEWISTON	77	2	0.81	0.30	NV ELY	66	-2	2.62	1.83	SPOKANE	73	2	0.97	0.50
POCATELLO	70	1	0.93	0.39	LAS VEGAS	89	-2	1.14	0.82	YAKIMA	73	2	0.44	0.22
IL CHICAGO/O_HARE	74	0	1.30	-2.94	RENO	76	1	0.41	0.17	WI EAU CLAIRE	70	1	2.10	-2.07
MOLINE	73	-1	2.35	-1.62	WINNEMUCCA	72	1	0.50	0.37	GREEN BAY	69	0	3.14	-0.26
PEORIA	75	0	5.94	2.63	NY ALBANY	70	-1	5.11	1.35	LA CROSSE	74	1	1.39	-2.51
ROCKFORD	71	-1	1.41	-2.78	BINGHAMTON	67	-1	7.28	3.18	MADISON	71	1	2.39	-1.78
SPRINGFIELD	74	-1	6.25	2.88	BUFFALO	69	-2	3.33	0.11	MILWAUKEE	73	1	2.61	-1.05
IN EVANSVILLE	77	0	3.69	0.70	ROCHESTER	68	-2	5.40	2.09	WV BECKLEY	70	-1	4.22	0.54
FORT WAYNE	70	-2	2.46	-1.34	SYRACUSE	70	-1	5.04	1.33	CHARLESTON	74	-1	3.67	-0.08
INDIANAPOLIS	74	-1	2.98	-0.23	OH AKRON-CANTON	69	-3	6.76	3.14	ELKINS	69	-1	5.85	1.98
SOUTH BEND	71	1	2.08	-1.94	CINCINNATI	74	-1	1.81	-1.62	HUNTINGTON	74	-1	3.57	-0.38
KS CONCORDIA	81	5	4.19	0.70	CLEVELAND	70	-3	6.33	2.77	WY CASPER	68	-1	0.99	0.19
DODGE CITY	79	1	0.98	-2.01	COLUMBUS	73	-1	4.44	0.70	CHEYENNE	69	1	3.46	1.94
GOODLAND	75	1	3.54	0.48	DAYTON	73	-2	4.13	1.17	LANDER	69	-1	1.58	1.06
TOPEKA	80	2	2.03	-2.52	MANSFIELD	70	-1	7.46	3.86	SHERIDAN	70	1	1.94	1.23

Based on 1991-2020 normals

***** Not Available**

National Agricultural Summary

September 4 – 10, 2023

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Much of the nation was drier than normal, but at least twice the normal amount of weekly precipitation was recorded in large parts of the Great Basin, northern Plains, and northern Rockies, as well as parts of the Great Lakes, mid Atlantic, Mississippi Valley, Northeast, and Southeast. Parts of Georgia, as well as some locations in the Mississippi Delta, recorded at least 4 inches of rain. Meanwhile, most of the nation was warmer than normal. Much of the mid Atlantic, Northeast, and southern Plains recorded weekly temperatures 9°F or more above normal. Parts of New England and Texas recorded temperatures 12°F or more above normal. In contrast, most of the Great Basin, California, Florida, and the Pacific Northwest were cooler than normal. Some locations in Nevada and Utah recorded temperatures 6°F or more below normal.

Corn: By September 10, ninety-seven percent of the corn acreage was at or beyond the dough stage, 2 percentage points ahead of last year and 1 point ahead of the 5-year average. By September 10, eighty-two percent of this year's corn acreage was denting, 7 percentage points ahead of last year and 4 points ahead of average. During the week, denting progress advanced 10 percentage points or more in 13 of the 18 estimating states. Thirty-four percent of the nation's corn acreage was mature by September 10, ten percentage points ahead of last year and 6 points ahead of average. Five percent of the 2023 corn acreage was harvested by week's end, equal to last year but 1 percentage point ahead of the average harvest pace. Harvest was underway in 11 of the 18 estimating states. On September 10, fifty-two percent of the nation's corn acreage was rated in good to excellent condition, 1 percentage point below both the previous week and the previous year. In Iowa, the largest corn-producing state, 46 percent of the corn was rated in good to excellent condition.

Soybeans: Nationally, leaf drop was 31 percent complete by September 10, eleven percentage points ahead of last year and 6 points ahead of the 5-year average. On September 10, fifty-two percent of the nation's soybean acreage was rated in good to excellent condition, 1 percentage point below the previous week and 4 points below the previous year.

Winter Wheat: Nationwide, producers had sown 7 percent of the intended 2024 winter wheat acreage by September 10, two percentage points behind last year but equal to the 5-year average. Progress was most advanced in Washington at 29 percent planted, 6 percentage points ahead of last year but 4 points behind average.

Cotton: By September 10, ninety-eight percent of the nation's cotton acreage had begun setting bolls, 2 percentage points behind last year but equal to the 5-year average. By September 10, forty-three percent of the nation's cotton had open bolls, 5 percentage points behind last year but 1 point ahead of average. By September 10, eight percent of the nation's cotton acreage was harvested, equal to last year but 1 point ahead of average. On September 10, twenty-nine percent of the 2023 cotton acreage was rated in good to excellent condition, 2 percentage points below the previous week and 4 points below the previous year.

Sorghum: By September 10, ninety-seven percent of the nation's sorghum acreage had reached the headed stage, 2 percentage points ahead of last year but 2 points behind the 5-year average. Seventy-four percent of the nation's sorghum acreage was at or beyond the coloring stage by September 10, two percentage points ahead of last year but 2 points behind average. By September 10, thirty-seven percent of the nation's sorghum acreage was mature, 2 percentage points ahead of last year and 3 points ahead of average. Eighty-one percent of the sorghum acreage in Texas was mature by September 10, six percentage points behind last year but equal to the average. Twenty-one percent of the 2023 sorghum acreage had been harvested by September 10, two percentage points behind last year and 1 point behind average. Forty-four percent of the nation's sorghum acreage was rated in good to excellent condition on September 10, equal to the previous week but 24 percentage points above the previous year.

Rice: Nationally, 45 percent of the rice acreage was harvested by September 10, twelve percentage points ahead of last year and 10 points ahead of the 5-year average. On September 10, seventy-one percent of the nation's rice acreage was rated in good to excellent condition, 1 percentage point above the previous week but 1 point below the same time last year.

Small Grains: Ninety-five percent of the nation's oat acreage had been harvested by September 10, one percentage point ahead of last year but 1 point behind the 5-year average. During the week, oat harvest progress advanced 19 percentage points in North Dakota.

By September 10, producers had harvested 89 percent of the nation's barley crop, equal to last year but 1 percentage point behind the 5-year average. During the week, barley harvest advanced 12 percentage points or more in Idaho, North Dakota, and Washington.

By September 10, eighty-seven percent of the nation's spring wheat had been harvested, 4 percentage points ahead of the previous year but equal to the 5-year average. During the week, spring wheat harvest advanced 12 percentage points or more in Idaho, North Dakota, and Washington.

Other Crops: Two percent of the nation's peanut acreage was harvested as of September 10, equal to both last year and the 5-year average. On September 10, fifty-two percent of the nation's peanut acreage was rated in good to excellent condition, 4 percentage points below the previous week and 16 points below the previous year.

Crop Progress and Condition

Week Ending September 10, 2023

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

Corn Percent Dough

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	84	86	96	92
IL	90	87	98	95
IN	97	92	96	96
IA	98	99	99	97
KS	95	95	97	97
KY	94	90	95	94
MI	96	78	89	90
MN	96	97	99	97
MO	96	97	98	98
NE	96	96	98	98
NC	100	98	100	100
ND	91	89	96	94
OH	95	90	95	93
PA	84	54	70	86
SD	95	93	97	96
TN	100	98	99	100
TX	100	96	100	99
WI	91	86	92	89
18 Sts	95	93	97	96

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

Corn Percent Dented

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	45	42	59	62
IL	69	66	87	80
IN	70	51	70	73
IA	82	78	90	81
KS	82	83	89	85
KY	80	72	83	85
MI	66	44	58	61
MN	69	71	86	75
MO	91	87	94	89
NE	84	76	90	84
NC	95	94	95	96
ND	58	52	67	61
OH	62	40	53	64
PA	55	28	48	60
SD	75	62	76	73
TN	93	91	96	94
TX	93	86	93	94
WI	60	41	66	63
18 Sts	75	67	82	78

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

Corn Percent Mature

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	1	3	7	10
IL	15	15	42	32
IN	14	4	12	25
IA	21	17	38	24
KS	48	39	56	42
KY	51	40	48	61
MI	12	3	10	12
MN	7	11	37	19
MO	42	32	51	42
NE	34	24	41	28
NC	85	81	89	89
ND	10	1	7	15
OH	14	2	11	16
PA	4	0	4	12
SD	17	9	18	23
TN	56	45	64	61
TX	80	69	73	73
WI	9	2	16	13
18 Sts	24	18	34	28

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

Corn Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	0	NA	0	0
IL	1	1	2	2
IN	0	NA	0	1
IA	0	NA	2	0
KS	20	6	17	10
KY	11	4	8	15
MI	0	NA	0	0
MN	0	NA	1	0
MO	4	2	9	6
NE	1	NA	2	1
NC	44	30	49	48
ND	0	NA	0	0
OH	0	NA	0	0
PA	0	NA	0	1
SD	0	NA	1	0
TN	13	5	12	16
TX	63	56	62	61
WI	0	NA	0	0
18 Sts	5	NA	5	4

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

Corn Condition by Percent

	VP	P	F	G	EX
CO	3	7	29	48	13
IL	6	10	26	48	10
IN	3	7	25	56	9
IA	5	11	38	41	5
KS	14	20	35	26	5
KY	1	4	25	54	16
MI	1	9	34	45	11
MN	7	17	37	32	7
MO	16	22	27	33	2
NE	11	16	22	38	13
NC	2	5	25	55	13
ND	2	7	25	58	8
OH	1	3	14	60	22
PA	0	2	18	62	18
SD	6	13	40	35	6
TN	1	7	17	57	18
TX	9	15	27	37	12
WI	4	15	31	38	12
18 Sts	6	12	30	43	9
Prev Wk	6	12	29	44	9
Prev Yr	9	11	27	41	12

Rice Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AR	22	24	40	27
CA	4	0	0	4
LA	82	86	91	86
MS	41	32	53	40
MO	2	5	14	7
TX	85	80	87	88
6 Sts	33	34	45	35

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

Rice Condition by Percent

	VP	P	F	G	EX
AR	1	4	24	51	20
CA	0	0	10	75	15
LA	0	4	44	47	5
MS	0	16	25	46	13
MO	0	0	20	60	20
TX	0	2	35	55	8
6 Sts	0	3	26	56	15
Prev Wk	1	5	24	55	15
Prev Yr	1	3	24	58	14

Crop Progress and Condition

Week Ending September 10, 2023

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

Cotton Percent Setting Bolls

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AL	100	97	99	100
AZ	100	100	100	100
AR	100	99	100	100
CA	99	95	96	94
GA	99	96	98	99
KS	100	93	97	95
LA	100	100	100	100
MS	97	96	98	98
MO	99	96	97	98
NC	99	96	98	98
OK	95	90	95	97
SC	100	98	100	98
TN	100	99	100	100
TX	99	92	98	98
VA	100	97	98	98
15 Sts	100	94	98	98

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

Cotton Percent Bolls Opening

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AL	43	24	37	46
AZ	72	62	67	82
AR	55	49	67	64
CA	29	5	10	23
GA	47	25	38	47
KS	36	37	58	26
LA	82	74	79	78
MS	59	55	70	57
MO	32	18	34	37
NC	46	15	27	40
OK	27	16	30	32
SC	39	20	34	35
TN	29	18	30	33
TX	49	33	41	39
VA	58	41	56	40
15 Sts	48	32	43	42

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

Cotton Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AL	0	NA	0	0
AZ	0	5	11	5
AR	0	NA	0	0
CA	0	NA	0	0
GA	0	NA	0	0
KS	0	NA	0	0
LA	2	0	3	3
MS	0	NA	0	1
MO	0	NA	0	0
NC	0	NA	0	0
OK	0	NA	0	0
SC	1	NA	0	0
TN	0	0	1	0
TX	16	16	19	14
VA	0	NA	0	0
15 Sts	8	NA	8	7

These 15 States harvested 98% of last year's cotton acreage.

Cotton Condition by Percent

	VP	P	F	G	EX
AL	1	5	35	52	7
AZ	1	1	20	36	42
AR	2	6	23	41	28
CA	0	0	5	95	0
GA	2	8	35	47	8
KS	4	15	41	37	3
LA	6	11	29	48	6
MS	2	10	38	41	9
MO	0	2	31	65	2
NC	4	10	37	48	1
OK	32	40	16	11	1
SC	0	3	38	51	8
TN	5	6	16	55	18
TX	28	33	30	8	1
VA	0	5	15	80	0
15 Sts	18	23	30	24	5
Prev Wk	19	22	28	26	5
Prev Yr	15	22	30	29	4

Soybeans Percent Dropping Leaves

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AR	28	41	49	28
IL	13	7	27	18
IN	19	6	19	26
IA	8	8	25	17
KS	25	19	37	19
KY	15	8	17	19
LA	73	74	81	68
MI	35	7	13	27
MN	5	12	31	22
MS	49	58	67	47
MO	9	8	17	7
NE	40	30	54	35
NC	30	17	27	21
ND	34	24	47	46
OH	13	3	8	20
SD	27	21	38	37
TN	28	18	28	25
WI	3	2	9	12
18 Sts	20	16	31	25

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

Soybean Condition by Percent

	VP	P	F	G	EX
AR	2	6	16	56	20
IL	6	11	25	44	14
IN	3	8	24	56	9
IA	5	10	41	39	5
KS	19	26	32	20	3
KY	2	4	25	55	14
LA	12	26	20	37	5
MI	2	8	37	44	9
MN	5	13	37	38	7
MS	4	14	17	53	12
MO	7	16	33	39	5
NE	12	17	25	36	10
NC	3	6	31	54	6
ND	4	14	31	46	5
OH	1	4	20	58	17
SD	5	13	39	37	6
TN	2	5	15	60	18
WI	5	15	33	36	11
18 Sts	6	12	30	43	9
Prev Wk	5	12	30	44	9
Prev Yr	5	10	29	45	11

Crop Progress and Condition

Week Ending September 10, 2023

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

Sorghum Percent Headed

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	100	95	98	97
KS	91	90	95	97
NE	99	98	100	100
OK	94	79	89	96
SD	100	100	100	99
TX	100	100	100	99
6 Sts	95	93	97	99

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

Sorghum Percent Coloring

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	78	31	57	69
KS	56	51	68	69
NE	72	67	85	79
OK	69	34	48	65
SD	87	74	81	78
TX	98	89	93	93
6 Sts	72	61	74	76

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

Sorghum Percent Mature

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	9	2	12	15
KS	10	11	22	11
NE	13	3	16	14
OK	24	7	18	25
SD	33	8	28	19
TX	87	77	81	81
6 Sts	35	28	37	34

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

Sorghum Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
CO	0	0	0	0
KS	2	2	4	1
NE	1	0	0	1
OK	1	0	5	3
SD	1	0	0	0
TX	73	67	71	72
6 Sts	23	19	21	22

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

Sorghum Condition by Percent

	VP	P	F	G	EX
CO	1	5	11	82	1
KS	11	19	37	27	6
NE	3	8	29	36	24
OK	1	14	31	47	7
SD	3	5	37	51	4
TX	16	17	22	29	16
6 Sts	10	16	30	35	9
Prev Wk	10	16	30	36	8
Prev Yr	17	29	34	19	1

Oats Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
IA	98	100	100	99
MN	89	95	98	96
NE	100	100	100	100
ND	88	64	83	89
OH	100	100	100	100
PA	97	95	97	93
SD	98	100	100	99
TX	100	100	100	100
WI	94	91	95	92
9 Sts	94	90	95	96

These 9 States harvested 72% of last year's oat acreage.

Peanuts Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AL	0	NA	0	1
FL	8	7	10	10
GA	1	NA	1	1
NC	0	NA	0	0
OK	0	NA	0	0
SC	1	NA	1	1
TX	0	NA	0	0
VA	0	NA	1	1
8 Sts	2	NA	2	2

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

Peanut Condition by Percent

	VP	P	F	G	EX
AL	3	14	37	43	3
FL	2	19	33	45	1
GA	3	6	37	46	8
NC	2	6	34	55	3
OK	0	1	3	96	0
SC	0	2	16	73	9
TX	12	22	35	29	2
VA	0	5	14	81	0
8 Sts	4	10	34	47	5
Prev Wk	2	8	34	51	5
Prev Yr	1	5	26	58	10

Spring Wheat Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
ID	84	63	76	89
MN	72	85	94	89
MT	97	85	90	87
ND	77	64	82	84
SD	100	97	99	98
WA	90	83	95	88
6 Sts	83	74	87	87

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

Crop Progress and Condition

Week Ending September 10, 2023

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

Barley Percent Harvested

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
ID	87	71	83	93
MN	75	87	95	94
MT	93	86	89	88
ND	87	79	93	91
WA	86	82	95	87
5 Sts	89	80	89	90

These 5 States harvested 89% of last year's barley acreage.

Winter Wheat Percent Planted

	Prev Year	Prev Week	Sep 10 2023	5-Yr Avg
AR	0	0	0	0
CA	0	0	0	0
CO	19	1	19	18
ID	10	1	10	10
IL	0	0	0	0
IN	0	0	1	1
KS	3	1	4	3
MI	0	0	0	1
MO	0	0	1	0
MT	17	1	3	8
NE	4	2	8	8
NC	0	0	0	0
OH	0	0	0	0
OK	10	0	5	5
OR	5	0	7	7
SD	9	8	17	9
TX	15	0	7	7
WA	23	9	29	33
18 Sts	9	1	7	7

These 18 States planted 88% of last year's winter wheat acreage.

Pasture and Range Condition by Percent
Week Ending Sep 10, 2023

	VP	P	F	G	EX			VP	P	F	G	EX
AL	2	12	27	59	0		NH	0	11	24	60	5
AZ	17	24	40	19	0		NJ	0	10	32	56	2
AR	5	23	39	30	3		NM	7	23	25	18	27
CA	5	20	40	25	10		NY	2	5	28	50	15
CO	8	9	23	49	11		NC	2	8	33	55	2
CT	0	0	25	70	5		ND	4	17	31	46	2
DE	12	29	27	24	8		OH	1	7	24	58	10
FL	2	5	31	40	22		OK	12	33	21	29	5
GA	2	10	35	47	6		OR	10	30	39	17	4
ID	1	16	42	25	16		PA	1	7	27	60	5
IL	16	23	37	21	3		RI	0	0	0	70	30
IN	6	11	41	39	3		SC	6	16	42	34	2
IA	22	24	39	13	2		SD	7	19	37	31	6
KS	22	27	34	16	1		TN	2	6	26	54	12
KY	4	11	33	47	5		TX	45	27	22	5	1
LA	32	29	26	13	0		UT	0	8	30	52	10
ME	3	14	32	45	6		VT	0	5	7	88	0
MD	18	22	31	28	1		VA	18	19	35	27	1
MA	0	0	10	70	20		WA	23	31	28	18	0
MI	3	16	39	33	9		WV	1	10	32	52	5
MN	26	38	26	9	1		WI	14	29	35	21	1
MS	19	21	40	18	2		WY	0	5	13	79	3
MO	19	28	38	13	2		48 Sts	18	21	28	27	6
MT	18	19	26	32	5							
NE	10	16	38	33	3		Prev Wk	16	20	28	29	7
NV	5	10	50	30	5		Prev Yr	19	22	30	24	5

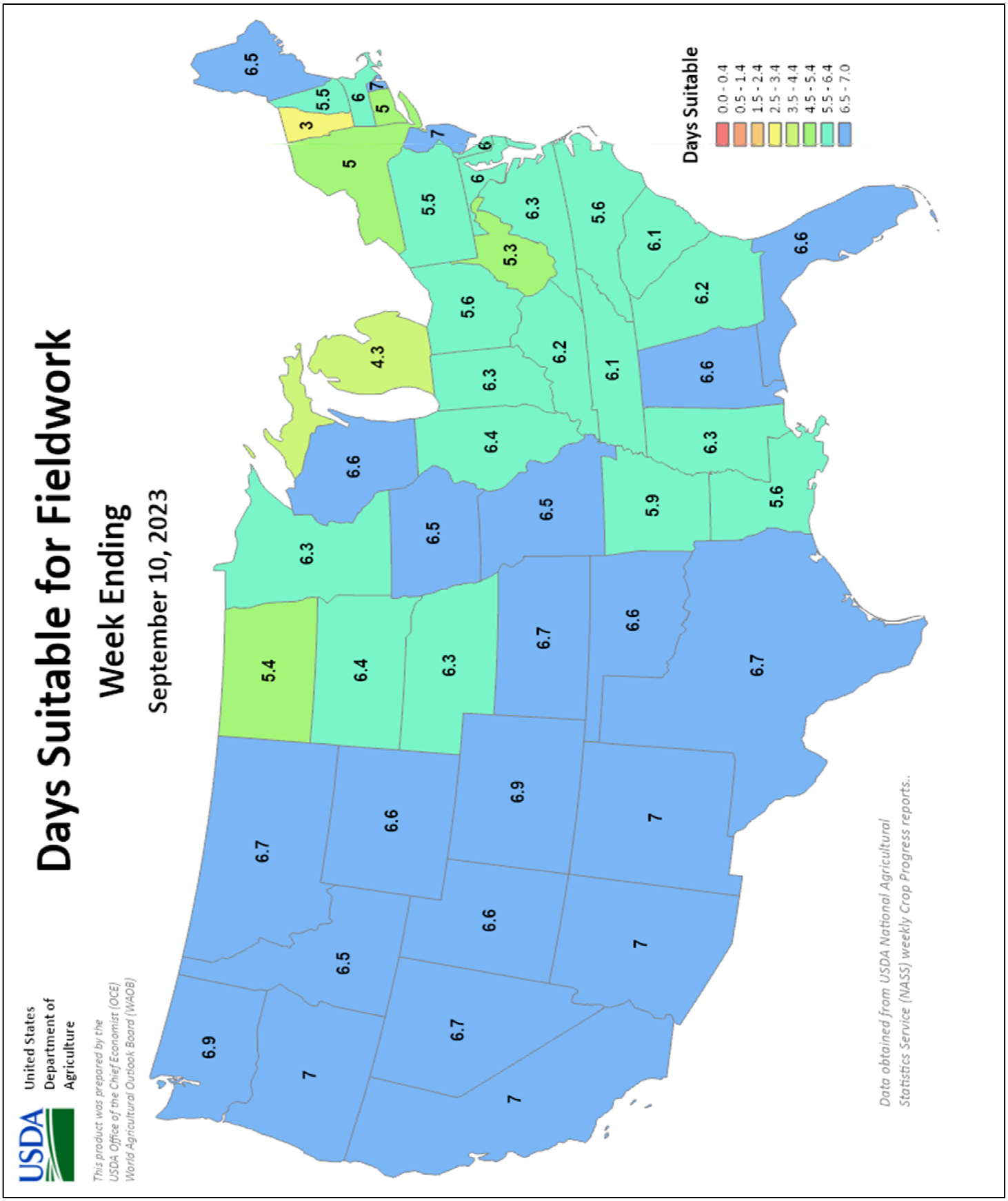
VP - Very Poor; P - Poor; F - Fair; G - Good; EX - Excellent

NA - Not Available; *Revised

Crop Progress and Condition

Week Ending September 10, 2023

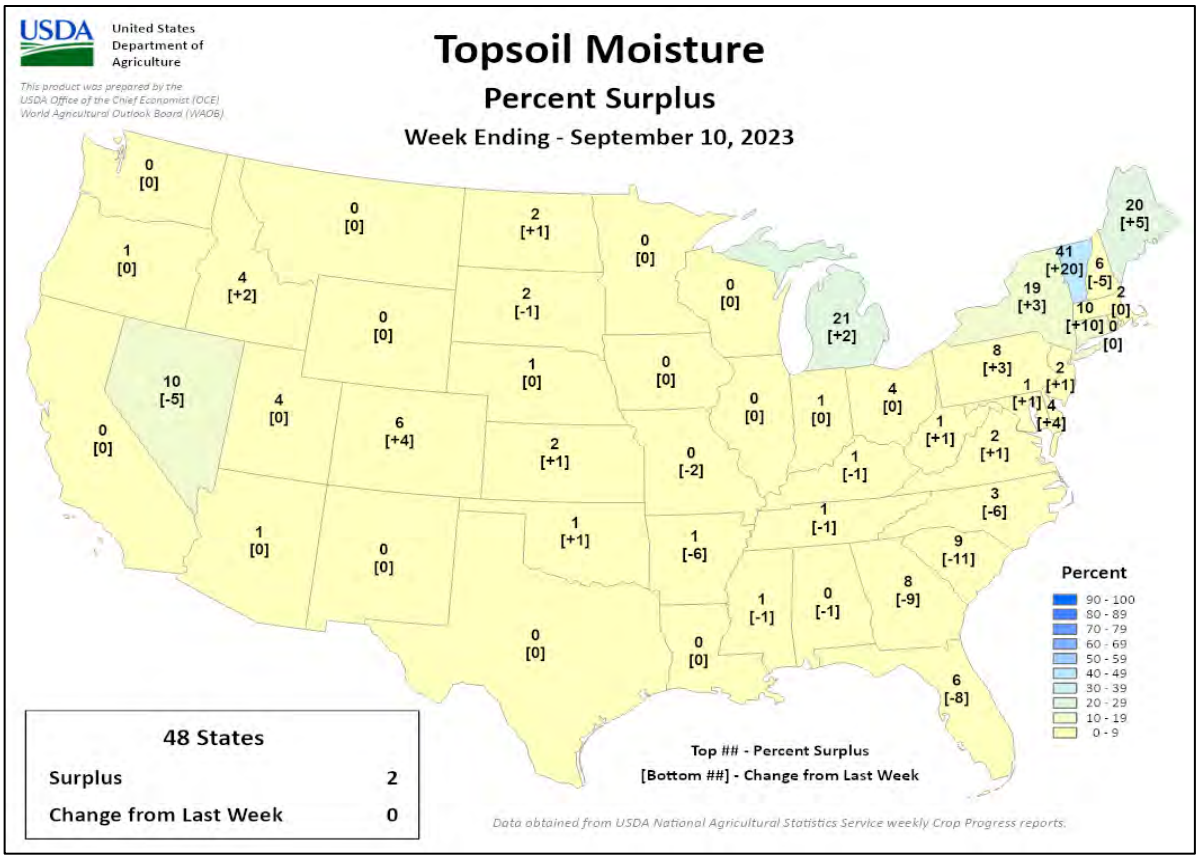
Weekly U.S. Progress and Condition Data provided by USDA/NASS

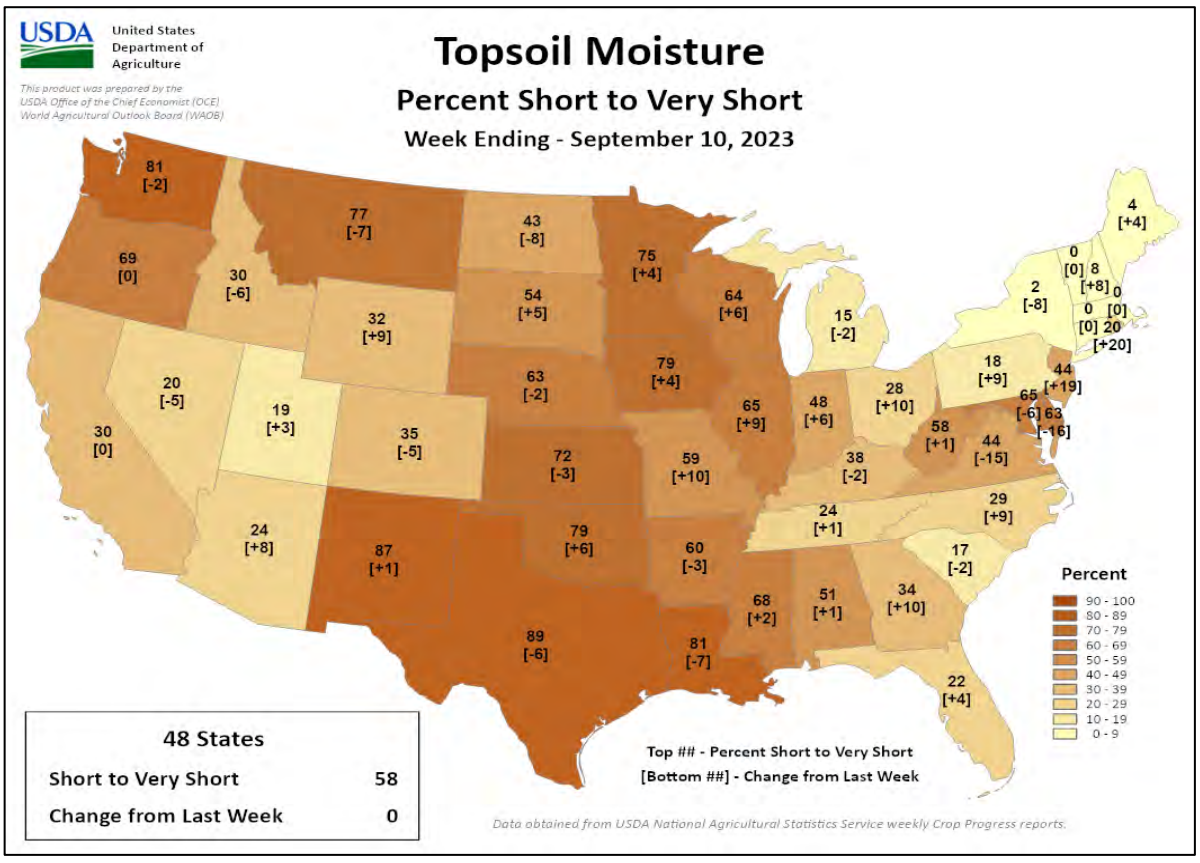


Crop Progress and Condition

Week Ending September 10, 2023

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





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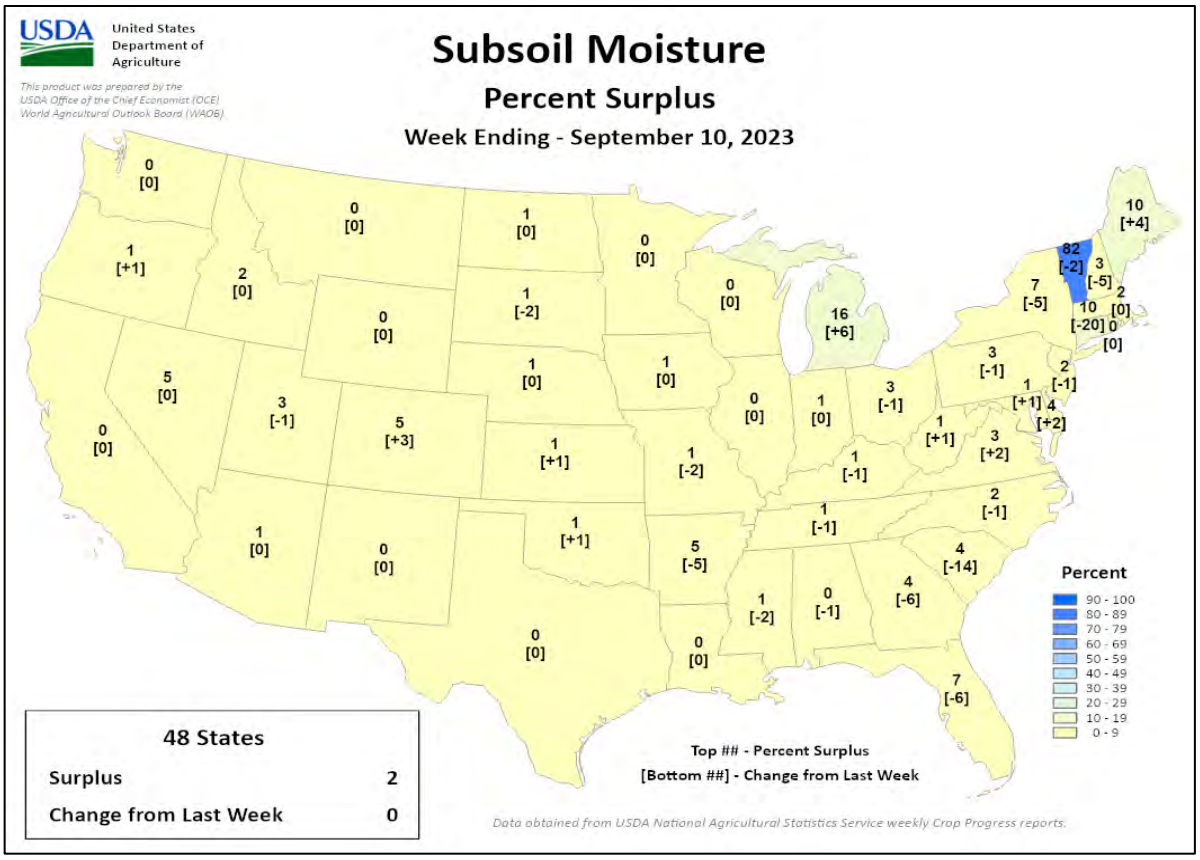
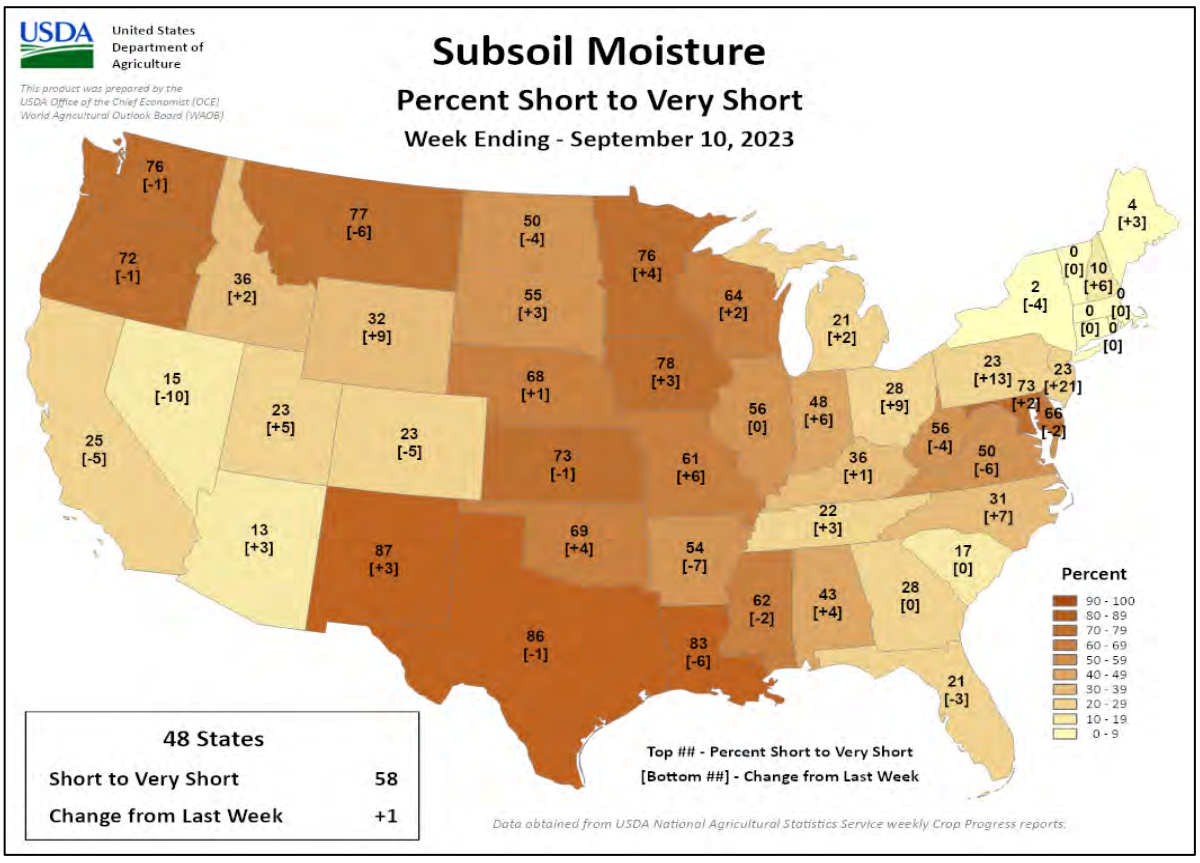




International Weather and Crop Summary

September 3-9, 2023

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

HIGHLIGHTS

EUROPE: A blocking high led to dry weather over much of Europe along with extreme heat in France, flooding in Spain, and historic rainfall in central Greece.

WESTERN FSU: Variable showers improved soil moisture locally for winter crop sowing, though dry conditions in central Ukraine favored summer crop drydown.

MIDDLE EAST: Showers in Turkey slowed summer crop maturation on the Anatolian Plateau but improved soil moisture for winter grain sowing.

SOUTH ASIA: Wet weather returned to much of India, improving soil moisture for kharif crops.

EAST ASIA: Drier weather and warmer-than-normal conditions in much of China supported summer crop maturation.

SOUTHEAST ASIA: Widespread showers in Indochina and the Philippines benefited rice and bolstered irrigation supplies.

AUSTRALIA: Scattered showers overspread the wheat belt, locally benefiting reproductive winter grains and oilseeds.

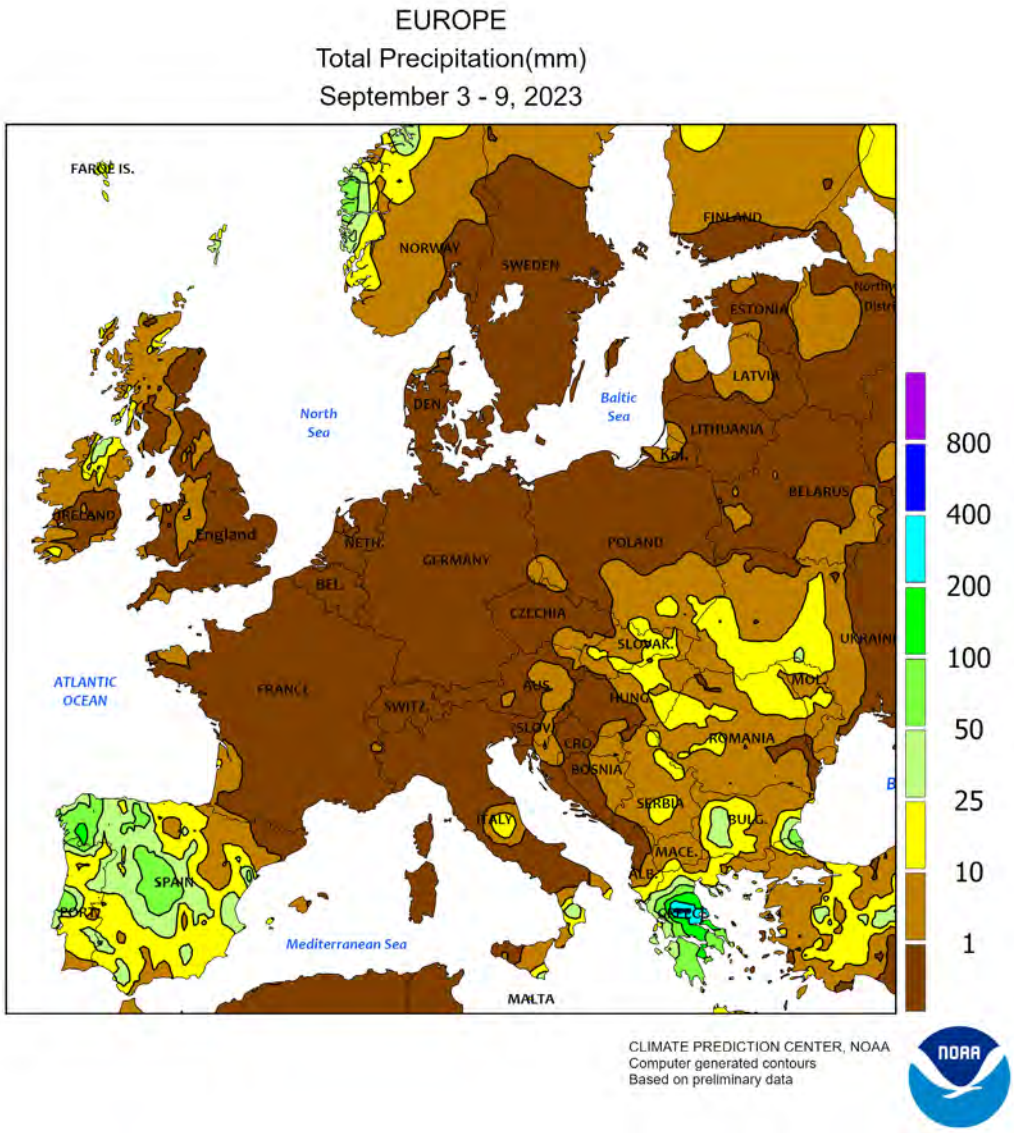
ARGENTINA: Locally heavy rain provided timely moisture for winter grains.

BRAZIL: Showers continued over southern farming areas, but rainfall tapered off farther north.

MEXICO: Monsoon showers retreated from northwestern watersheds.

CANADIAN PRAIRIES: Light showers caused temporary delays in the spring crop harvest.

SOUTHEASTERN CANADA: Warm, sunny weather favored rapid summer crop maturation.



EUROPE

A blocking high anchored over north-central Europe led to dry weather across much of the continent in addition to extreme late-season heat in France, flooding in Spain, and historic rainfall in central Greece. A strong, stationary area of high pressure settled over Germany and Scandinavia, sustaining dry weather across much of central and northern Europe. Under sunny skies, temperatures averaged 1 to 4°C above normal over eastern Europe but 5 to 8°C above normal in France and England. The late-season warmth and dryness accelerated summer crop drydown and winter crop sowing but increased soil moisture evaporation, especially in the west. However, maximum temperatures in France as high as 37°C — the highest for the first week of September over the past 30 years — had no adverse impacts on mature summer crops. The unrelenting area of high pressure initially caused Atlantic moisture to funnel over Spain, leading to moderate to heavy showers and thunderstorms (10-100 mm, locally more in Castilla La Mancha) early in the period. Supplemental rainfall reports indicated over 200 mm in 24 hours in Catalonia in northeastern Spain. The rainfall eased the country's drought but caused flooding and damage to infrastructure, especially in central and northeastern Spain where totals were greatest. Meanwhile, an upper-air low was locked in place over the east-central Mediterranean Sea, bringing heavy to excessive rainfall (100-650 mm, locally more) to central Greece. More details on this historic event can be found on page 41 of this week's *Bulletin.*

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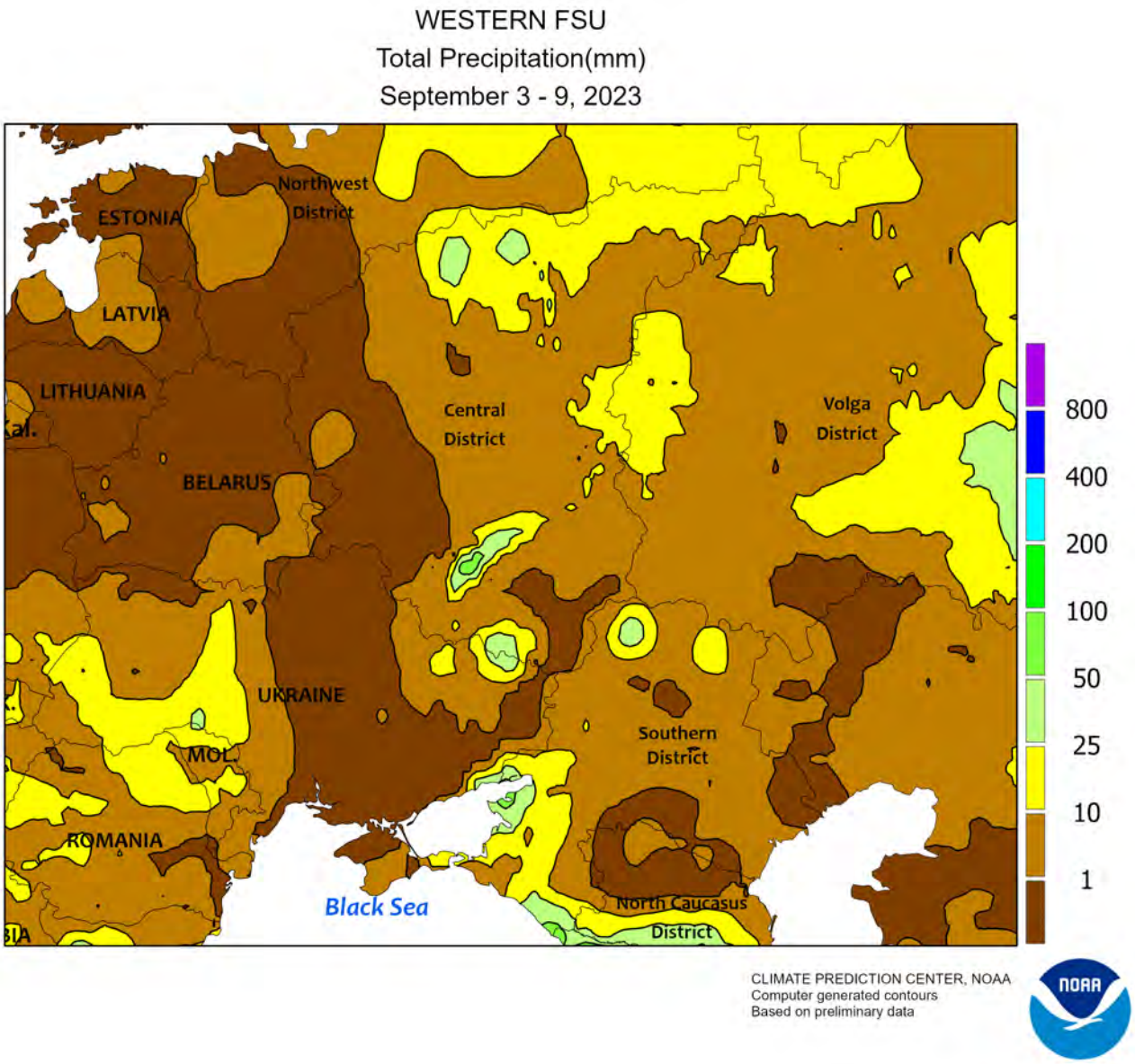

WESTERN FSU

Widely variable showers and thunderstorms were interspersed with total dryness in central portions of the region. Moderate to heavy showers in Moldova and southwestern Ukraine (10-45 mm) improved soil moisture for winter crop establishment but were largely too late to improve prospects for filling to maturing corn and soybeans. A second area of hit-and-miss showers (2-30 mm, locally more) was noted over eastern Ukraine and neighboring portions of western Russia, improving soil moisture for winter wheat sowing and establishment but arriving much too late to benefit maturing corn and sunflowers. Conversely, dry weather across central Ukraine, Belarus, and northwestern Russia favored summer crop drydown and early harvesting. Temperatures during the monitoring period averaged 1 to 3°C above normal across the west and south but up to 2°C below normal in Russia's Volga District.

The WWCB focuses entirely on weather and resultant crop conditions; conflict and unrest are beyond the scope of this publication.

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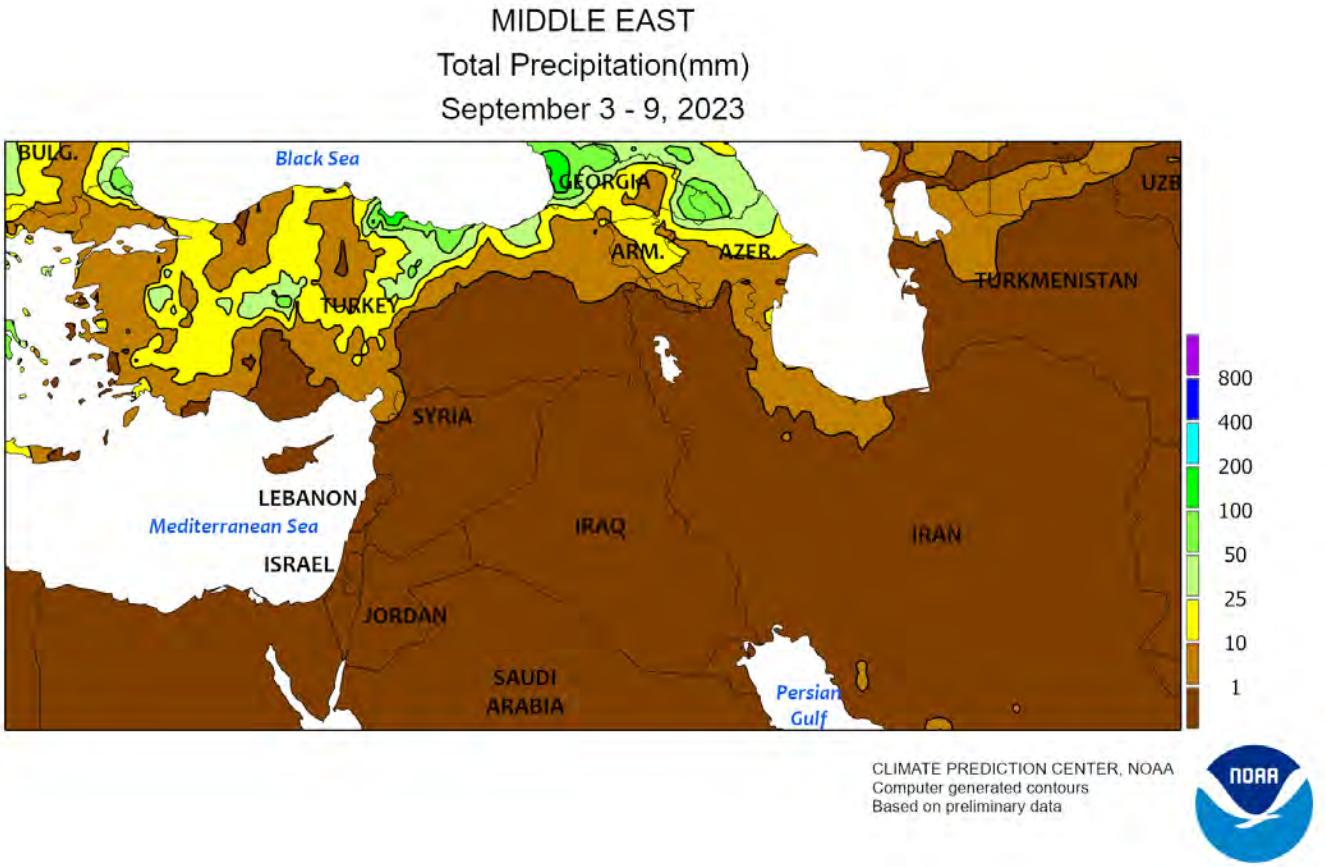

MIDDLE EAST

Widespread showers over Turkey contrasted with seasonably dry weather elsewhere. An influx of Mediterranean moisture from a stationary storm system southwest of Greece led to widespread showers and thunderstorms over central and northern Turkey. Rain totaling 10 to 25 mm on central Turkey's Anatolian Plateau improved soil moisture for winter grain sowing but slowed summer crop drydown and early harvesting. Heavier rain in the north (up to 45 mm in Thrace and more than 100 mm along Turkey's eastern Black Sea Coast) hampered summer crop harvesting and other seasonal fieldwork. The rest of the Middle East was seasonably dry; cool-season precipitation typically returns in October or November from Syria into Iran.

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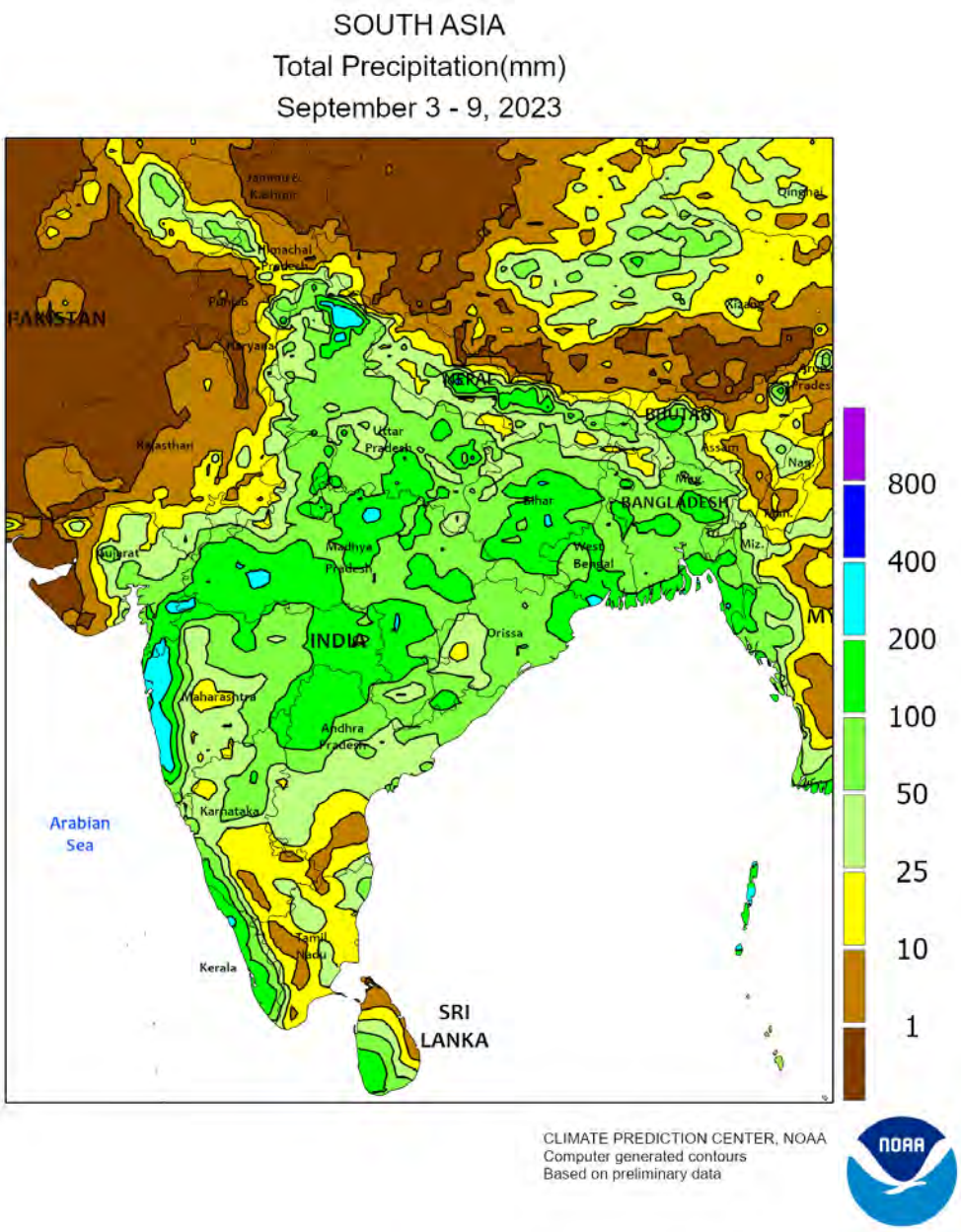

SOUTH ASIA

Monsoon showers surged back into India as a low pressure area tracked across central portions of the country. At least 25 mm of rain (locally over 150 mm) was recorded in nearly every state, providing much-needed moisture to kharif crops following the driest August in the last 30 years. While the downpours improved the short-term moisture situation, reservoir recharge still lags last year and the long-term average (as of the end of the period) due to inconsistent rainfall for much of the season. The southwest monsoon typically lingers into mid-October and many areas could still benefit from a late-season moisture boost.

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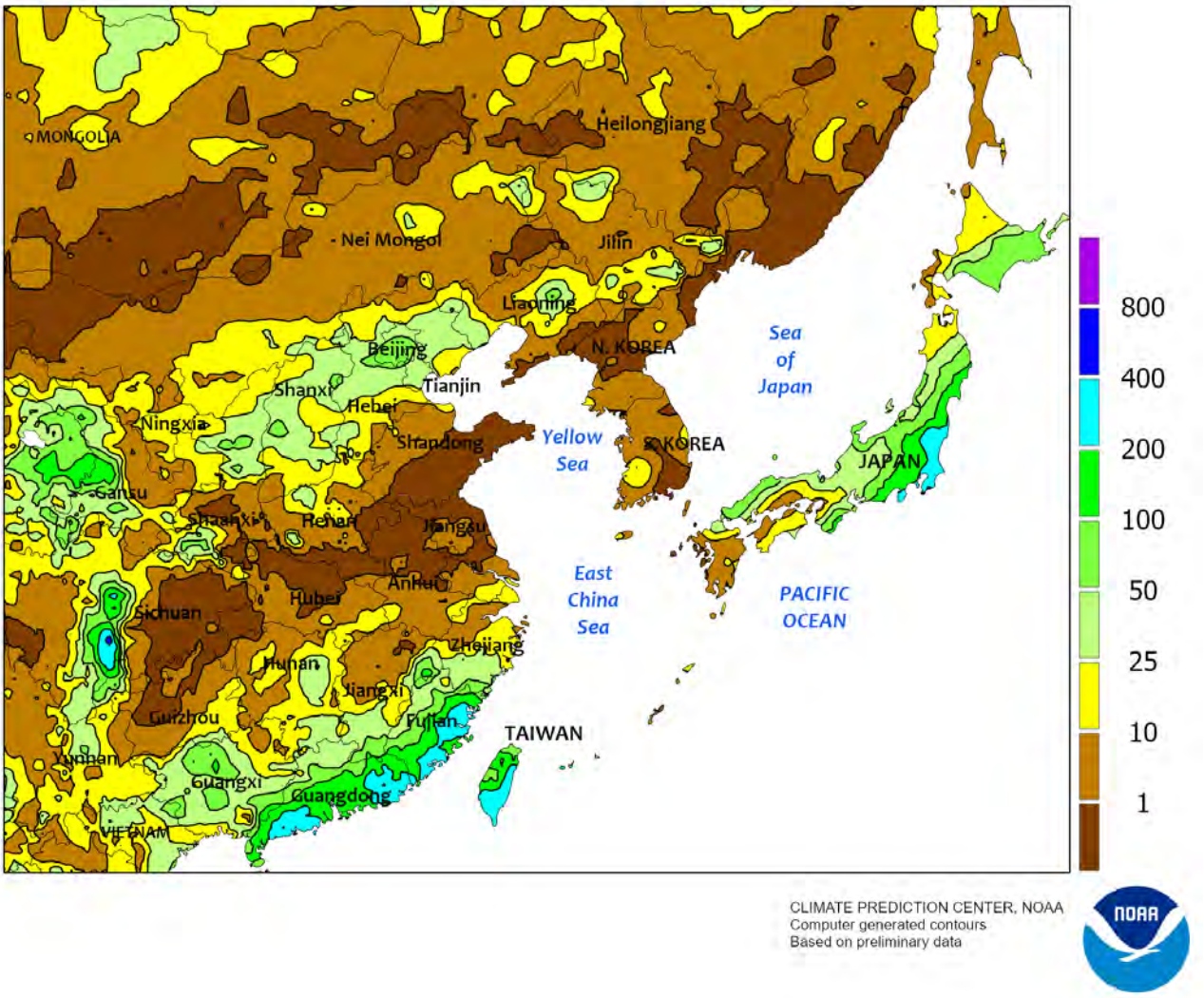

EASTERN ASIA

Drier weather prevailed across large swaths of China, aiding summer crop maturation. Showers eased in the northeast, with most prefectures recording less than 25 mm. The drier conditions were welcome for maturing corn and soybeans experiencing near-record wetness since July 1 in some locales. Meanwhile, little if any rain occurred along a path extending from the upper Yangtze Valley to the North China Plain, where most summer crops were already mature or in advance stages of development; rainfall extending outward from this area was generally below 25 mm. In addition, summer heat (greater than 35°C, 5°C above normal) lingered in some areas, promoting crop development and drydown without causing undue stress. In contrast to the drier weather for most of China, Typhoon Haikui inundated parts of the southeast with rainfall amounts in excess of 150 mm. While flooding was minimal farther inland, some rice was impacted.

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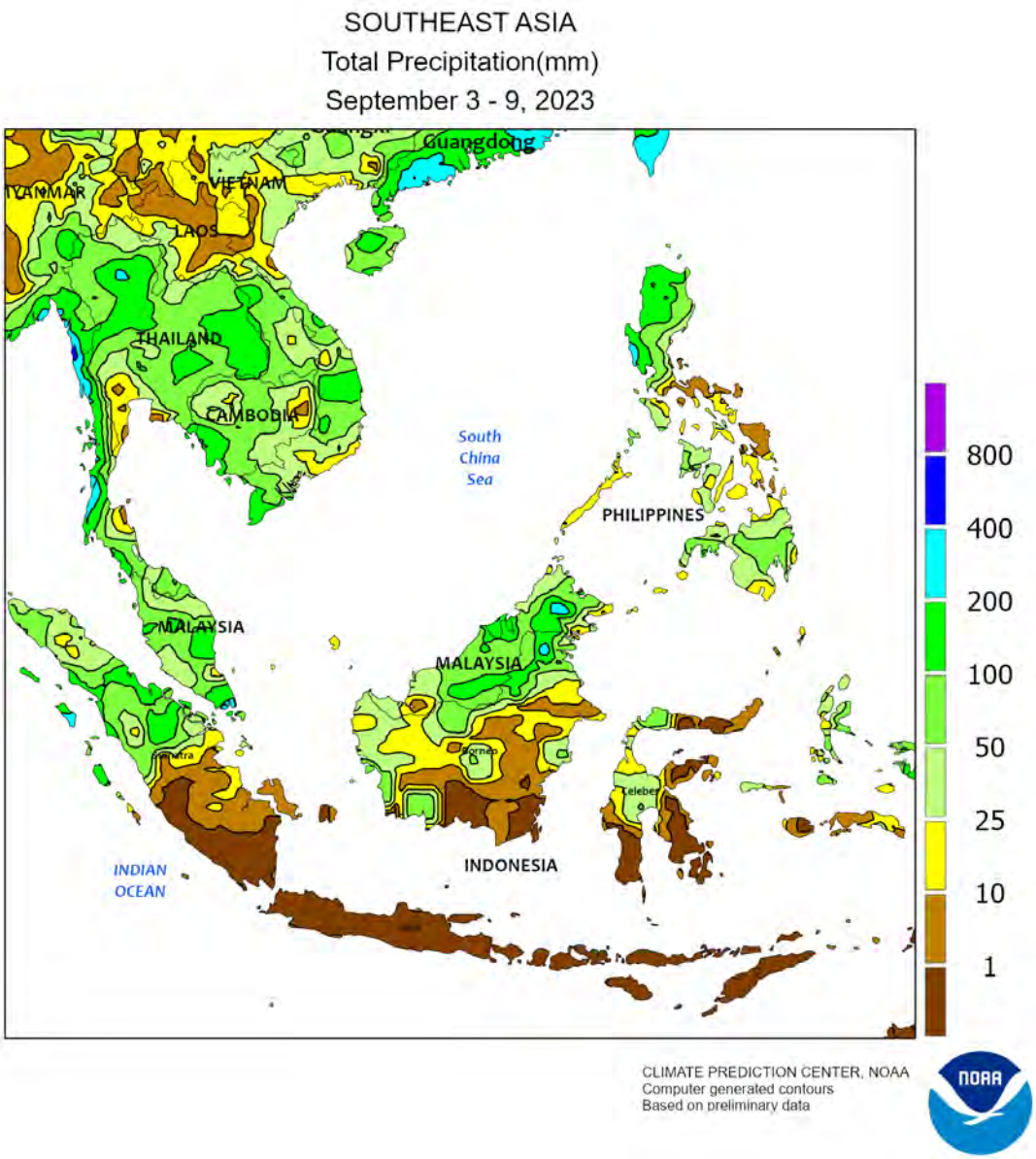

SOUTHEAST ASIA

Monsoon showers overspread much of the region, bringing needed moisture to locales where seasonal rainfall has been inconsistent. In particular, northern Thailand, which is experiencing one of the driest seasons in the last 30 years, recorded over 100 mm, helping to bolster lower-than-normal reservoir levels. In fact, the rainfall (25-100 mm or more) benefited rice and other crops across most of Indochina; northern Laos and neighboring sections of northern Vietnam received less than 25 mm. Meanwhile, Typhoon Haikui passing to the north of the Philippines triggered downpours (locally over 300 mm) in Luzon, producing some localized flooding but overall benefiting rice and increasing irrigation supplies. Elsewhere, heavy rain (25-100 mm or more) in key oil palm areas of Malaysia and Indonesia slowed the start of the main harvest period (September-October) while maintaining favorable soil moisture.

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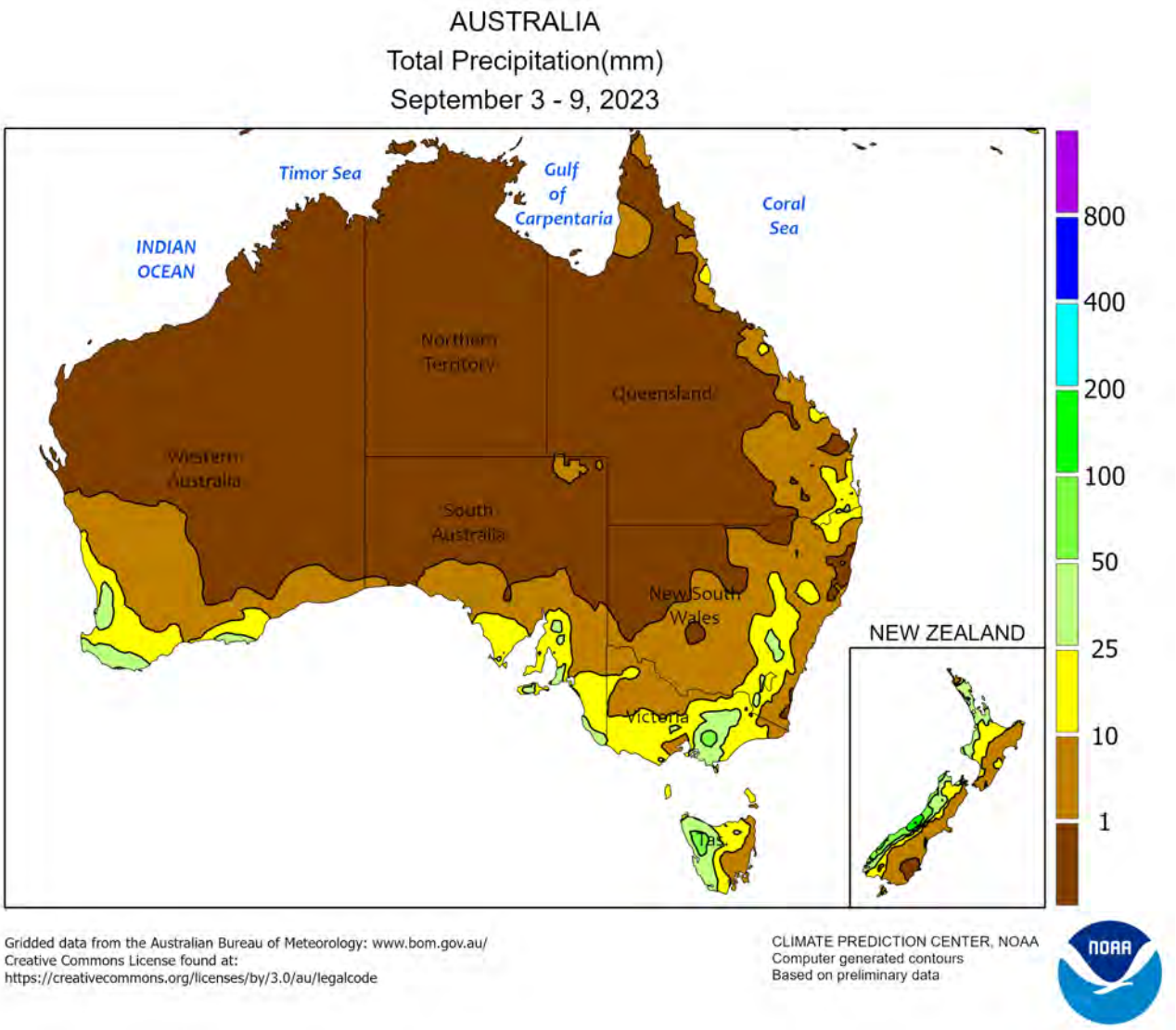

AUSTRALIA

Scattered showers (5-15 mm, locally over 25 mm) slid across the wheat belt, increasing local moisture supplies for wheat, barley, and canola. In multiple areas, the added moisture helped promote development of winter grains and oilseeds, which are advancing through the critical reproductive stages of development. Continued rainfall is necessary in the upcoming weeks, however, to maintain current crops prospects. The rain is most urgently needed in northern portions of the wheat belt, where persistent dryness has reduced root zone soil moisture and stressed reproductive winter crops. Any rain in the east could potentially benefit summer crops too, by helping to moisten the topsoil in advance of cotton and sorghum planting. Temperatures averaged near to somewhat above normal (up to 2°C above normal) in the wheat belt, accelerating local crop development.

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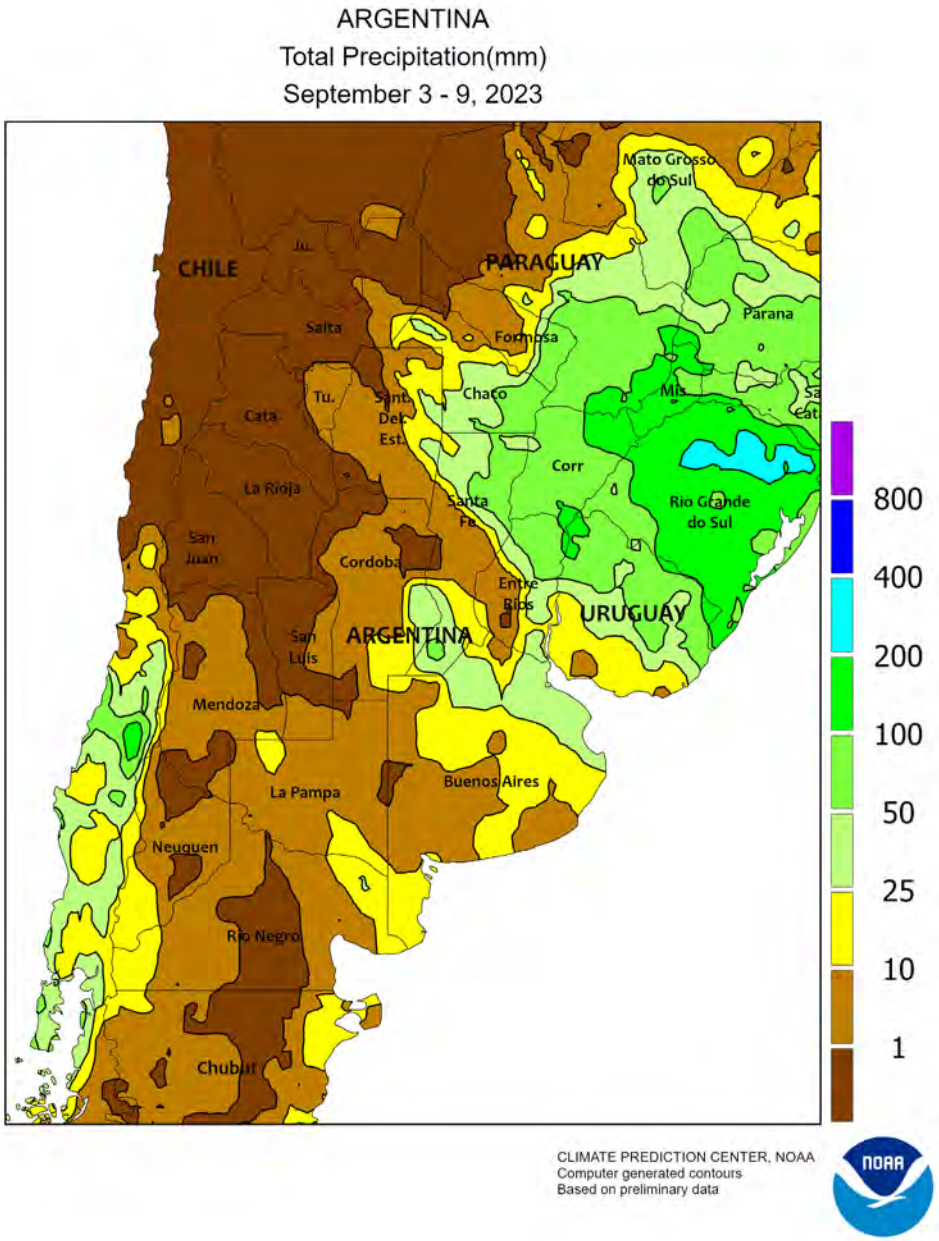

ARGENTINA

Moderate to heavy showers provided much-needed moisture for winter grain development and germination of early planted summer crops. The heaviest rainfall (greater than 50 mm) was concentrated over northeastern Argentina and southern Paraguay, extending westward into the eastern cotton belt (northern Santa Fe to eastern Formosa). Similar amounts were recorded in high-yielding farming areas of central Argentina, including eastern districts in Córdoba. Meanwhile, drier conditions (less than 10 mm) prevailed at the western edge of the main summer crop areas, including La Pampa and much of Córdoba and Santiago del Estero. Weekly temperatures averaged 2 to 3°C below normal throughout most agricultural delegations, although freezes were generally confined to the typically cooler south and northwest. According to the government of Argentina, sunflowers were 11 percent planted as of September 7, 8 points ahead of last year.

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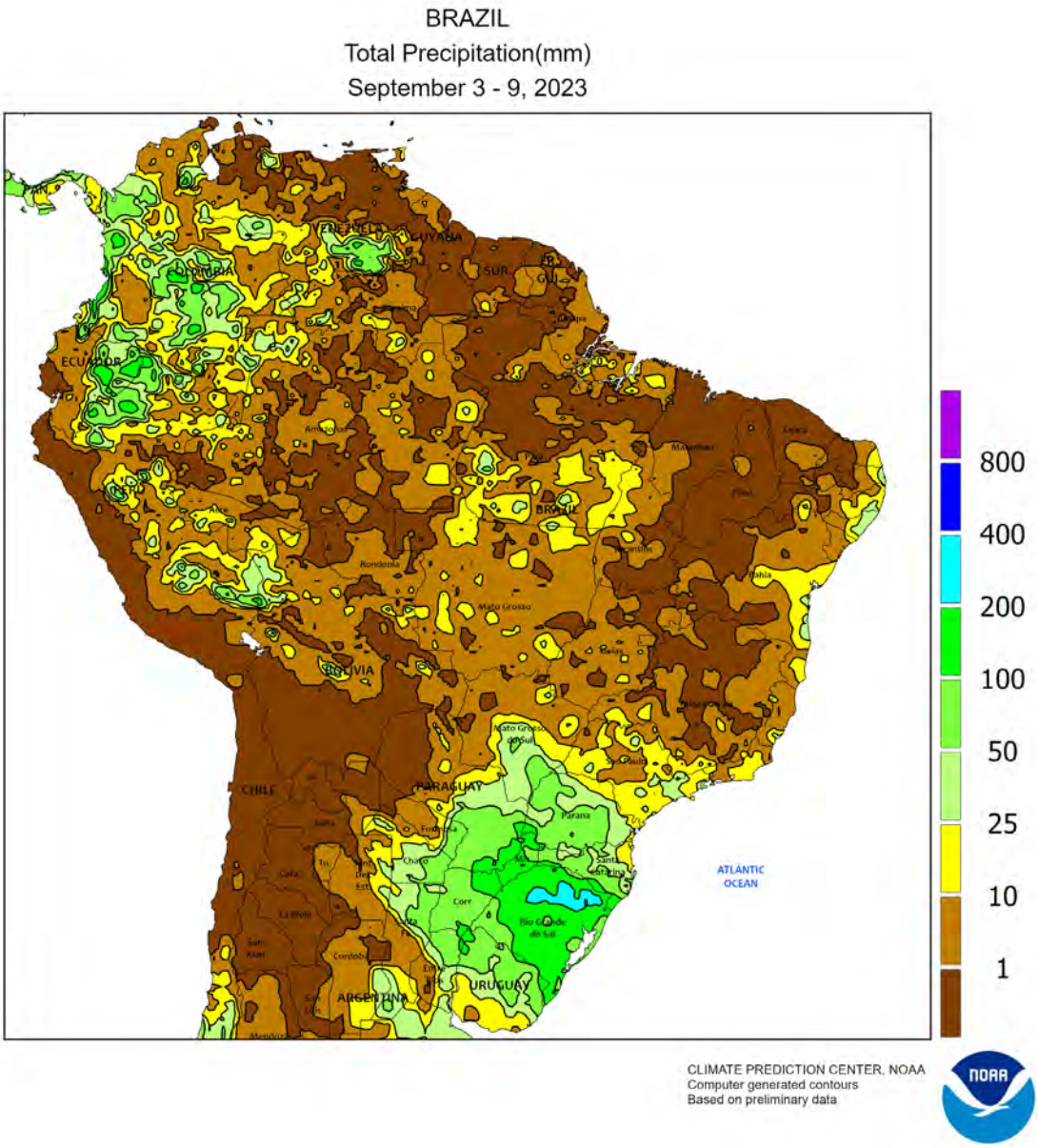

BRAZIL

Showers intensified over southern Brazil, while early season rain tapered off over northern agricultural production areas. Rainfall totaling 10 to 100 mm stretched from Mato Grosso do Sul southward, extending eastward into parts of São Paulo. Temperatures reached into the middle 30s (degrees C) at the northern edge of the aforementioned areas, maintaining high evaporative losses as well as spurring rapid crop development. According to the government of Paraná, 26 percent of wheat was harvested as of September 4, with 47 percent of the remaining crop mature; 79 percent of second-crop corn was harvested, while planting of 2023/24 first-crop corn reached 26 percent. In Rio Grande do Sul, wheat was 67 percent flowering to filling as of September 6. Farther north, showers tapered off from recent weeks, although a few pockets of unseasonably heavy rain (greater than 10 mm) lingered in and around Mato Grosso. According to the government of Mato Grosso, cotton was 97 percent harvested as of September 8. Soybean planting should begin in the north over the next few weeks as moisture conditions allow.

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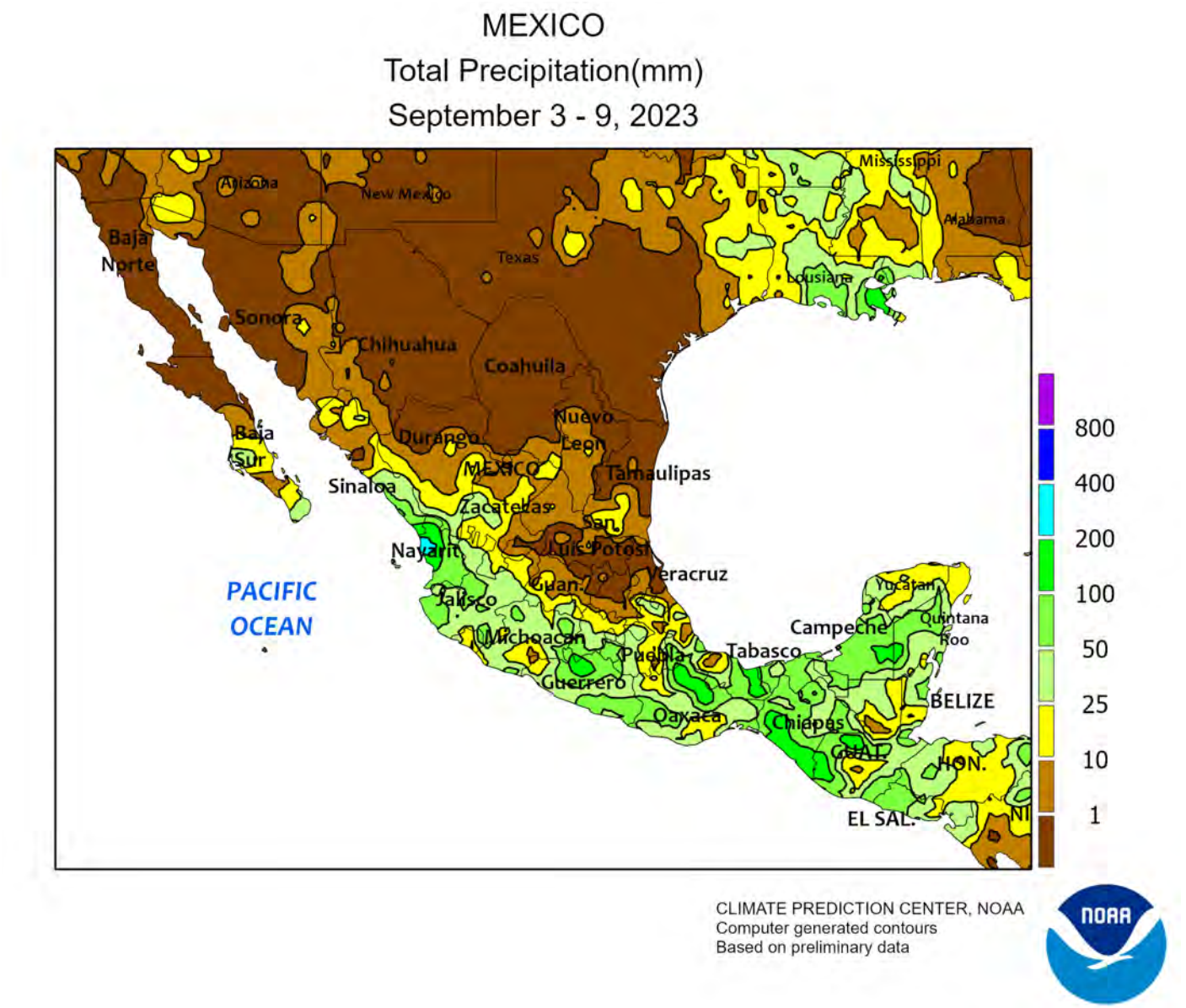

MEXICO

Monsoon showers diminished over northwestern watersheds, reducing recharge of reservoirs providing irrigation to winter grains. Little to no rainfall was recorded over Sonora and Chihuahua, and only patchy showers (locally greater than 10 mm) were recorded in northern Sinaloa. In contrast, heavier rain (10-50 mm, locally exceeding 100 mm) fell from southern Sinaloa southward through western Jalisco. Similar amounts were recorded elsewhere across the southern plateau, along the southern Pacific Coast, and in the southeast. However, unseasonable warmth and dryness persisted over northeastern Mexico; large sections of the region from the Rio Grande Valley southward to Veracruz and Guanajuato were completely dry and most locations recorded temperatures near or above 40°C.

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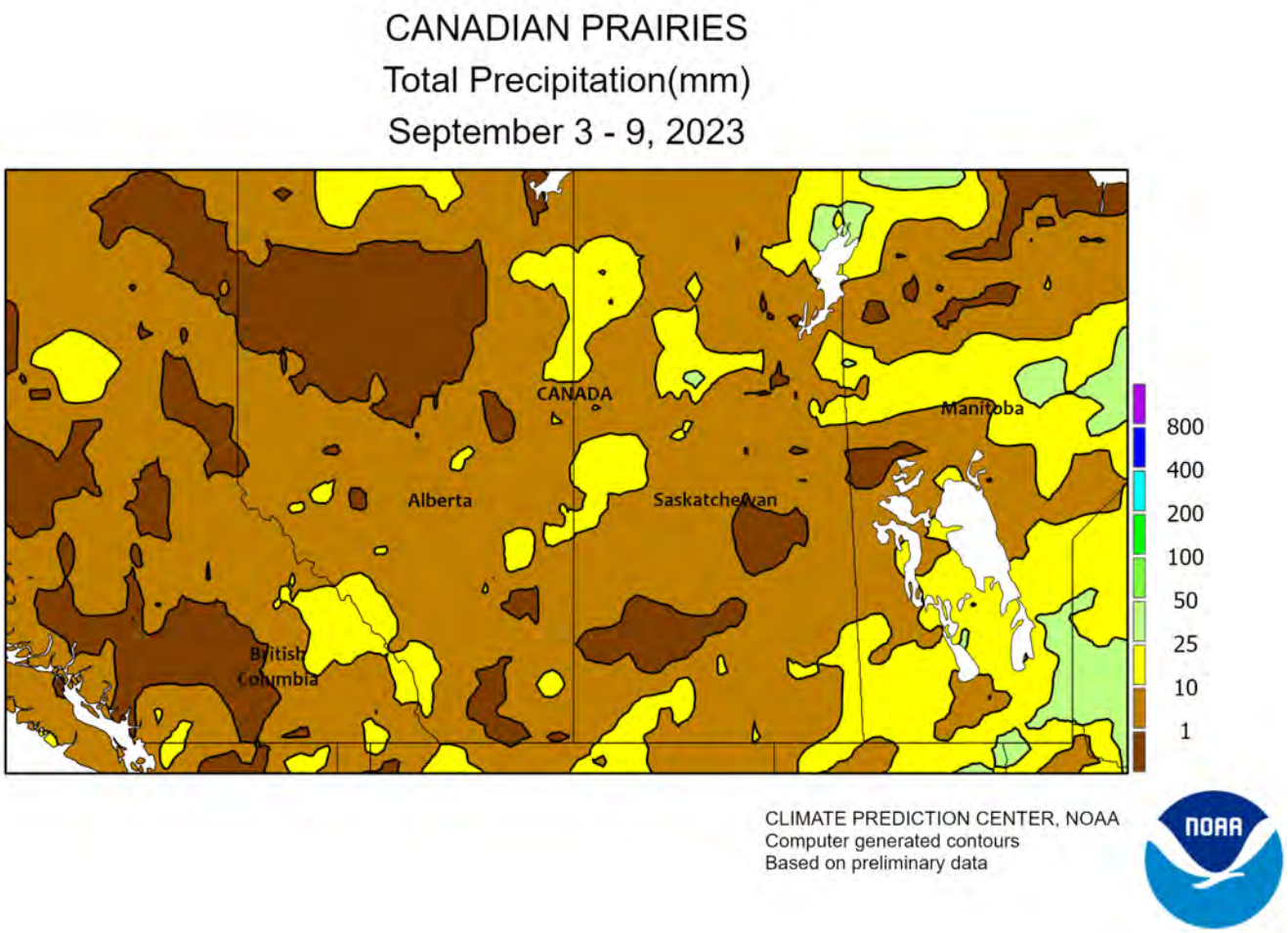

CANADIAN PRAIRIES

Scattered, mostly light showers likely caused local harvest delays. While rainfall totaled below 10 mm in most locations, pockets of heavier rain (10-20 mm) were prevalent in Alberta's northeastern farming areas and in Manitoba. Weekly average temperatures were 1 to 2°C above normal from southern Alberta to Manitoba, where highest daytime temperatures reached the lower and middle 30s (degrees C). In contrast, cooler weather prevailed in northern Alberta and neighboring sections of Saskatchewan, with some agricultural districts reporting a season-ending freeze (nighttime lows at or below -2°C). According to the government of Alberta, crops were 33 percent harvested as of September 5, 8 points ahead of the 5-year average, although the majority of fieldwork has been completed in the drier southern parts of the province.

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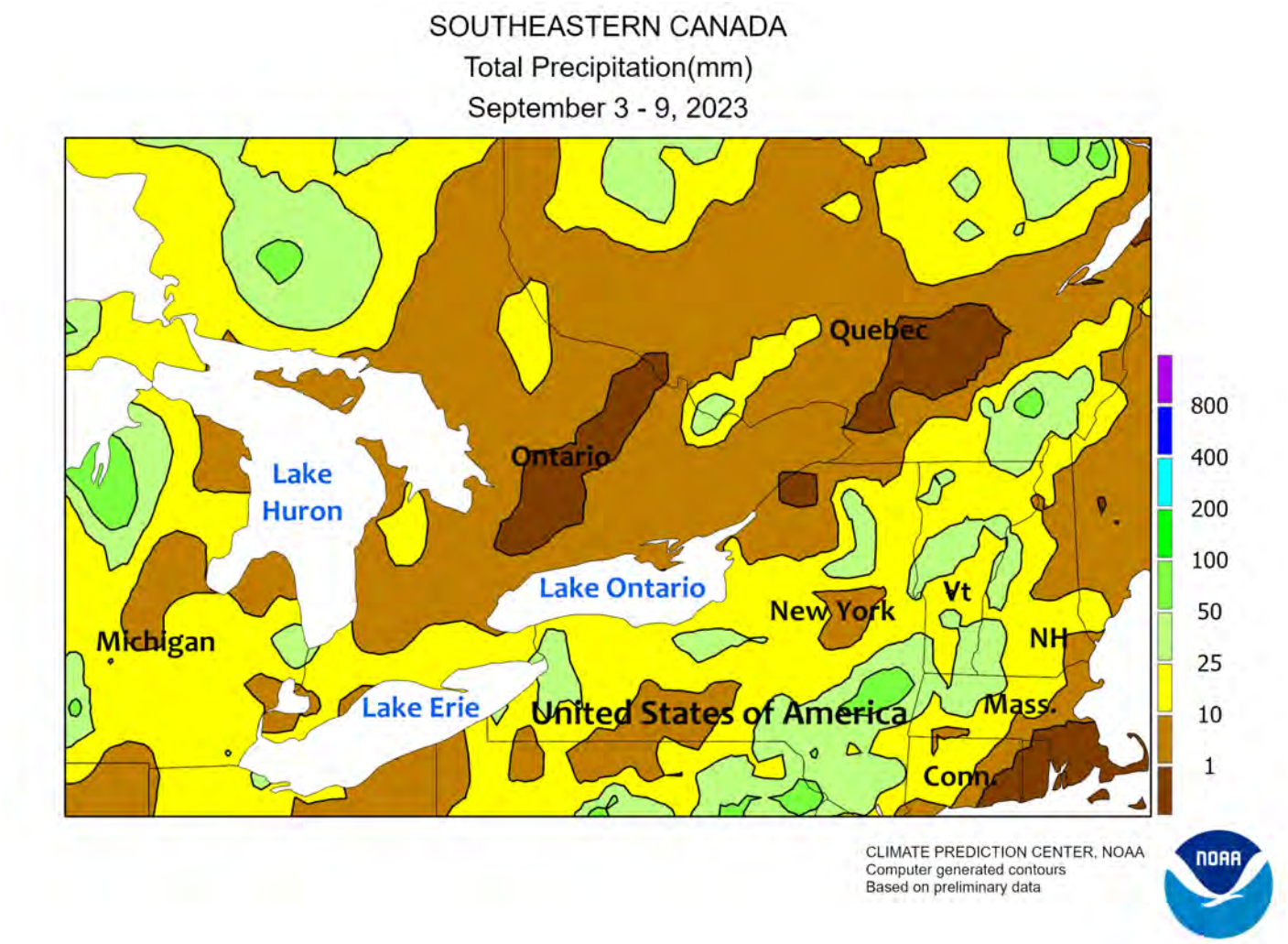

SOUTHEASTERN CANADA

Unseasonable warmth fostered a rapid rate of summer crop maturation. Weekly temperatures averaged 4 to 7°C above normal across the region, with highest daytime temperatures reaching the lower 30s (degrees C) in all agricultural districts. Additionally, nighttime lows stayed well above freezing and only the outlying northern farming areas recorded temperatures below 10°C. Light rain (10 mm or less) accompanied the warmth, and the abundance of sunshine further helped the maturation process. Winter wheat planting should intensify over the next few weeks as field conditions allow.

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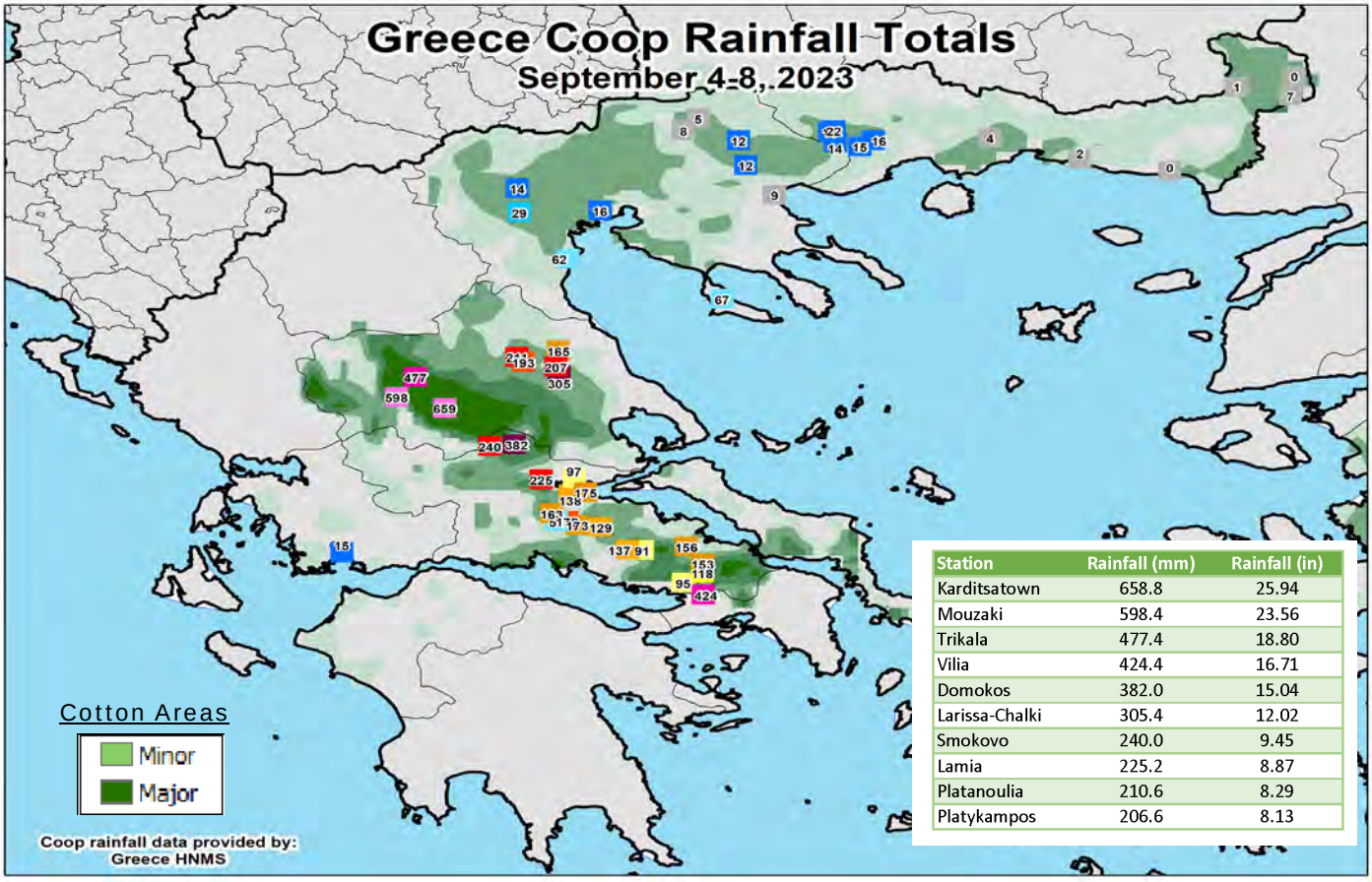
Historic Rain Devastates Central Greece



Station	Rainfall (mm)	Rainfall (in)
Karditsatown	658.8	25.94
Mouzaki	598.4	23.56
Trikala	477.4	18.80
Vilia	424.4	16.71
Domokos	382.0	15.04
Larissa-Chalki	305.4	12.02
Smokovo	240.0	9.45
Lamia	225.2	8.87
Platanoulia	210.6	8.29
Platykampos	206.6	8.13

Figure 1: Total rainfall (mm) from cooperative weather observer network from the Hellenic National Meteorological Service in Greece for September 4-8, overlaid on top of Greece's cotton areas. The top 10 totals in the crop areas are given in the inset table.

Synopsis: A stationary storm system inundated central Greece's Thessaly Region, causing widespread flooding and damage to infrastructure as well as significant cotton losses.

A worst-case scenario unfolded over Greece during the past week, as a strong blocking high over north-central Europe caused an upper-air low to stall over the east-central Mediterranean Sea. The low drifted southward from the Balkans on September 3 and stalled southwest of the Peloponnese Peninsula on September 4. The counterclockwise rotation of the low southwest of Greece netted a moisture-laden easterly fetch from the Adriatic Sea which persisted for nearly four days. The tropical-like moisture entered the Thessalian Plain from the east, with rainfall rates enhanced as the moist air encountered the Pindus Mountain Range on the western side of the Plains.

The rainfall — as detected by weather radar — began in earnest late on the 4th and did not abate until mid-day on September 8. Radar indicated rainfall was heavy and virtually unrelenting during this time frame. While first-order weather stations operated by the World Meteorological Organization (WMO) indicated 100 to 265 mm of rainfall, these stations lie outside the primary cotton areas. Supplemental rainfall data courtesy of the Hellenic National Meteorological Service (HNMS) cooperative weather station network provided excellent coverage and detail of the event, as seen in Figure 1.

The peak rainfall total in the cotton areas was noted in Karditsatown, where 659 mm was reported (see inset table in Figure 1). Nearby reporting sites Mouzaki and Trikala corroborated this high report with totals of 598 and 477 mm, respectively. These excessive totals were in primary cotton areas as the crop was in the open boll stage of development. There were numerous reports near or above 200 mm, with a secondary area of heavy rain (90-225 mm) to the south.

The flooding has drawn some comparisons to Medicane Ionas which impacted Greece September 17-20, 2020. Data from the WMO and the HNMS revealed the past week's storm, dubbed "Daniel", was far more severe and impactful than Ionas in 2020. In fact, the peak value reported by the HNMS during Daniel (910 mm) was nearly three times the peak from Ionas (317 mm). The top 8 rainfall totals from both events were provided by the HNMS; the average of the top 8 rainfall from this past week was more than three times the top 8 totals from Ionas (680 mm this past week versus 224 mm in 2020).

The full impact of this week's historic flooding may not be known for months. However, losses in cotton area and yield are expected along with severe damage to infrastructure.

U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on September 12, 2023. Forecasts refer to September 1.

Corn production for grain is forecast at 15.1 billion bushels, up less than 1 percent from the previous forecast and up 10 percent from 2022. U.S. yields are expected to average 173.8 bushels per harvested acre, down 1.3 bushels from the previous forecast but up 0.5 bushel from last year. Acreage updates were made in several states based on a thorough review of all available data. Total planted area, at 94.9 million acres, is up 1 percent from the previous estimate and up 7 percent from the previous year. Area harvested for grain is forecast at 87.1 million acres, up 1 percent from the previous forecast and up 10 percent from the previous year.

Soybean production for beans is forecast at 4.15 billion bushels, down 1 percent from the previous forecast and down 3 percent from 2022. U.S. yields are expected to average 50.1 bushels per acre, down 0.8 bushel from the previous forecast but up 0.6 bushel from 2022. Total planted area, at 83.6 million acres, is up less than 1 percent from the previous estimate but down 4 percent from the previous year. U.S. area harvested for beans is forecast at 82.8 million acres, up less than 1 percent from the previous forecast but down 4 percent from 2022. Acreage updates were made in several states based on a thorough review of all available data.

All cotton production is forecast at 13.1 million 480-pound bales, down 6 percent from the previous forecast and down 9 percent from 2022. U.S. yields are expected to average 786 pounds per harvested acre, up 7 pounds from the previous forecast but down 164 pounds from 2022. Upland cotton production is forecast at 12.8 million 480-pound bales, down 7 percent from the previous forecast and down 9 percent from 2022. Pima cotton production is forecast at 356,000 bales, up 33 percent from the previous forecast but down 24 percent from 2022. All cotton planted area totaled 10.2 million acres, down 8 percent from the previous forecast and down 26 percent from 2022. All cotton area harvested is forecast at 8.02 million acres, down 7 percent from the previous forecast but up 10 percent from 2022.

California Navel orange production for the 2023-2024 season is forecast at 37.0 million boxes (1.48 million tons) up 1 percent from last season. The initial forecast is based on an objective measurement survey conducted in California's Central Valley from mid-June to the beginning of September. The objective measurement survey indicated that fruit set was down 5 percent from last year, but the average fruit size was up 3 percent. Harvest is expected to begin in October.

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