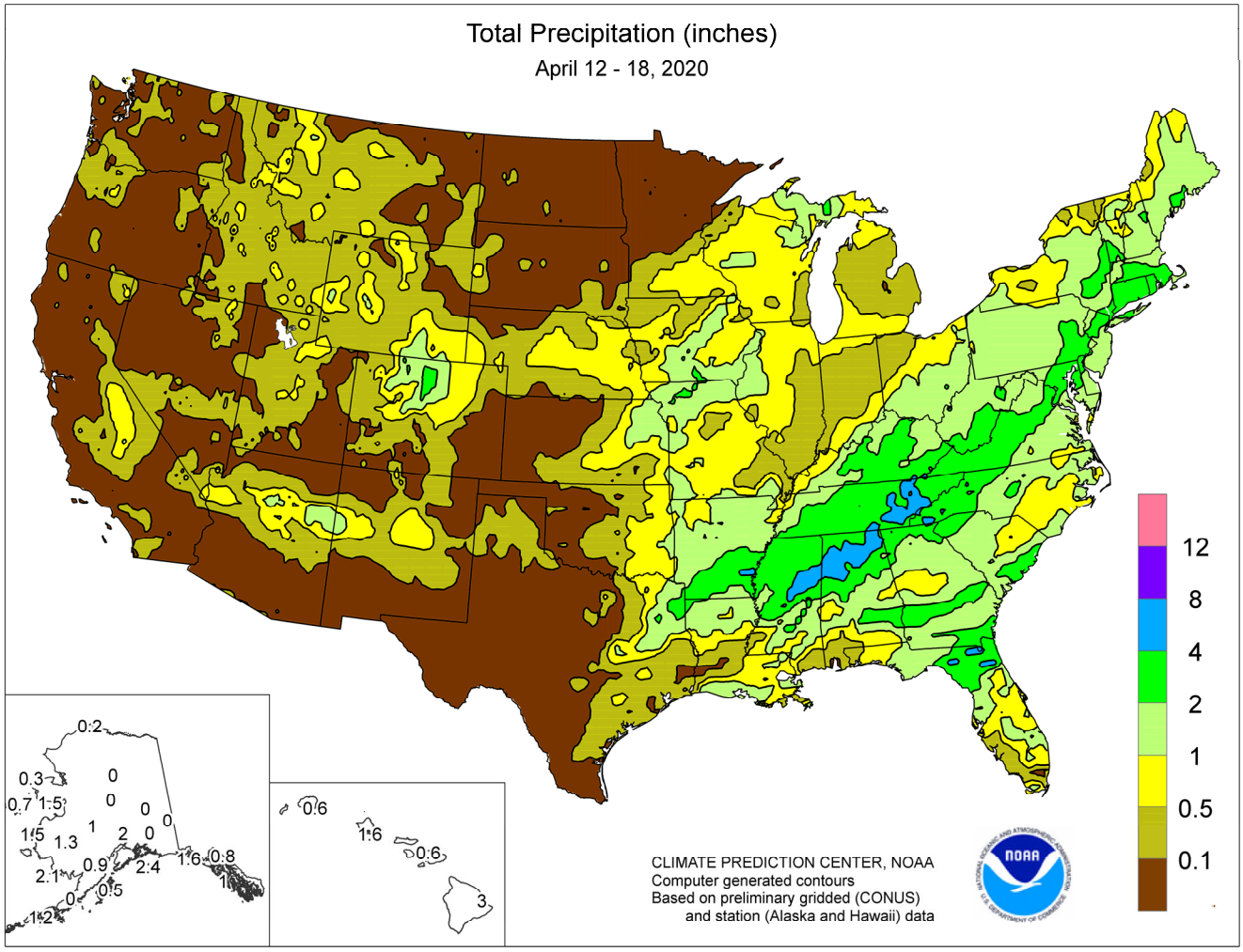
Volume 107, No. 16 http://www.usda.gov/oce/weather April 21, 2020

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
April 12 – 18, 2020

Highlights provided by USDA/WAOB

A sharp, mid-April cold snap engulfed much of the country, holding weekly temperatures 10 to 20°F below normal across the **Plains** and **Midwest** and resulting in multiple freezes as far south as **Texas' northern panhandle** and the **Tennessee Valley**. By week's end, producers monitored a variety of commodities, including alfalfa; jointing to heading winter wheat; blooming fruits; and emerging summer crops, for signs of freeze injury. Meanwhile, temperatures plunged below 10°F on the **High Plains** as far south as **northeastern Colorado** and

(Continued on page 5)

Contents

Water Supply Forecast for the Western United States

Highlights

During the winter of 2019-2020, substantial snowpack developed in many Western watersheds. However, with many storms diverted around northern and central California, sub-par snow has accumulated in the Sierra Nevada. Although California has abundant stored water, courtesy of last winter's bounteous storms, this year's snowpack will not provide much runoff.

Some of this season's storms have crossed southern California and the Southwest. Despite widespread Southwestern precipitation, early-season warmth prematurely melted snow in many river basins across Arizona and New Mexico.

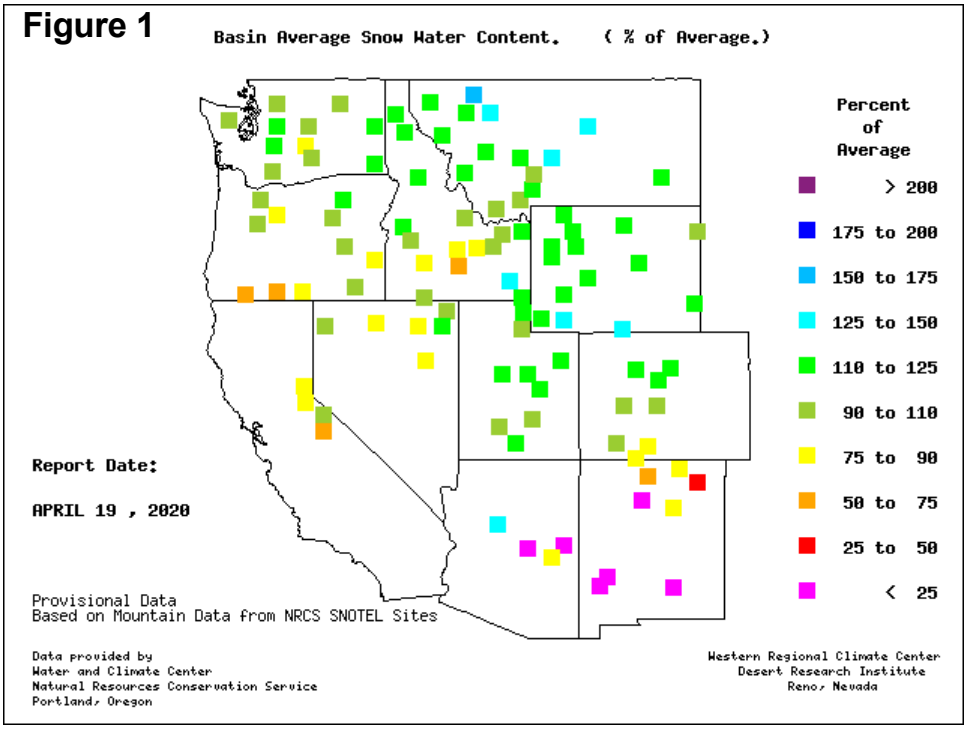
Elsewhere, some of the most impressive Western snowpack exists in the northern and central Rockies, ensuring abundant runoff into many creeks and streams on both sides of the Continental Divide.

Snowpack and Precipitation

By April 19, 2020, near- or above-average snowpack values were common, especially along and near the Canadian border and in the northern and central Rockies (figure 1). However, snow has melted early in parts of Arizona and New Mexico, while California's key watershed areas experienced only modest snowpack improvements, compared to a month ago. Below-average snowpack also remains a concern in southern Oregon and south-central Idaho.

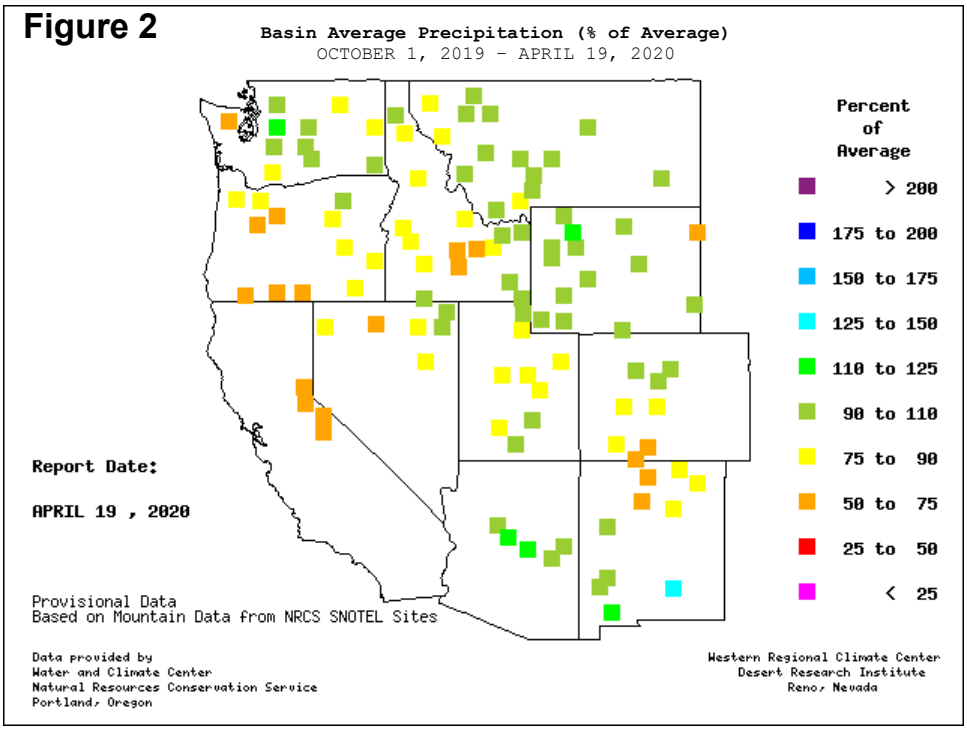
SNOTEL – River Basin Snow Water Content

Figure 1



SNOTEL – River Basin Precipitation

Figure 2



Season-to-date precipitation (October 1, 2019 – April 19, 2020) was at least 75 percent of normal in many Western basins. However, totals were just 50 to 75 percent of normal in much of California and Oregon, as well as parts of south-central Idaho and several basins along the Colorado-New Mexico border (figure 2). In contrast, totals ranging from 110 to 150 percent of normal were mostly concentrated across Arizona and southern New Mexico.

Spring and Summer Streamflow Forecasts

By April 1, 2020, projections for spring and summer streamflow (figure 3) were indicating the likelihood of generally favorable runoff prospects in the Southwest, although snow began to melt early in parts of Arizona and New Mexico. Meanwhile, Northwestern runoff prospects are mixed, with plenty of snow ready to melt in the northern Rockies but drought starting to tighten its grip in Oregon, central Washington, and south-central Idaho. Elsewhere, California's key watersheds received much-needed snow in March—but faces sub-par runoff prospects due to a protracted, mid-winter dry spell.

Reservoir Storage

On April 1, statewide reservoir storage as a percent of average for the date was near or above normal in all Western States except New Mexico (figure 4). Storage in Oregon and Washington was effectively normal. Despite an extended dry spell in January and February, reservoir storage in California was also very close to average—courtesy of the aftereffects of the very wet 2018-19 season. In contrast, New Mexico's statewide storage remained about two-thirds of average for this time of year.

For More Information

The National Water and Climate Center homepage provides the latest available snowpack and water supply information. Please visit: http://www.wcc.nrcs.usda.gov

Figure 3

Spring and Summer Streamflow Forecasts

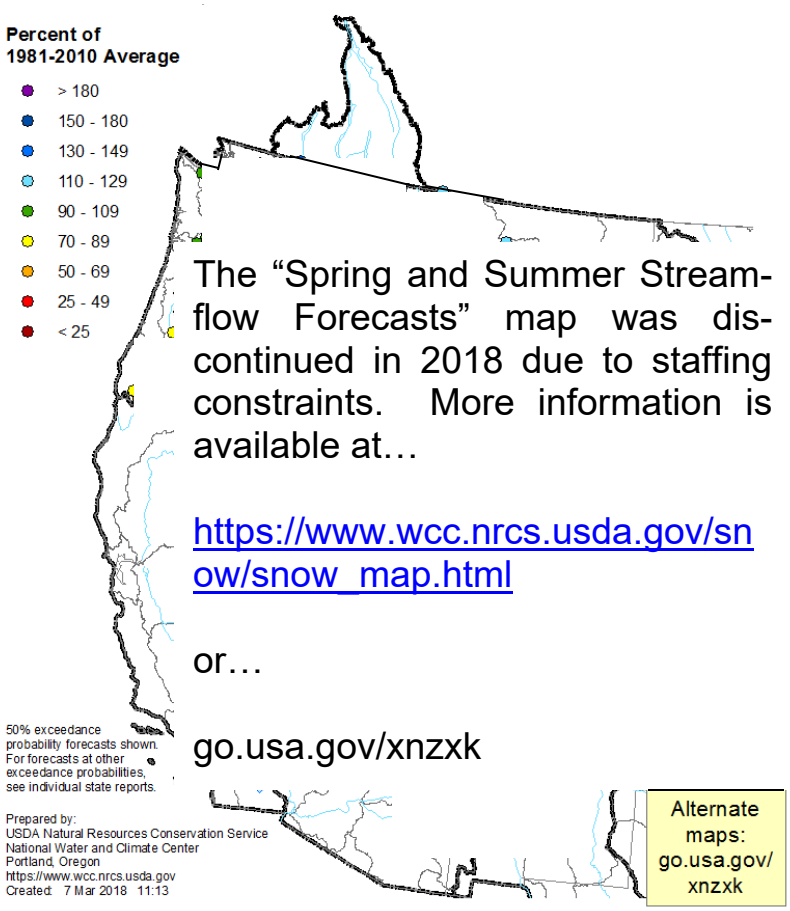
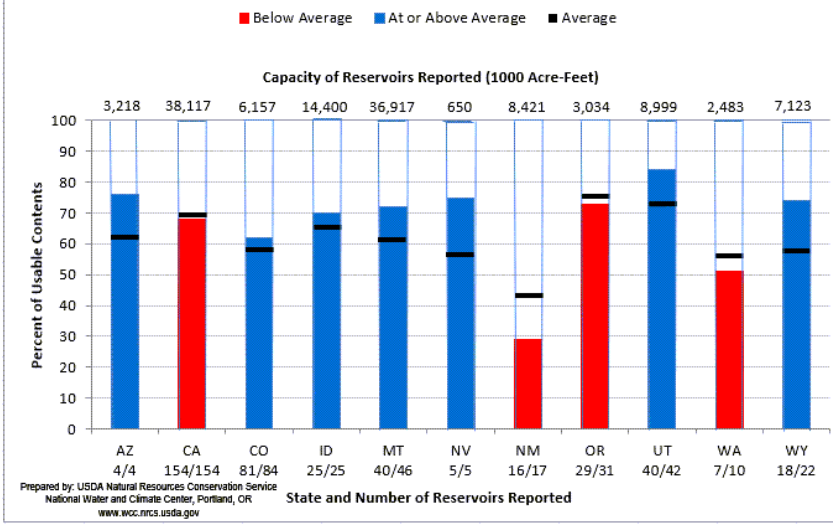
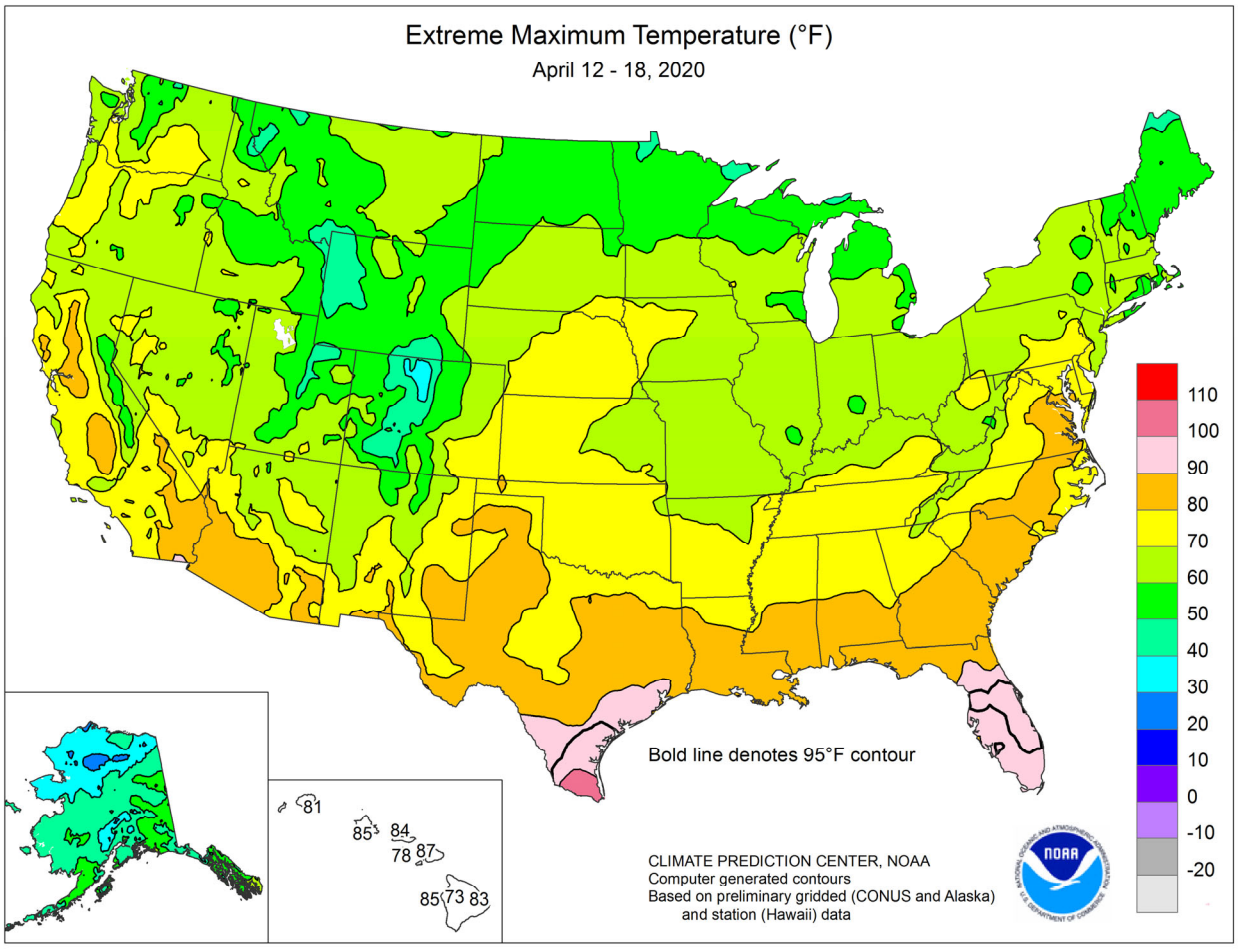
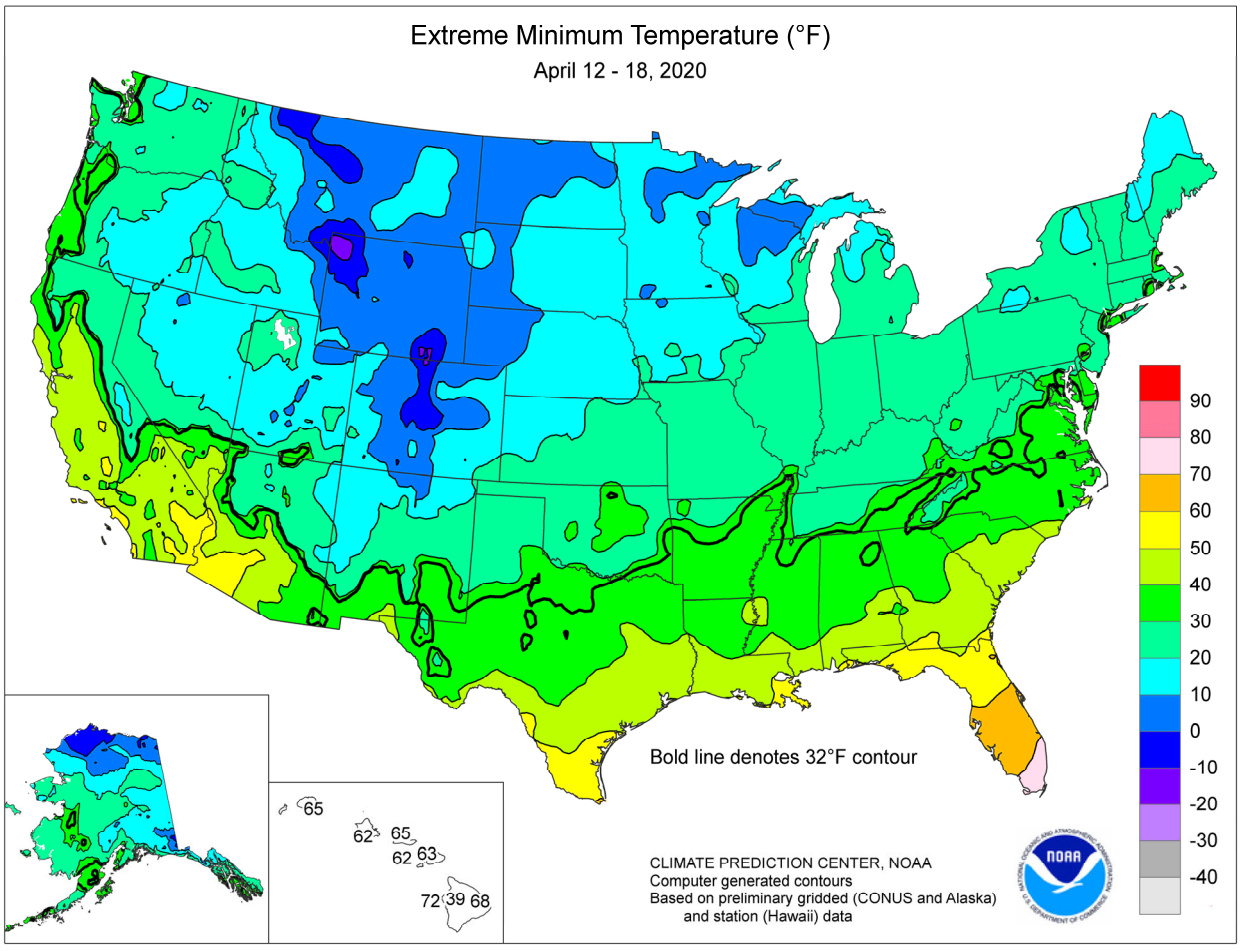


Figure 4 **Reservoir Storage as of April 1, 2020**

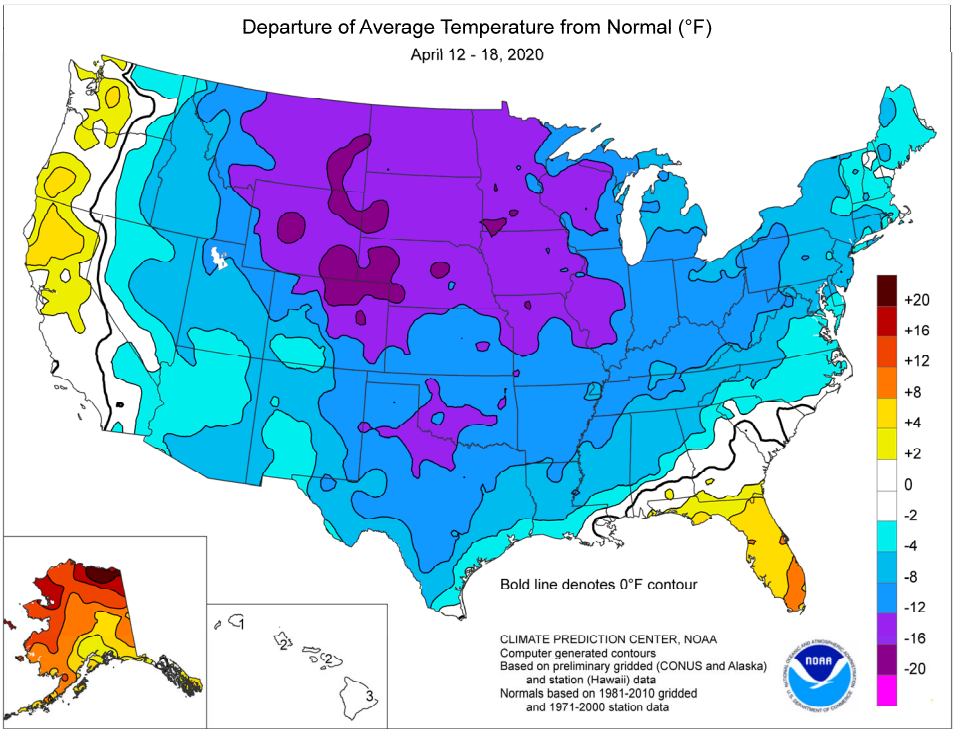



Extreme Maximum Temperature (°F)
April 12 - 18, 2020
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
81
85
84
78
87
85
73
83
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
April 12 - 18, 2020
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
65
62
65
62
63
72
69
68
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)

western Nebraska. Across the **Plains**, **Midwest**, and **Northeast**, there were several instances of accumulating snow, starting with a significant storm across the **northern Plains** and **upper Midwest** on April 11-12. A subsequent storm produced a stripe of heavy snow on April 16-17 from **Nebraska into the lower Great Lakes region**. As a result, most **Midwestern** fieldwork remained at a standstill due to cool, damp soil conditions. Farther south, a deadly severe-weather outbreak struck the **South** on April 12-13. The outbreak featured more than 130 tornadoes, based on preliminary reports, and resulted in more than 30 tornado-related fatalities. The severe weather was accompanied by torrential rain (locally 2 to 4 inches or more), leading to flash flooding, river rises, and fieldwork delays. Rain fell in some drought-affected areas across **Florida** and along the **Gulf Coast**, but bypassed others. Elsewhere, cold air also settled across **interior sections of the West**, while warmth lingered along and near the **Pacific Coast**. Significant, late-season snow accompanied the chilly conditions in several areas, particularly across the **northern and central Rockies**.

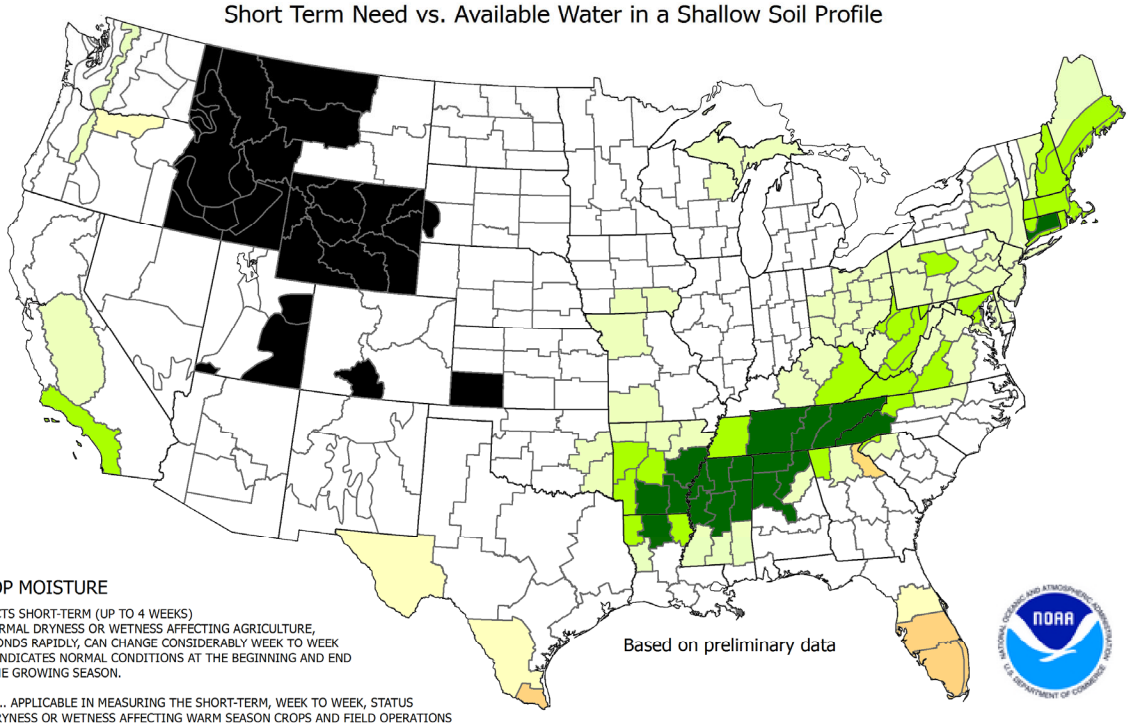


As the week began, a late-season snowfall was in progress in parts of the **upper Midwest**. Record-setting snowfall totals for April 12 included 9.1 inches in **Rhinelander, WI**; 7.5 inches in **Rochester, MN**; 5.2 inches in **Sioux Falls, SD**; and 3.7 inches in **Sioux City, IA**. For **Sioux Falls**, it was also the snowiest Easter on record, surpassing 5.0 inches on March 31, 1929. In **Michigan**, **Marquette** received 18.8 inches of snow on April 12-13. Meanwhile, heavy showers and severe thunderstorms erupted across the **South**. With a 4.17-inch sum on the 12th, **Crossville, TN**, noted its wettest April day on record (previously, 4.13 inches on April 4, 1977). Daily-record rainfall amounts for April 12 included 2.58 inches in **Tyler, TX**; 2.28 inches in **Jackson, TN**; and 1.94 inches in **Montgomery, AL**. By April 13, heavy showers swept into the **East**, where daily-record totals reached 3.10 inches in **Lynchburg, VA**; 2.33 inches in **Washington, DC**; 1.97 inches in **Baltimore, MD**; and 1.92 inches in **New York's Central Park**. The deadly tornado outbreak began in **Mississippi** and later spread to parts of **Georgia**, **Tennessee**, and **South Carolina**. One tornado in **southern Mississippi** was on the ground for approximately 76 minutes (from 4:12 to 5:28 pm CDT on April 12) and had a path length of nearly 68 miles across parts of five counties. The same tornado, an EF-4 with winds estimated near 190 mph, had a maximum width of 2.25 miles and resulted in eight fatalities. The only wider tornadoes in U.S. history occurred in **El Reno, OK** (2.6 miles wide on May 31, 2013), and **Hallam, NE** (2.5 miles wide on May 22, 2004). By April 13-14, light snow dusted the **southern High Plains**, where **Amarillo, TX**, received 1.7 inches. At mid-week, patchy snow stretched from the **northern Rockies into the Midwest**. Daily-record snowfall totals for April 15 included 2.1 inches in **Missoula, MT**, and 1.7 inches in **Chicago, IL**. **Missoula** also netted a daily-record precipitation total (0.59 inch) for April 15, along with **Pocatello, ID** (0.63 inch). On April 16-17, snow spread eastward from parts of **Colorado**, **Nebraska**, and **Wyoming**. Record-setting snowfall amounts for April 16 totaled 9.1 inches in **Lander, WY**; 6.9 inches in **Cheyenne, WY**, and 5.0 inches in **Omaha, NE**. On April 17, snowfall reached 3.0 inches in **Chicago, IL**, and **South Bend, IN**. For **Chicago**, it was the second-latest snowfall of at least 3 inches, behind 3.1 inches on April 23, 1967. By April 18, **Harford, CT** (2.4 inches), and **Providence, RI** (1.2 inches), achieved daily-record snowfall totals.

Historically cold weather for mid-April settled across the **Plains** and **Midwest**. In **Montana**, daily-record lows for April 12 plunged to -3ºF in **Great Falls** and 2ºF in **Cut Bank**. It was **Great Falls'** latest sub-zero reading since April 21, 2008, when the low dipped to -8ºF. In **northwestern Wyoming**, **Lake Yellowstone** reported three consecutive sub-zero readings from April 12-14, including a low of -15ºF on the middle date. Cold air briefly spread into the **Northwest**, where record-setting lows for April 13 included 15ºF in **Idaho Falls, ID**, and 23ºF in **Olympia, WA**. On the **Plains**, consecutive daily-record lows occurred on April 13-14 in **Great Falls** (-3 and 4ºF); **Denver, CO** (15 and 11ºF); and **Miles City, MT** (11 and 12ºF). In **North Dakota**, daily-record lows for April 14 fell to 4ºF in **Grand Forks** and 6ºF in **Dickinson**. Similarly, sub-10ºF, daily-record lows occurred on the 14th in **Nebraska** locations such as **Alliance** (2ºF) and **Chadron** (9ºF). Elsewhere in **Nebraska**, **Lincoln** logged consecutive daily-record lows of 16ºF on April 14-15. With a low of 15ºF of April 14, **Hastings, NE**, noted its latest-ever 15-degree reading. By April 15, cold air settled across the **interior South**, including **Kentucky**, where daily-record lows sagged to 25ºF in **Lexington** and **Frankfort**. In **Illinois**, the coldest weather since March 7 affected **Lincoln** and **Springfield**, with April 16 lows plummeting to 24 and 26ºF, respectively. Toward week's end, another surge of cold air delivered another pair of daily-record lows to **Denver** (19 and 12ºF, respectively, on April 16-17. **Laramie, WY**, also registered a pair of daily-record lows (-2 and -11ºF) on those dates. Cold air also edged farther into the **South** and **East**; late-week records fell to 24ºF (on April 17) in **Williamsport, PA**, and 28ºF (on April 18) in **Harrison, AR**. In stark contrast, heat and humidity persisted for much of the week in **Florida**, where monthly records were established on April 13 with highs of 97ºF in **Sanford** and **Vero Beach**. Earlier, the week had begun with a brief burst of triple-digit heat in **southern Texas**, where April 12 highs soared to 103ºF in **Brownsville** and 102ºF in **McAllen**.

Widespread precipitation accompanied mild weather in **Alaska**, especially in some southern and western locations. In **Nome**, measurable precipitation fell all 7 days of the week, totaling 1.44 inches. **Nome** netted consecutive daily-record totals (0.39 and 0.71 inch, respectively) on April 16-17. **Bethel's** weekly sum reached 1.16 inches, aided by a trio of daily-record amounts (0.37, 0.23, and 0.23 inch) from April 15-17. In the **Aleutians**, **Cold Bay** collected a daily-record total of 0.84 inch on April 17. Meanwhile, weekly temperatures averaged 10 to 15ºF in much of **northern and western Alaska**. **King Salmon** tallied a trio of daily-record highs (61, 61, and 59ºF) from April 16-18. Other **Alaskan** daily-record highs included 61ºF (on April 18) in **Juneau** and 44ºF (on April 12) on **St. Paul Island**. Farther south, heavy showers swept across **Hawaii** early in the week. **Kahului, Maui**, reported a daily-record total (0.53 inch) on April 12. Two days, later totals (not daily records) for April 14 reached 1.60 inches in **Honolulu, Oahu**, and 3.11 inches in **Hilo**, on the **Big Island**. A few amounts in excess of 5 inches were observed on **Oahu** during a 24-hour period ending the morning of April 14.

Crop Moisture Index by Division
Weekly Value for Period Ending Apr 18, 2020
Short Term Need vs. Available Water in a Shallow Soil Profile



CROP MOISTURE

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

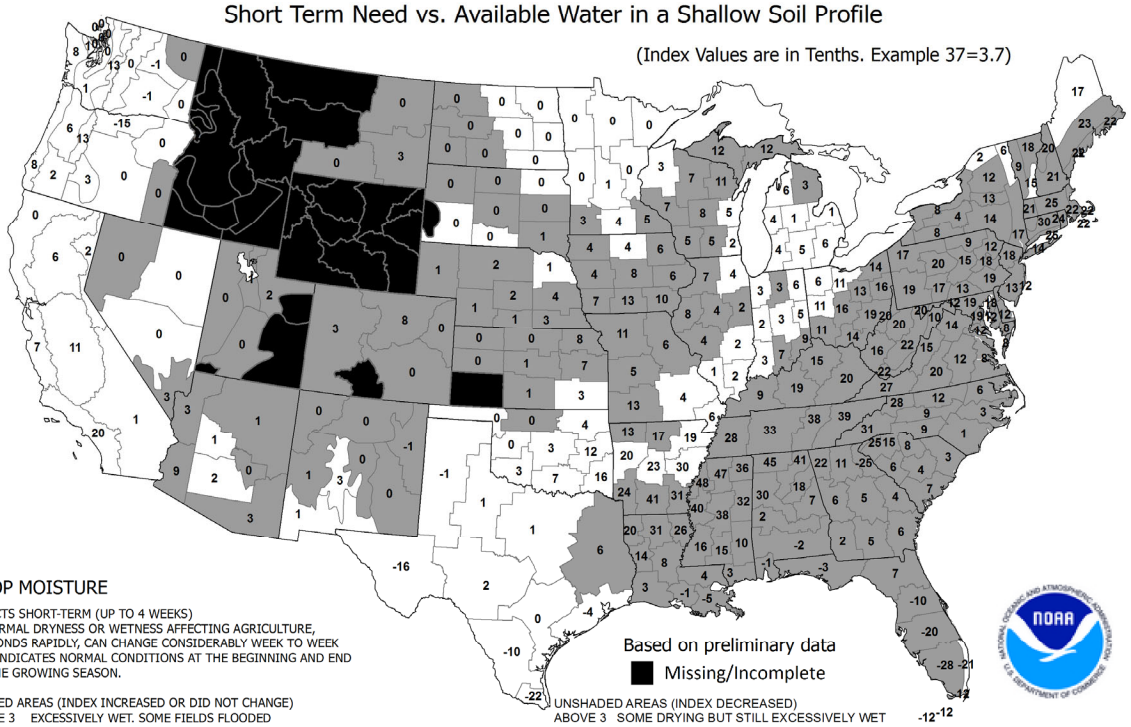
USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS
OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

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

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

Crop Moisture Index by Division
Weekly Value for Period Ending Apr 18, 2020
Short Term Need vs. Available Water in a Shallow Soil Profile

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



CROP MOISTURE

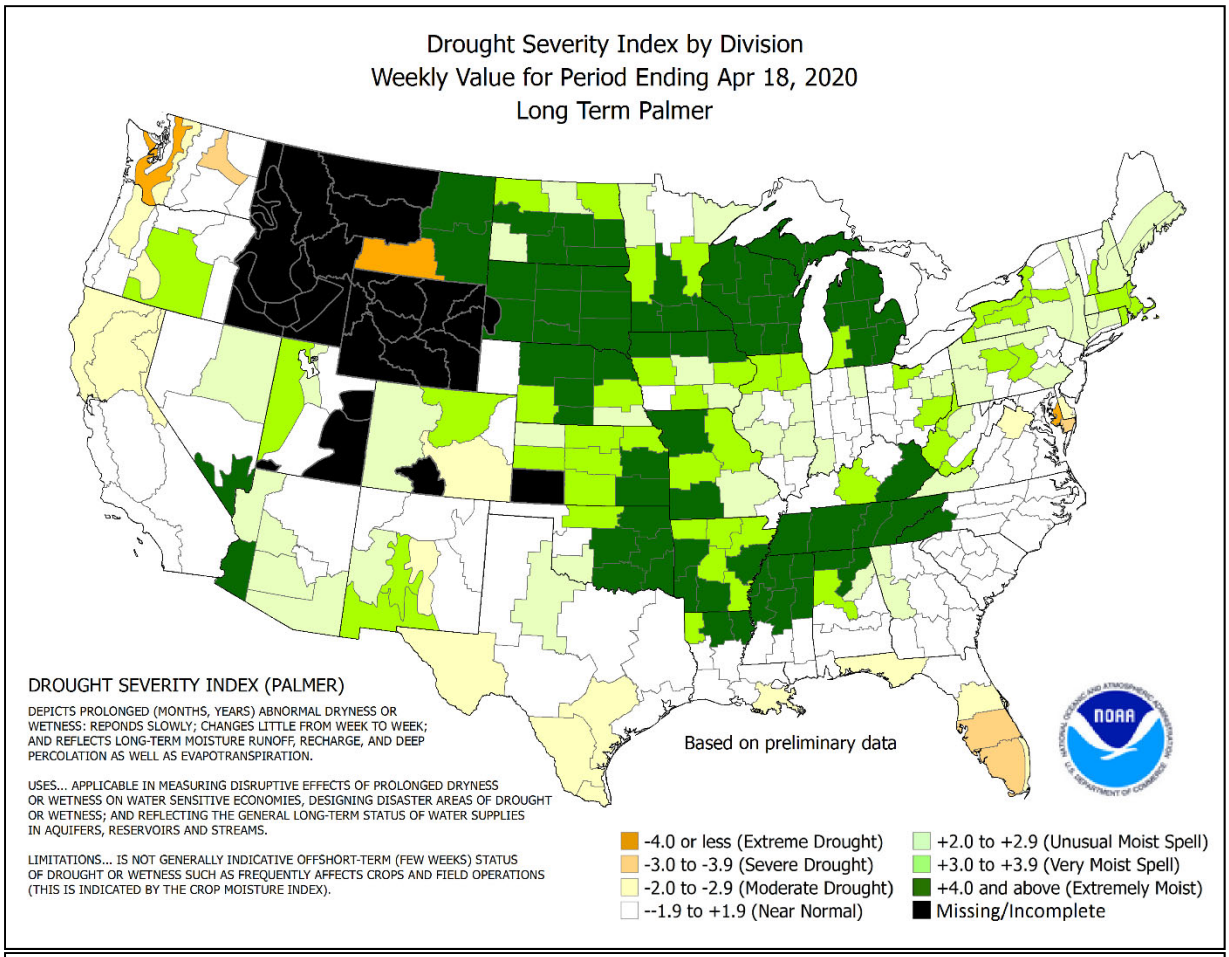
DEPICTS SHORT-TERM (UP TO 4 WEEKS)
ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE,
RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK
AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END
OF THE GROWING SEASON.

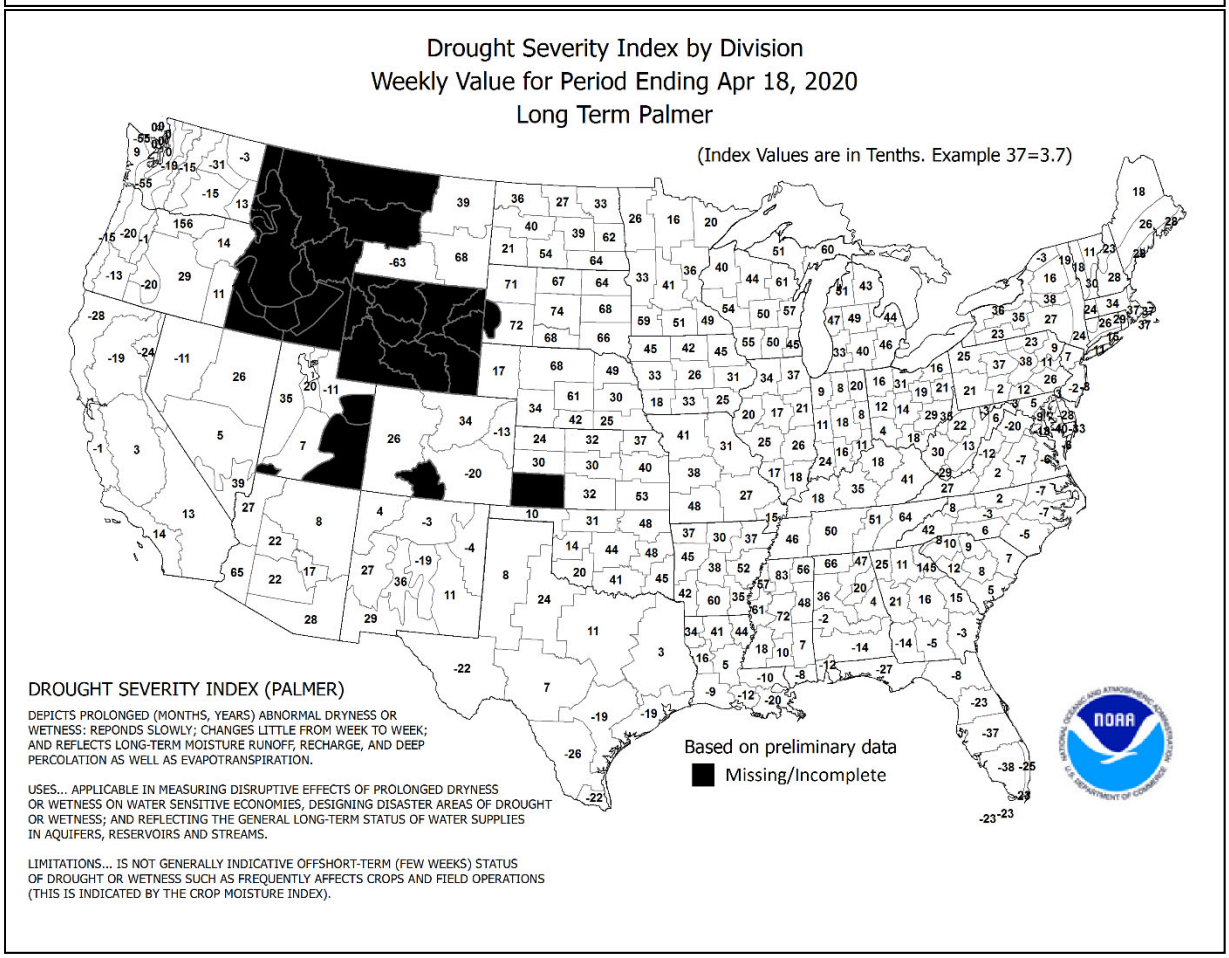
SHADED AREAS (INDEX INCREASED OR DID NOT CHANGE)

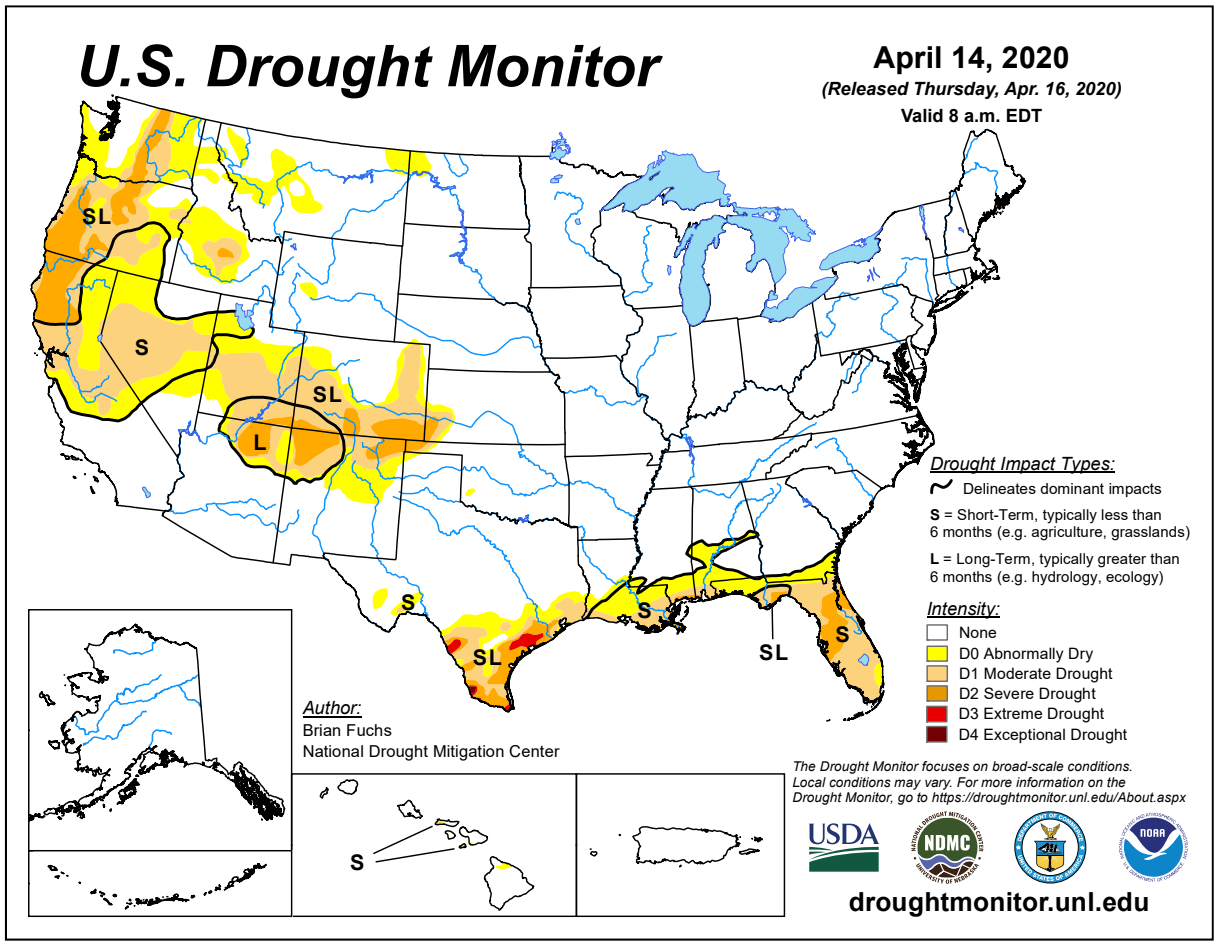
ABOVE 3	EXCESSIVELY WET. SOME FIELDS FLOODED
2 TO 3	TOO WET. SOME STANDING WATER
1 TO 2	SOME FIELDS TOO WET, PROSPECTS ABOVE NORMAL
0 TO 1	MOISTURE ADEQUATE FOR PRESENT CROP NEEDS
0 TO -1	PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2	SOME IMPROVEMENT BUT STILL ABNORMALLY DRY
-2 TO -3	DRYNESS EASED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

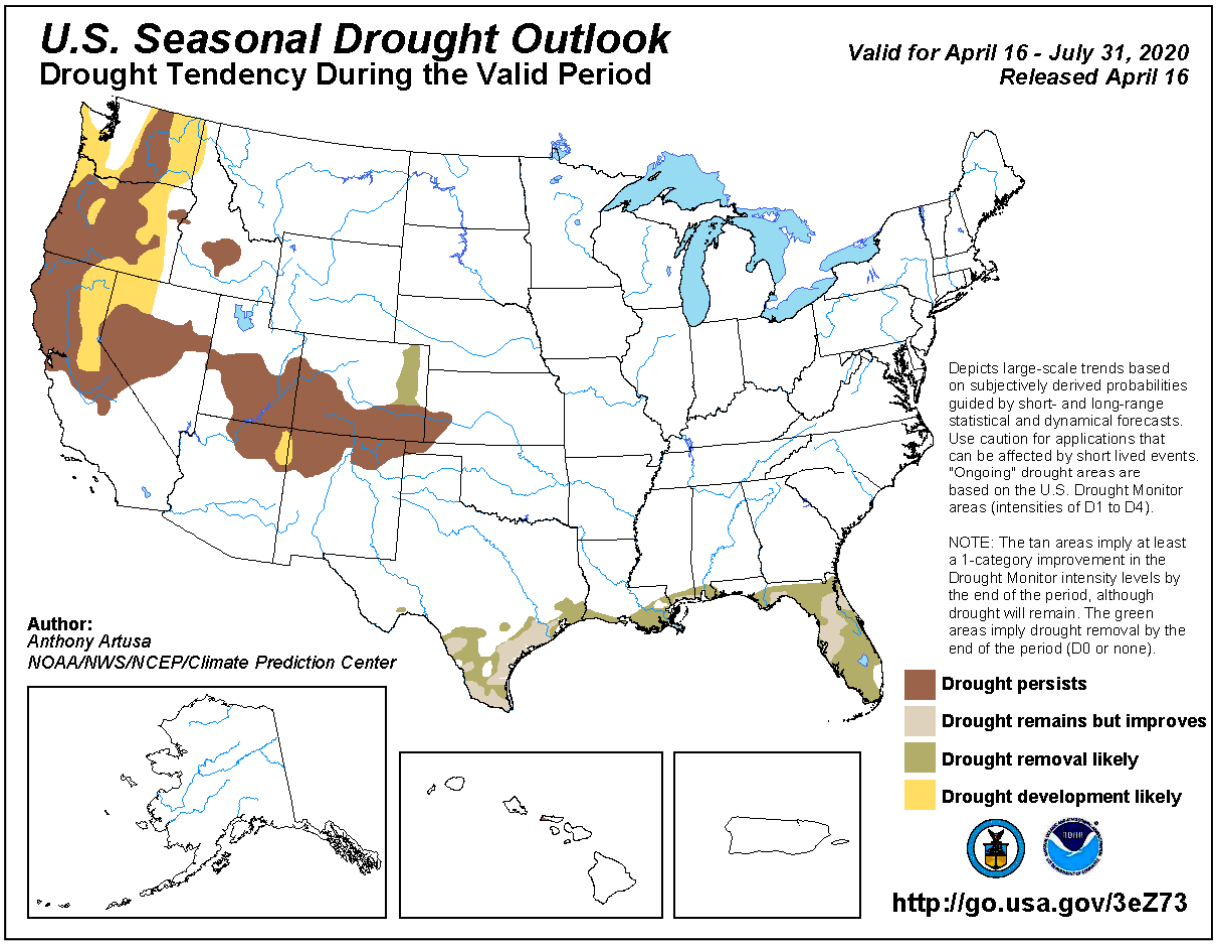
UNSHADED AREAS (INDEX DECREASED)

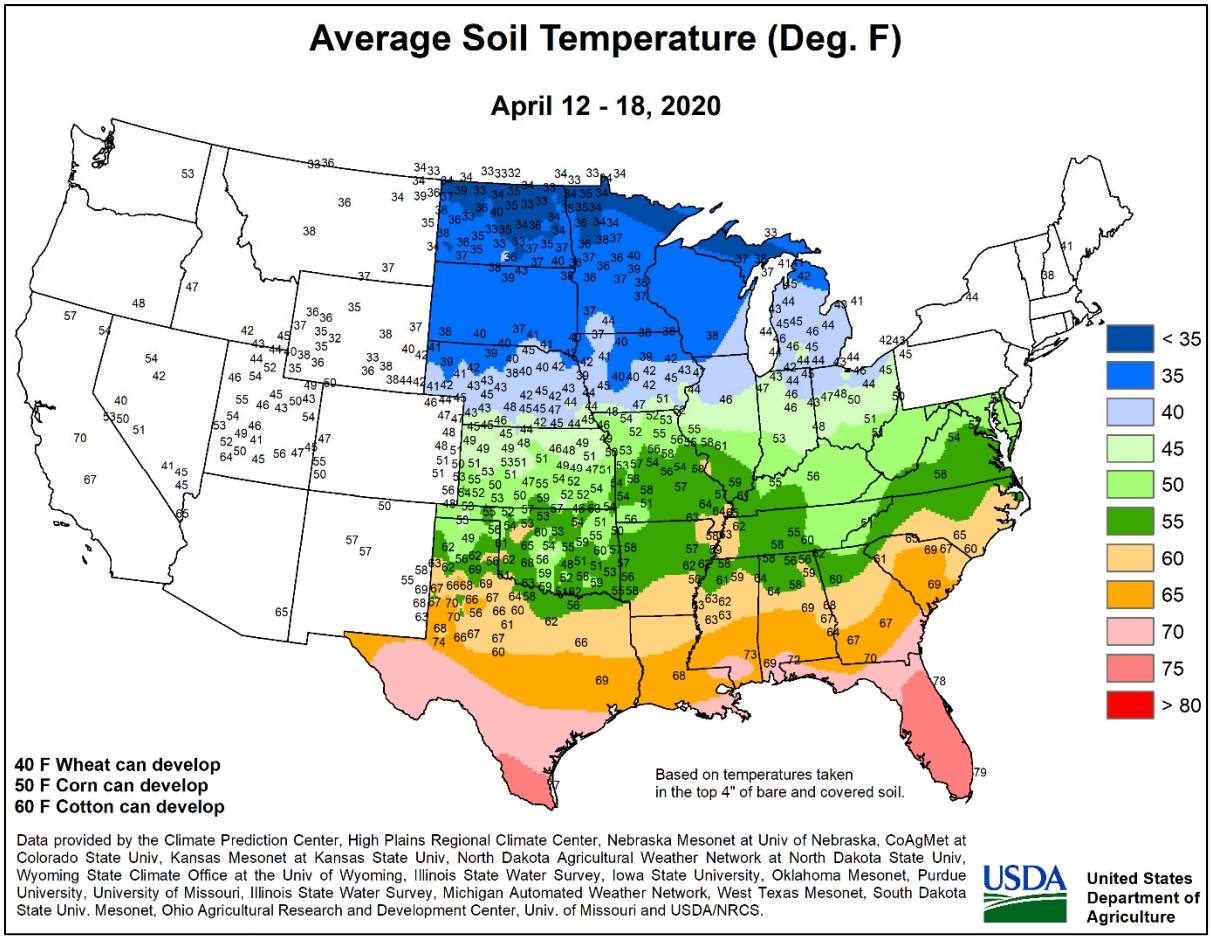
ABOVE 3	SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3	MORE DRY WEATHER NEEDED, WORK DELAYED
1 TO 2	FAVORABLE EXCEPT STILL TOO WET IN SPOTS
0 TO 1	FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1	TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2	ABNORMALLY DRY. PROSPECTS DETERIORATING
-2 TO -3	EXCESSIVELY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

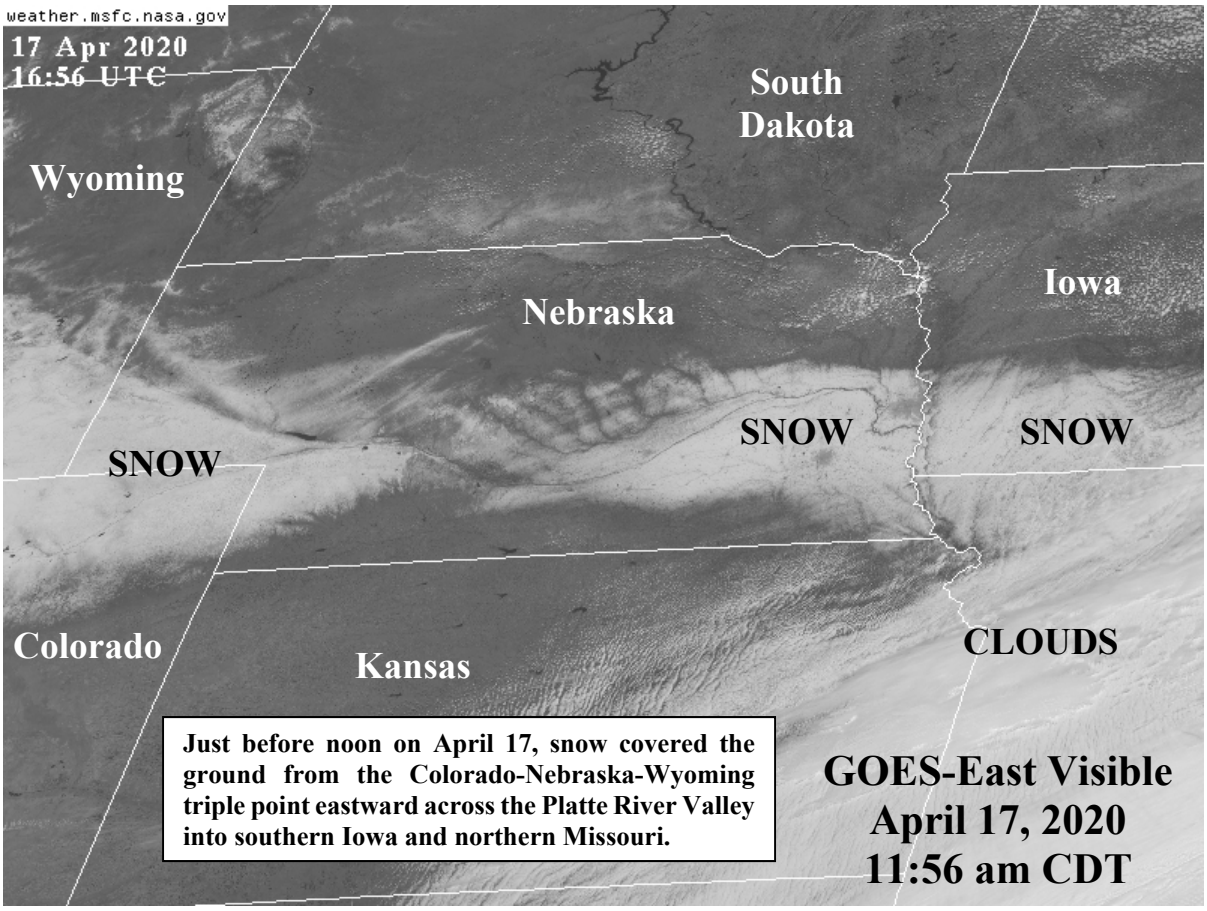

Drought Severity Index by Division
Weekly Value for Period Ending Apr 18, 2020
Long Term Palmer
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: REPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.
LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
Based on preliminary data
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
--1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)
Missing/Incomplete
NOAA


Drought Severity Index by Division
Weekly Value for Period Ending Apr 18, 2020
Long Term Palmer
(Index Values are in Tenths. Example 37=3.7)
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: REPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.
LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
Based on preliminary data
Missing/Incomplete
NOAA


U.S. Drought Monitor
April 14, 2020
(Released Thursday, Apr. 16, 2020)
Valid 8 a.m. EDT
SL
S
SL
L
S
SL
S
S
SL
S
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:
Brian Fuchs
National Drought Mitigation Center
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
USDA
NDMC
droughtmonitor.unl.edu


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for April 16 - July 31, 2020
Released April 16
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/3eZ73


Average Soil Temperature (Deg. F)
April 12 - 18, 2020
< 35
35
40
45
50
55
60
65
70
75
> 80
40 F Wheat can develop
50 F Corn can develop
60 F Cotton can develop
Based on temperatures taken in the top 4" of bare and covered soil.
Data provided by the Climate Prediction Center, High Plains Regional Climate Center, Nebraska Mesonet at Univ of Nebraska, CoAgMet at Colorado State Univ, Kansas Mesonet at Kansas State Univ, North Dakota Agricultural Weather Network at North Dakota State Univ, Wyoming State Climate Office at the Univ of Wyoming, Illinois State Water Survey, Iowa State University, Oklahoma Mesonet, Purdue University, University of Missouri, Illinois State Water Survey, Michigan Automated Weather Network, West Texas Mesonet, South Dakota State Univ. Mesonet, Ohio Agricultural Research and Development Center, Univ. of Missouri and USDA/NRCS.
USDA
United States Department of Agriculture


weather.msfc.nasa.gov
17 Apr 2020
16:56 UTC
South Dakota
Wyoming
Nebraska
Iowa
SNOW
SNOW
SNOW
Colorado
Kansas
CLOUDS
Just before noon on April 17, snow covered the ground from the Colorado-Nebraska-Wyoming triple point eastward across the Platte River Valley into southern Iowa and northern Missouri.
GOES-East Visible
April 17, 2020
11:56 am CDT

National Weather Data for Selected Cities

Weather Data for the Week Ending April 18, 2020

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	70	45	78	36	57	-5	3.24	2.22	2.80	12.92	163	34.02	194	87	41	0	0	2	1
	HUNTSVILLE	66	42	76	34	54	-8	3.36	2.40	3.04	14.59	187	32.95	185	92	42	0	0	3	1
	MOBILE	78	53	83	45	65	-1	0.09	-1.02	0.07	1.57	17	11.26	56	88	47	0	0	2	0
	MONTGOMERY	77	49	84	40	63	-1	1.96	1.03	1.96	6.96	80	22.47	120	84	39	0	0	1	1
AK	ANCHORAGE	43	35	47	33	39	2	0.27	0.16	0.13	2.02	229	3.69	154	96	77	0	0	3	0
	BARROW	22	10	29	-10	15	14	0.25	0.20	0.13	1.54	686	1.80	329	92	81	0	7	5	0
	FAIRBANKS	49	27	52	15	38	6	0.31	0.23	0.12	1.07	227	1.07	71	90	50	0	4	4	0
	JUNEAU	52	35	61	25	43	3	0.80	0.15	0.38	4.37	78	17.35	114	96	59	0	2	5	0
	KODIAK	48	39	53	36	43	6	0.52	-0.89	0.31	1.99	21	7.13	30	94	79	0	0	4	0
	NOME	35	30	39	20	33	13	1.45	1.27	0.64	4.55	418	5.87	192	99	88	0	4	7	1
AZ	PHOENIX	82	57	89	52	69	-3	0.00	-0.06	0.00	2.06	167	3.61	114	48	16	0	0	0	0
	PRESCOTT	62	35	67	29	49	-3	0.64	0.52	0.64	3.94	275	5.07	127	76	24	0	2	1	1
	TUCSON	80	49	85	43	64	-3	0.00	-0.08	0.00	0.78	78	2.13	73	45	12	0	0	0	0
AR	FORT SMITH	64	37	74	34	51	-11	2.44	1.46	2.39	10.27	163	18.94	158	89	41	0	0	2	1
CA	BAKERSFIELD	75	55	84	52	65	3	0.12	-0.02	0.08	4.28	234	4.56	104	74	38	0	0	2	0
	FRESNO	75	55	83	52	65	3	0.12	-0.10	0.12	3.81	142	4.47	64	82	37	0	0	1	0
	LOS ANGELES	68	57	78	55	62	2	0.02	-0.13	0.02	6.87	292	7.25	86	80	54	0	0	1	0
	REDDING	77	52	82	42	64	6	0.00	-0.57	0.00	6.86	116	9.77	55	73	23	0	0	0	0
	SAN DIEGO	69	58	75	55	63	2	0.09	-0.09	0.06	5.96	249	6.84	102	94	56	0	0	2	0
	SAN FRANCISCO	66	51	77	47	59	2	0.00	-0.32	0.00	2.76	51	3.99	29	82	52	0	0	0	0
	STOCKTON	77	50	84	45	63	4	0.01	-0.23	0.01	2.82	88	3.78	42	84	32	0	0	1	0
CO	ALAMOSA	58	21	64	9	40	-2	0.00	-0.13	0.00	0.22	25	0.50	32	54	10	0	7	0	0
	CO SPRINGS	47	20	61	7	33	-13	0.13	-0.20	0.13	1.38	78	2.10	82	78	35	0	7	1	0
	DENVER INTL	44	19	58	11	31	-16	0.32	-0.11	0.20	1.69	92	2.78	99	89	46	0	6	4	0
	GRAND JUNCTION	57	28	67	19	43	-9	0.20	-0.02	0.20	1.74	113	2.33	86	65	19	0	5	1	0
	PUEBLO	55	24	71	20	40	-11	0.14	-0.19	0.08	0.35	20	1.17	47	83	29	0	7	3	0
CT	BRIDGEPORT	54	40	61	34	47	-3	1.98	0.98	1.55	7.03	106	12.37	98	82	37	0	0	3	1
	HARTFORD	54	35	64	27	45	-5	2.31	1.46	1.72	7.58	129	12.70	105	81	33	0	3	3	1
DC	WASHINGTON	63	42	81	38	52	-5	2.94	2.28	2.32	5.85	110	12.00	111	87	36	0	0	5	1
DE	WILMINGTON	58	37	73	29	48	-5	2.17	1.38	1.76	5.80	95	12.64	106	82	37	0	2	6	1
FL	DAYTONA BEACH	84	67	94	59	76	7	1.36	0.89	0.70	1.97	34	4.70	41	99	60	1	0	2	2
	JACKSONVILLE	80	62	85	51	71	4	3.70	3.07	2.54	6.33	112	10.81	88	90	62	0	0	5	2
	KEY WEST	87	80	89	78	83	7	0.00	-0.51	0.00	0.04	1	2.04	29	87	69	0	0	0	0
	MIAMI	91	78	93	76	84	9	0.00	-0.74	0.00	0.49	10	5.46	62	87	58	4	0	0	0
	ORLANDO	88	70	97	62	79	8	0.65	0.04	0.47	1.28	23	3.50	34	91	51	4	0	3	0
	PENSACOLA	79	60	85	53	70	3	0.71	-0.31	0.66	2.02	23	12.23	66	83	48	0	0	3	1
	TALLAHASSEE	81	58	88	50	69	3	1.18	0.49	0.87	3.45	43	9.95	57	88	46	0	0	2	1
	TAMPA	85	70	91	62	78	6	1.80	1.31	1.54	1.87	43	5.48	58	87	57	1	0	3	1
	WEST PALM BEACH	90	75	96	73	83	9	1.80	0.95	1.18	2.58	37	7.06	54	91	57	5	0	3	2
GA	ATHENS	75	46	78	37	60	-1	1.16	0.48	0.84	6.76	106	24.59	163	82	31	0	0	3	1
	ATLANTA	71	47	75	41	59	-3	1.11	0.37	0.55	8.85	129	27.57	173	78	36	0	0	3	1
	AUGUSTA	78	48	84	40	63	1	1.28	0.63	1.12	6.68	111	18.48	132	93	36	0	0	3	1
	COLUMBUS	77	51	81	46	64	1	1.52	0.67	0.95	6.58	84	24.02	140	79	36	0	0	2	2
	MACON	78	47	84	38	62	-1	0.68	0.00	0.67	6.92	106	21.16	138	88	37	0	0	2	1
	SAVANNAH	80	56	85	47	68	3	1.16	0.43	0.94	6.98	124	13.32	109	93	49	0	0	3	1
HI	HILO	79	71	83	69	75	3	3.02	0.28	2.41	17.80	85	26.87	67	81	72	0	0	6	1
	HONOLULU	84	72	86	69	78	2	1.61	1.49	1.61	6.43	259	8.45	124	77	48	0	0	1	1
	KAHULUI	82	70	85	68	76	2	0.61	0.24	0.38	3.98	113	7.35	88	83	73	0	0	2	0
	LIHUE	79	71	81	67	75	1	0.65	0.16	0.55	8.38	136	10.80	82	84	74	0	0	2	1
ID	BOISE	59	35	69	28	47	-4	0.02	-0.26	0.02	2.00	95	5.52	125	65	22	0	2	1	0
	LEWISTON	61	36	70	27	49	-3	0.06	-0.25	0.06	1.24	65	5.20	135	65	22	0	4	1	0
	POCATELLO	50	24	63	19	37	-8	0.63	0.38	0.63	3.07	162	4.89	124	77	23	0	7	1	1
IL	CHICAGO/O_HARE	48	33	66	27	41	-8	0.56	-0.22	0.31	4.59	103	8.10	100	79	40	0	3	4	0
	MOLINE	51	30	69	24	40	-11	0.96	0.15	0.51	3.74	76	6.69	82	86	42	0	5	4	1
	PEORIA	48	30	64	27	39	-13	0.72	-0.11	0.28	3.99	81	9.27	108	87	43	0	6	4	0
	ROCKFORD	49	30	65	23	39	-10	0.68	-0.12	0.39	5.59	129	8.79	122	88	41	0	4	4	0
	SPRINGFIELD	50	31	63	26	40	-13	0.68	-0.13	0.39	4.25	92	11.52	139	90	48	0	6	4	0
IN	EVANSVILLE	56	35	62	28	46	-10	0.30	-0.69	0.16	7.75	115	17.19	131	84	36	0	4	2	0
	FORT WAYNE	48	30	63	22	39	-11	0.57	-0.26	0.40	4.95	102	11.18	121	91	44	0	6	4	0
	INDIANAPOLIS	51	33	60	24	42	-11	0.31	-0.56	0.20	5.50	95	14.77	137	91	46	0	4	5	0
	SOUTH BEND	48	30	64	22	39	-10	0.59	-0.18	0.43	4.05	94	10.18	118	88	42	0	6	4	0
IA	BURLINGTON	49	29	67	25	39	-15	0.77	-0.08	0.35	3.19	66	5.05	64	86	44	0	6	3	0
	CEDAR RAPIDS	48	24	64	15	36	-13	0.45	-0.28	0.24	3.33	88	4.39	73	97	46	0	7	4	0
	DES MOINES	47	28	65	23	37	-14	1.32	0.42	0.93	5.33	123	7.19	107	90	46	0	6	4	1
	DUBUQUE	46	26	60	19	36	-12	0.54	-0.32	0.51	4.53	101	7.26	101	91	48	0	6	2	1
	SIOUX CITY	48	25	75	15	37	-13	0.23	-0.45	0.23	3.59	97	4.67	93	86	37	0	6	1	0
	WATERLOO	48	26	67	19	37	-12	0.89	-0.01	0.89	4.23	103	6.06	100	83	40	0	5	1	1
KS	CONCORDIA	56	29	72	22	43	-10	0.13	-0.40	0.13	1.42	42	2.85	59	74	29	0	5	1	0
	DODGE CITY	59	28	73	23	44	-10	0.17	-0.23	0.17	1.13	43	3.15	80	82	29	0	6	1	0
	GOODLAND	51	22	72	17	36	-13	0.00	-0.36	0.00	1.18	60	1.89	65	83	31	0	6	0	0
	TOPEKA	55	32	66	28	44	-11	1.42	0.62	0.79	4.56	103	7.09	106	80	37	0	4	3	1
	WICHITA	59	32	74	27	46	-10	0.60	0.04	0.41	3.43	84	7.84	127	81	35	0	3	2	0
KY	JACKSON	59	37	74	30	48	-9	1.66	0.83	1.03	11.57	194	22.03	169	94	39	0	3	5	1
	LEXINGTON	55	35	62	25	45	-10	2.26	1.48	1.06	7.78	127	16.46	131	96	43	0	3	3	2

Based on 1981-2010 normals

***** Not Available**

Weather Data for the Week Ending April 18, 2020

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	LOUISVILLE	58	38	63	30	48	-10	2.04	1.14	0.92	7.13	110	14.77	114	85	34	0	2	3	2
LA	BATON ROUGE	76	53	86	43	65	-3	1.32	0.26	1.04	4.13	57	15.52	86	91	50	0	0	3	1
	LAKE CHARLES	75	53	83	45	64	-4	0.06	-0.71	0.04	2.67	48	11.51	80	92	48	0	0	3	0
	NEW ORLEANS	78	62	86	54	70	1	2.61	1.52	2.38	3.83	52	12.25	68	83	49	0	0	2	1
	SHREVEPORT	70	47	81	39	58	-7	1.32	0.37	1.15	7.75	116	22.17	140	90	49	0	0	3	1
ME	CARIBOU	45	27	50	21	36	-3	0.74	0.09	0.74	5.06	124	10.38	114	78	37	0	5	1	1
	PORTLAND	52	34	59	29	43	-1	1.37	0.35	1.24	7.95	115	14.62	107	71	33	0	5	2	1
MD	BALTIMORE	61	37	78	32	49	-4	2.42	1.73	1.93	5.79	99	12.01	101	85	33	0	1	5	1
MA	BOSTON	53	38	60	32	45	-3	1.28	0.40	0.62	6.56	97	11.32	84	81	36	0	1	3	2
	WORCESTER	50	34	60	28	42	-4	2.22	1.24	1.59	8.45	124	13.77	101	84	40	0	4	3	2
MI	ALPENA	47	24	58	19	35	-6	0.51	-0.09	0.27	3.55	107	6.55	103	91	38	0	7	2	0
	GRAND RAPIDS	46	30	63	25	38	-10	0.38	-0.44	0.10	4.87	111	9.17	110	95	46	0	6	6	0
	HOUGHTON LAKE	45	29	57	23	37	-6	0.21	-0.40	0.16	3.31	97	5.74	93	85	40	0	6	2	0
	LANSING	47	29	63	22	38	-10	0.24	-0.51	0.13	3.90	100	9.14	129	89	42	0	6	5	0
	MUSKEGON	46	33	64	28	40	-7	0.51	-0.18	0.29	4.91	123	8.61	108	83	44	0	5	3	0
	TRAVERSE CITY	47	28	58	19	38	-5	0.29	-0.14	0.21	2.78	118	4.44	94	84	37	0	6	3	0
MN	DULUTH	39	20	55	14	29	-10	0.00	-0.59	0.00	2.22	78	3.98	85	68	34	0	6	0	0
	INT_L FALLS	38	17	54	11	28	-12	0.01	-0.33	0.01	1.48	82	3.03	100	78	30	0	7	1	0
	MINNEAPOLIS	44	26	67	19	35	-12	0.27	-0.34	0.21	2.96	88	4.58	89	75	35	0	6	3	0
	ROCHESTER	40	20	64	8	30	-17	0.80	0.02	0.80	3.88	105	6.03	110	82	50	0	7	1	1
	ST. CLOUD	42	21	61	13	32	-13	0.06	-0.55	0.06	2.53	85	3.80	89	79	34	0	6	1	0
MS	JACKSON	70	46	83	36	58	-6	0.69	-0.54	0.67	5.44	66	28.74	158	87	47	0	0	2	1
	MERIDIAN	74	46	84	36	60	-3	1.78	0.63	1.77	9.06	107	28.39	146	88	43	0	0	2	1
	TUPELO	67	43	77	35	55	-7	1.80	0.70	1.64	8.35	109	27.69	160	86	41	0	0	3	1
MO	COLUMBIA	55	33	67	28	44	-11	0.64	-0.39	0.37	7.40	137	17.97	187	79	40	0	3	2	0
	KANSAS CITY	53	30	63	27	41	-13	1.16	0.33	0.47	6.13	142	9.55	137	86	35	0	6	3	0
	SAINT LOUIS	54	35	63	31	45	-12	0.82	-0.01	0.53	4.86	89	14.15	139	74	35	0	1	3	1
	SPRINGFIELD	57	32	69	27	44	-11	0.87	-0.09	0.79	9.51	159	18.43	167	86	44	0	4	2	1
MT	BILLINGS	42	23	62	15	33	-13	0.11	-0.28	0.06	1.46	72	2.35	77	82	37	0	6	2	0
	BUTTE	40	15	56	8	28	-11	0.22	-0.11	0.22	0.85	57	1.44	58	82	33	0	7	1	0
	CUT BANK	42	20	59	2	31	-10	0.06	-0.12	0.03	0.26	28	0.48	33	87	40	0	6	2	0
	GLASGOW	46	19	66	11	33	-12	0.09	-0.11	0.08	0.56	64	1.39	86	75	24	0	7	2	0
	GREAT FALLS	41	19	60	-3	30	-13	0.19	-0.14	0.13	1.52	87	2.02	73	80	44	0	6	3	0
	HAVRE	45	20	65	9	32	-12	0.11	-0.07	0.08	1.01	102	1.74	101	87	35	0	6	3	0
	MISSOULA	50	25	64	18	38	-8	0.80	0.52	0.72	1.80	103	3.74	111	80	29	0	6	2	1
NE	GRAND ISLAND	57	24	84	17	40	-10	0.44	-0.12	0.36	3.34	106	4.65	105	81	36	0	6	2	0
	LINCOLN	52	24	74	16	38	-13	0.53	-0.07	0.53	2.27	68	3.75	77	83	32	0	6	1	1
	NORFOLK	49	23	75	16	36	-14	0.18	-0.43	0.12	3.25	100	4.40	94	83	36	0	6	3	0
	NORTH PLATTE	49	17	72	12	33	-14	0.31	-0.25	0.19	1.81	79	2.42	75	86	38	0	7	2	0
	OMAHA	51	27	74	21	39	-12	0.43	-0.22	0.38	2.46	68	3.95	75	89	35	0	6	3	0
	SCOTTSBLUFF	47	16	67	9	31	-15	0.30	-0.15	0.20	1.44	69	1.80	57	87	35	0	7	3	0
	VALENTINE	45	19	70	9	32	-15	0.32	-0.20	0.29	1.58	77	2.21	77	83	37	0	6	2	0
NV	ELY	53	23	61	12	38	-4	0.01	-0.21	0.01	2.46	158	3.05	99	80	21	0	7	1	0
	LAS VEGAS	75	56	79	50	65	-1	0.12	0.09	0.11	1.84	307	2.15	110	45	16	0	0	2	0
	RENO	63	39	71	31	51	1	0.00	-0.11	0.00	1.26	118	1.39	43	56	14	0	1	0	0
	WINNEMUCCA	62	26	69	11	44	-2	0.00	-0.22	0.00	0.92	65	2.01	67	47	13	0	6	0	0
NH	CONCORD	52	30	60	22	41	-4	0.90	0.10	0.83	5.54	104	9.72	91	79	33	0	5	3	1
NJ	NEWARK	57	40	69	32	48	-5	1.98	0.99	1.68	6.26	92	10.49	79	82	32	0	1	4	1
NM	ALBUQUERQUE	63	37	73	29	50	-6	0.47	0.31	0.46	0.79	82	1.71	90	64	20	0	1	2	0
NY	ALBANY	53	34	64	27	44	-4	0.96	0.22	0.65	4.68	91	9.43	94	77	31	0	4	4	1
	BINGHAMTON	47	29	64	24	38	-7	1.19	0.38	0.55	4.37	86	16.94	171	92	39	0	6	4	1
	BUFFALO	48	32	66	25	40	-6	1.16	0.46	0.81	5.06	106	10.32	98	87	44	0	5	5	1
	ROCHESTER	50	31	67	24	40	-6	0.55	-0.10	0.34	3.05	73	7.99	93	89	38	0	4	6	0
	SYRACUSE	51	32	71	29	42	-5	0.61	-0.15	0.19	4.94	100	10.47	109	87	34	0	4	6	0
NC	ASHEVILLE	65	39	73	32	53	-3	3.54	2.81	2.18	6.91	119	19.28	144	84	36	0	1	3	2
	CHARLOTTE	71	45	80	36	58	-1	2.15	1.48	1.47	5.84	100	16.52	130	85	36	0	0	3	2
	GREENSBORO	67	43	77	36	55	-4	0.91	0.10	0.59	3.78	64	16.13	135	89	35	0	0	3	1
	HATTERAS	72	53	77	44	63	3	1.13	0.31	0.60	7.57	107	16.71	102	89	51	0	0	3	1
	RALEIGH	71	43	81	34	57	-3	0.93	0.28	0.41	3.64	61	13.74	108	89	36	0	0	4	0
	WILMINGTON	74	50	82	42	62	-1	1.45	0.84	1.21	6.64	112	15.85	118	89	43	0	0	2	1
ND	BISMARCK	43	20	60	12	32	-12	0.05	-0.23	0.04	0.77	48	1.31	50	76	29	0	7	2	0
	DICKINSON	41	15	58	5	28	-14	0.01	-0.35	0.01	0.19	12	0.48	21	78	32	0	7	1	0
	FARGO	40	20	58	15	30	-14	0.04	-0.25	0.04	1.06	52	2.43	72	88	44	0	7	1	0
	GRAND FORKS	38	17	56	4	28	-14	0.07	-0.15	0.04	0.89	57	1.85	70	86	44	0	7	3	0
	JAMESTOWN	40	20	57	16	30	-13	0.00	-0.25	0.00	0.16	10	0.39	16	84	38	0	7	0	0
OH	AKRON-CANTON	51	33	62	26	42	-7	1.01	0.17	0.37	7.87	154	13.88	137	82	43	0	4	4	0
	CINCINNATI	55	34	65	25	45	-10	1.69	0.83	0.71	7.92	127	15.69	129	84	39	0	3	4	2
	CLEVELAND	51	33	67	27	42	-7	0.96	0.13	0.43	8.00	157	13.36	131	84	40	0	4	5	0
	COLUMBUS	53	34	63	26	44	-9	1.40	0.61	0.54	11.03	219	18.11	180	83	40	0	3	4	2
	DAYTON	53	33	66	25	43	-8	0.73	-0.24	0.29	7.95	139	14.57	136	84	41	0	3	4	0
	MANSFIELD	51	33	64	24	42	-7	0.88	-0.12	0.42	6.70	113	13.22	118	89	42	0	4	4	0
	TOLEDO	50	32	66	26	41	-9	0.64	-0.13	0.35	5.59	127	10.45	122	83	40	0	5	4	0
	YOUNGSTOWN	49	31	64	24	40	-8	1.44	0.65	0.56	7.63	153	14.02	143	88	42	0	4	5	1
OK	OKLAHOMA CITY	59	33	71	28	46	-15	0.35	-0.30	0.30	6.11	130	9.96	128	94	45	0	3	3	0

Based on 1981-2010 normals

***** Not Available**

Weather Data for the Week Ending April 18, 2020

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 MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TULSA	61	36	71	30	48	-12	0.28	-0.56	0.20	6.67	126	13.06	147	89	40	0	1	4	0
OR	ASTORIA	60	38	69	32	49	1	0.18	-1.04	0.10	5.74	52	31.20	109	97	48	0	1	3	0
	BURNS	59	23	67	18	41	-2	0.00	-0.23	0.00	1.51	89	3.75	94	71	17	0	6	0	0
	EUGENE	67	38	75	32	53	3	0.05	-0.71	0.05	3.49	48	11.75	59	87	35	0	1	1	0
	MEDFORD	72	40	78	35	56	3	0.00	-0.32	0.00	0.99	38	5.12	72	70	19	0	0	0	0
	PENDLETON	65	35	73	28	50	-1	0.00	-0.28	0.00	0.94	47	5.11	111	66	16	0	3	0	0
	PORTLAND	67	43	76	37	55	3	0.09	-0.55	0.09	2.82	52	12.28	87	80	27	0	0	1	0
	SALEM	65	38	77	34	52	2	0.12	-0.53	0.12	3.67	63	13.80	83	83	29	0	0	1	0
PA	ALLENTOWN	58	36	73	30	47	-3	1.42	0.61	0.95	5.19	94	10.83	96	80	32	0	4	5	1
	ERIE	49	35	66	28	42	-5	0.90	0.11	0.44	5.25	104	11.02	106	86	41	0	2	6	0
	MIDDLETOWN	56	35	72	29	45	-7	1.78	1.11	1.26	6.53	126	12.15	115	90	38	0	2	6	1
	PHILADELPHIA	58	40	72	34	49	-5	1.78	0.97	1.56	6.11	102	11.38	97	77	33	0	0	4	1
	PITTSBURGH	52	33	69	28	42	-8	1.37	0.64	0.63	7.03	146	13.55	136	89	37	0	4	5	1
	WILKES-BARRE	53	33	70	28	43	-5	0.75	-0.04	0.37	4.31	95	9.70	107	84	35	0	5	5	0
	WILLIAMSPORT	54	31	68	24	43	-7	1.65	0.90	0.87	5.60	113	10.85	108	86	34	0	5	5	2
RI	PROVIDENCE	54	37	61	32	46	-4	2.37	1.35	1.55	8.78	112	13.11	87	86	41	0	1	4	2
SC	BEAUFORT	78	56	85	47	67	1	1.06	0.43	0.77	1.30	27	2.84	25	91	50	0	0	2	1
	CHARLESTON	76	53	82	45	65	0	3.98	3.31	2.85	7.89	145	14.46	119	93	48	0	0	3	2
	COLUMBIA	75	48	83	42	62	-1	1.36	0.80	0.69	5.59	106	15.17	120	88	36	0	0	2	2
	GREENVILLE	71	42	77	35	57	-4	2.69	1.95	1.54	7.41	113	23.77	164	87	35	0	0	3	2
SD	ABERDEEN	45	19	63	15	32	-12	0.00	-0.40	0.00	0.55	26	1.28	40	84	29	0	7	0	0
	HURON	43	22	64	19	33	-14	0.13	-0.41	0.13	1.23	44	2.54	65	92	40	0	7	1	0
	RAPID CITY	41	16	62	5	28	-16	0.07	-0.34	0.06	1.07	58	2.34	87	83	44	0	7	2	0
	SIOUX FALLS	43	22	70	15	33	-14	0.20	-0.53	0.20	3.88	110	4.87	103	85	43	0	6	1	0
TN	BRISTOL	62	37	72	31	50	-5	2.70	1.93	2.34	9.68	179	22.28	180	86	37	0	2	2	1
	CHATTANOOGA	67	44	76	37	56	-5	1.21	0.33	1.05	9.99	134	26.90	154	89	36	0	0	2	1
	KNOXVILLE	64	40	74	34	52	-7	4.33	3.43	3.56	11.95	177	30.37	196	86	36	0	0	3	1
	MEMPHIS	64	43	73	34	53	-10	2.89	1.57	2.59	12.82	152	25.70	151	90	44	0	0	3	1
	NASHVILLE	64	40	77	30	52	-7	2.92	2.06	2.22	9.85	156	21.45	151	84	37	0	1	4	1
TX	ABILENE	66	39	80	33	53	-12	0.25	-0.11	0.25	5.50	211	9.39	185	87	44	0	0	1	0
	AMARILLO	59	30	79	25	44	-12	0.12	-0.18	0.09	1.97	90	2.64	75	83	32	0	5	2	0
	AUSTIN	71	48	87	41	60	-9	0.10	-0.35	0.05	7.65	197	12.81	156	88	45	0	0	3	0
	BEAUMONT	76	54	89	45	65	-3	1.11	0.41	0.99	2.25	42	9.48	66	91	47	0	0	2	1
	BROWNSVILLE	85	67	103	62	76	1	0.02	-0.37	0.02	0.46	21	1.11	24	89	52	3	0	1	0
	CORPUS CHRISTI	80	59	97	51	69	-3	0.11	-0.32	0.11	1.19	40	2.36	36	85	50	1	0	1	0
	DEL RIO	78	55	87	48	67	-5	0.00	-0.40	0.00	4.52	234	5.50	153	79	37	0	0	0	0
	EL PASO	78	51	83	45	64	0	0.00	-0.06	0.00	2.08	452	3.17	228	45	12	0	0	0	0
	FORT WORTH	67	42	82	38	55	-11	0.50	-0.12	0.50	7.73	152	16.61	167	84	43	0	0	1	1
	GALVESTON	77	62	92	53	69	-1	0.12	-0.65	0.08	0.94	18	10.37	86	85	52	1	0	3	0
	HOUSTON	77	54	92	47	66	-4	1.15	0.41	1.14	6.62	126	12.15	102	87	45	1	0	2	1
	LUBBOCK	67	35	84	30	51	-9	0.02	-0.29	0.02	2.45	131	3.37	101	79	29	0	2	1	0
	MIDLAND	70	43	84	36	57	-7	0.00	-0.15	0.00	3.48	350	5.37	232	69	30	0	0	0	0
	SAN ANGELO	70	42	80	32	56	-10	1.03	0.72	1.03	4.86	211	7.82	167	86	42	0	1	1	1
	SAN ANTONIO	72	51	86	45	62	-8	0.04	-0.42	0.03	4.27	125	7.21	102	82	46	0	0	2	0
	VICTORIA	79	55	94	47	67	-3	0.30	-0.34	0.23	2.27	52	5.49	60	84	44	1	0	2	0
	WACO	68	45	83	37	56	-10	1.57	0.99	1.57	9.88	216	19.04	202	87	46	0	0	1	1
	WICHITA FALLS	64	36	77	31	50	-12	0.08	-0.49	0.08	5.41	154	10.31	159	93	46	0	1	1	0
UT	SALT LAKE CITY	54	36	64	30	45	-5	0.23	-0.22	0.20	1.83	61	4.91	88	68	22	0	1	2	0
VT	BURLINGTON	51	34	64	30	43	-2	0.26	-0.41	0.25	3.31	85	8.12	104	71	28	0	3	2	0
VA	LYNCHBURG	66	38	77	31	52	-3	3.68	2.93	3.01	6.69	120	15.91	136	87	31	0	1	5	1
	NORFOLK	67	46	82	36	57	-1	1.03	0.23	0.60	6.98	122	15.13	123	81	43	0	0	4	1
	RICHMOND	68	42	83	37	55	-3	1.67	0.95	1.38	4.76	79	12.11	102	87	33	0	0	5	1
	ROANOKE	64	39	73	35	52	-5	2.87	2.09	1.66	6.32	116	13.78	121	86	34	0	0	5	2
	WASH/DULLES	61	36	77	29	48	-6	2.44	1.68	1.75	4.97	91	11.72	107	90	34	0	2	5	1
WA	OLYMPIA	65	34	73	24	50	2	0.01	-0.81	0.01	3.50	46	22.05	105	90	28	0	4	1	0
	QUILLAYUTE	59	36	64	28	47	1	0.01	-1.85	0.01	7.74	48	41.94	105	96	47	0	2	1	0
	SEATTLE-TACOMA	64	44	70	38	54	4	0.05	-0.59	0.05	3.33	61	16.95	115	75	31	0	0	1	0
	SPOKANE	56	35	63	24	46	-1	0.05	-0.25	0.05	0.96	39	5.17	90	62	23	0	2	1	0
	YAKIMA	69	35	77	26	52	3	0.00	-0.13	0.00	0.34	35	1.60	54	60	16	0	3	0	0
WV	BECKLEY	56	33	66	26	44	-8	1.74	0.97	0.86	8.50	154	16.78	150	94	39	0	5	4	1
	CHARLESTON	59	36	70	31	47	-9	1.58	0.88	0.64	7.15	124	15.86	132	89	36	0	4	5	1
	ELKINS	56	30	71	26	43	-6	2.15	1.29	0.78	6.88	111	16.27	129	85	37	0	6	6	2
	HUNTINGTON	58	36	69	28	47	-9	1.58	0.81	0.74	6.64	113	14.94	124	92	40	0	3	5	1
WI	EAU CLAIRE	43	24	66	17	33	-13	0.49	-0.14	0.49	3.00	92	3.80	74	81	38	0	7	1	0
	GREEN BAY	44	29	62	23	37	-7	0.65	0.00	0.58	5.12	150	7.64	134	79	40	0	7	3	1
	LA CROSSE	47	28	71	22	38	-11	0.62	-0.18	0.61	4.18	106	6.13	99	75	34	0	5	2	1
	MADISON	46	27	60	21	37	-10	0.51	-0.31	0.49	4.50	107	7.31	105	77	40	0	7	2	0
	MILWAUKEE	46	32	60	26	39	-6	0.15	-0.72	0.12	4.29	96	7.32	92	76	37	0	3	3	0
WY	CASPER	39	16	60	7	28	-15	0.32	0.03	0.25	1.89	123	3.24	122	87	41	0	7	3	0
	CHEYENNE	35	13	53	5	24	-18	0.63	0.20	0.47	1.80	89	2.47	84	84	44	0	7	4	0
	LANDER	37	16	56	9	26	-17	0.98	0.53	0.39	2.39	107	4.09	124	86	42	0	7	4	0
	SHERIDAN	41	15	61	2	28	-15	0.26	-0.10	0.17	1.54	84	3.38	115	83	44	0	7	3	0

Based on 1981-2010 normals

***** Not Available**

National Agricultural Summary

April 13 - 19, 2020

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Large parts of the Mississippi Valley, the Southeast, and New England received above-average precipitation. Some areas in Alabama and Tennessee received at least 4 inches of rain. Most of the western half of the nation received little or no rain, except small pockets in the Rocky Mountains and Southwest. Temperatures were below normal for most of the nation. Much of the Corn Belt, the Great Plains, and the Rocky Mountain region experienced temperatures 10°F or more below normal. In contrast, Florida and the Pacific Coast were warmer than normal, with most of Florida seeing temperatures 5°F or more above average.

Corn: By April 19, producers had planted 7 percent of the nation's corn crop, 2 percentage points ahead of last year but 2 points behind the 5-year average. Texas and North Carolina were the furthest advanced in planting progress, with 64 and 49 percent planted, respectively.

Soybeans: Two percent of the nation's soybean crop was planted by April 19, one percentage point ahead of both last year and the 5-year average. The Mississippi Delta was the most advanced in planting.

Winter Wheat: By April 19, fourteen percent of the nation's winter wheat crop was headed, 6 percentage points ahead of last year but 1 point behind the 5-year average. On April 19, fifty-seven percent of the 2020 winter wheat crop was reported in good to excellent condition, 5 percentage points below both the previous week and last year. In Kansas, the largest winter wheat-producing state, 46 percent of the winter wheat crop was rated in good to excellent condition.

Cotton: Nationwide, 11 percent of the cotton crop had been planted by April 19, three percentage points ahead of last year and 2 points ahead of the 5-year average. Planting progress was furthest advanced in Arizona at 45 percent planted, 8 percentage points ahead of last year but 2 points behind the 5-year average.

Sorghum: Nineteen percent of the nation's sorghum crop was planted by April 19, two percentage points ahead of the previous year but equal to the 5-year average. Texas producers had planted 64 percent of the intended sorghum acreage by week's end, 8 percentage points ahead of both last year and the 5-year average.

Rice: By April 19, producers had seeded 30 percent of the 2020 rice crop, equal to the previous year but 13 percentage points behind the 5-year average. Texas and Louisiana had the largest percentages of acreage planted—82 and 80 percent, respectively. By April 19, eighteen percent of the nation's rice crop had emerged, 1 percentage point ahead of last year but 4 points behind the 5-year average.

Small Grains: Nationally, oat producers had seeded 39 percent of this year's crop by April 19, five percentage points ahead of the previous year but 8 points behind the 5-year average. Oat planting progress was behind the 5-year average in six of the nine estimating states. Planting had not yet begun in North Dakota by week's end. Twenty-six percent of the nation's oat crop was emerged by April 19, one percentage point behind the previous year and 4 points behind the 5-year average.

Sixteen percent of the nation's barley was planted by April 19, two percentage points ahead of last year but 8 points behind the 5-year average. Washington and Idaho had the largest percentages of acreage planted—70 and 42 percent, respectively. Planting had not yet begun in North Dakota. Three percent of the nation's barley crop was emerged by April 19, two percentage points ahead of the previous year but 1 point behind the 5-year average.

By April 19, seven percent of the spring wheat crop was seeded, 3 percentage points ahead of last year but 11 points behind the 5-year average. Washington and Idaho had the largest percentages of acreage planted—78 and 54 percent, respectively.

Other Crops: Nationally, peanut producers had planted 2 percent of the 2020 peanut acreage by April 19, one percentage point ahead of last year but equal to the 5-year average. Producers in Florida had planted 13 percent of the 2020 intended acreage by week's end, 1 percentage point ahead of last year and 5 points ahead of the 5-year average.

By April 19, eighteen percent of the sugarbeet crop was planted, 6 percentage points ahead of last year but 12 points behind the 5-year average. Idaho and Michigan had the largest percentages of acreage planted—58 and 41 percent, respectively.

Crop Progress and Condition

Week Ending April 19, 2020

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

Corn Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
CO	1	0	4	2
IL	1	1	8	11
IN	1	1	4	3
IA	3	0	2	7
KS	14	6	13	20
KY	14	12	25	15
MI	0	0	0	0
MN	0	0	1	7
MO	13	4	11	25
NE	1	0	2	5
NC	25	28	49	41
ND	0	0	0	1
OH	1	0	0	2
PA	0	0	0	2
SD	0	0	0	2
TN	22	12	23	25
TX	58	63	64	57
WI	1	0	1	1
18 Sts	5	3	7	9

These 18 States planted 91% of last year's corn acreage.

Soybeans Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AR	6	1	8	15
IL	0	NA	2	0
IN	0	NA	2	0
IA	0	NA	0	0
KS	0	NA	0	0
KY	1	5	9	0
LA	15	15	24	23
MI	0	NA	0	0
MN	0	NA	0	0
MS	15	5	21	29
MO	0	NA	0	1
NE	0	NA	0	0
NC	0	NA	1	0
ND	0	NA	0	0
OH	0	NA	0	0
SD	0	NA	0	0
TN	1	NA	2	1
WI	0	NA	0	0
18 Sts	1	NA	2	1

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

Cotton Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AL	2	0	5	2
AZ	37	36	45	47
AR	0	0	0	2
CA	29	10	20	35
GA	5	1	5	3
KS	0	0	0	0
LA	0	6	7	5
MS	0	1	4	3
MO	1	0	0	3
NC	0	0	0	0
OK	4	0	0	2
SC	1	0	1	2
TN	1	0	0	0
TX	12	15	17	11
VA	0	0	0	1
15 Sts	8	9	11	9

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

Rice Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AR	23	8	23	45
CA	0	0	0	1
LA	81	75	80	82
MS	18	5	11	38
MO	21	3	8	31
TX	61	79	82	67
6 Sts	30	21	30	43

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

Rice Percent Emerged

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AR	7	0	4	16
CA	0	0	0	0
LA	68	64	72	66
MS	9	0	0	17
MO	3	0	0	4
TX	38	66	71	48
6 Sts	17	15	18	22

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

Peanuts Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AL	1	NA	1	1
FL	12	4	13	8
GA	1	NA	1	1
NC	0	0	0	0
OK	0	NA	0	0
SC	0	NA	1	0
TX	0	NA	0	0
VA	0	NA	0	0
8 Sts	1	NA	2	2

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

Sugarbeets Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
ID	61	46	58	61
MI	10	12	41	11
MN	0	0	2	29
ND	0	0	0	21
4 Sts	12	10	18	30

These 4 States planted 84% of last year's sugarbeet acreage.

Crop Progress and Condition

Week Ending April 19, 2020

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

Winter Wheat Percent Headed

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
AR	34	33	47	43
CA	36	15	30	52
CO	0	0	0	0
ID	0	0	0	1
IL	2	1	2	4
IN	1	0	0	3
KS	0	0	0	6
MI	0	0	0	0
MO	1	0	2	9
MT	0	0	0	0
NE	0	0	0	0
NC	7	15	30	19
OH	0	0	0	0
OK	10	2	28	30
OR	0	0	0	0
SD	0	0	0	0
TX	37	35	53	47
WA	0	0	0	0
18 Sts	8	6	14	15

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

Winter Wheat Condition by Percent

	VP	P	F	G	EX
AR	0	6	51	36	7
CA	0	5	40	45	10
CO	15	16	27	40	2
ID	0	2	28	57	13
IL	4	5	23	47	21
IN	1	4	28	54	13
KS	5	13	36	41	5
MI	2	9	34	48	7
MO	2	7	41	44	6
MT	3	4	29	62	2
NE	2	8	21	61	8
NC	0	4	19	62	15
OH	1	4	22	58	15
OK	2	9	24	62	3
OR	2	5	25	27	41
SD	0	1	30	61	8
TX	2	10	30	49	9
WA	0	3	25	62	10
18 Sts	4	9	30	50	7
Prev Wk	3	7	28	53	9
Prev Yr	2	6	30	48	14

Spring Wheat Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
ID	34	42	54	45
MN	0	0	1	21
MT	7	2	3	17
ND	0	0	0	9
SD	1	6	9	40
WA	24	57	78	49
6 Sts	4	5	7	18

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

Barley Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
ID	39	32	42	51
MN	0	1	2	14
MT	8	3	4	24
ND	0	0	0	6
WA	19	50	70	30
5 Sts	14	12	16	24

These 5 States planted 81% of last year's barley acreage.

Oats Percent Planted

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
IA	39	29	50	53
MN	3	3	10	26
NE	25	33	54	60
ND	0	0	0	7
OH	33	24	34	25
PA	53	19	29	36
SD	2	5	11	37
TX	100	100	100	100
WI	8	9	21	15
9 Sts	34	32	39	47

These 9 States planted 71% of last year's oat acreage.

Oats Percent Emerged

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
IA	3	1	6	13
MN	0	0	0	4
NE	2	4	16	24
ND	0	0	0	0
OH	9	1	7	7
PA	23	8	16	11
SD	0	0	1	9
TX	100	100	100	100
WI	1	1	1	1
9 Sts	27	24	26	30

These 9 States planted 71% of last year's oat acreage.

Barley Percent Emerged

	Prev Year	Prev Week	Apr 19 2020	5-Yr Avg
ID	6	NA	7	14
MN	0	NA	0	1
MT	0	NA	0	2
ND	0	NA	0	0
WA	1	15	30	7
5 Sts	1	NA	3	4

These 5 States planted 81% of last year's barley acreage.

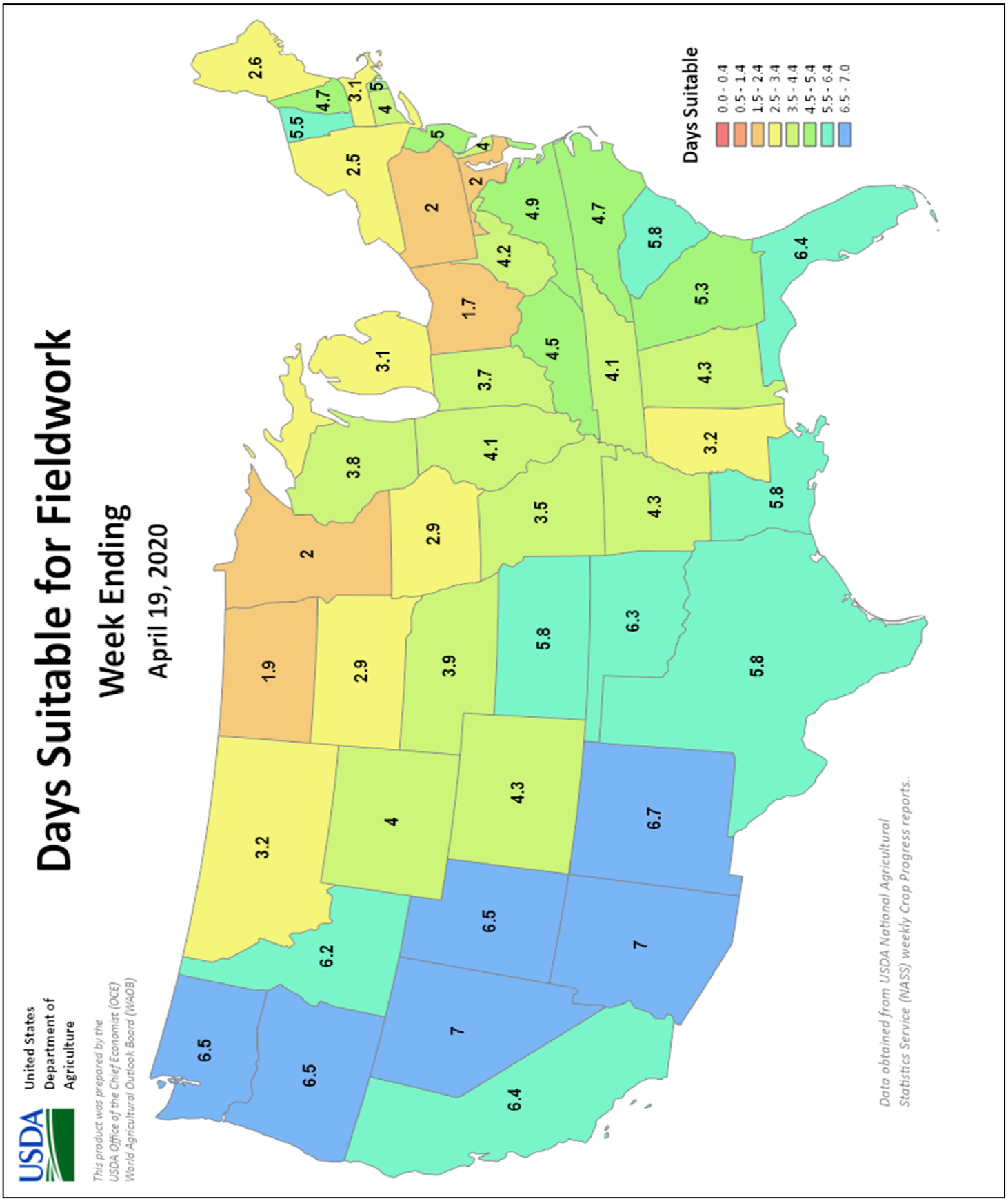
VP - Very Poor; P - Poor; F - Fair; G - Good; EX - Excellent

NA - Not Available; *Revised

Crop Progress and Condition

Week Ending April 19, 2020

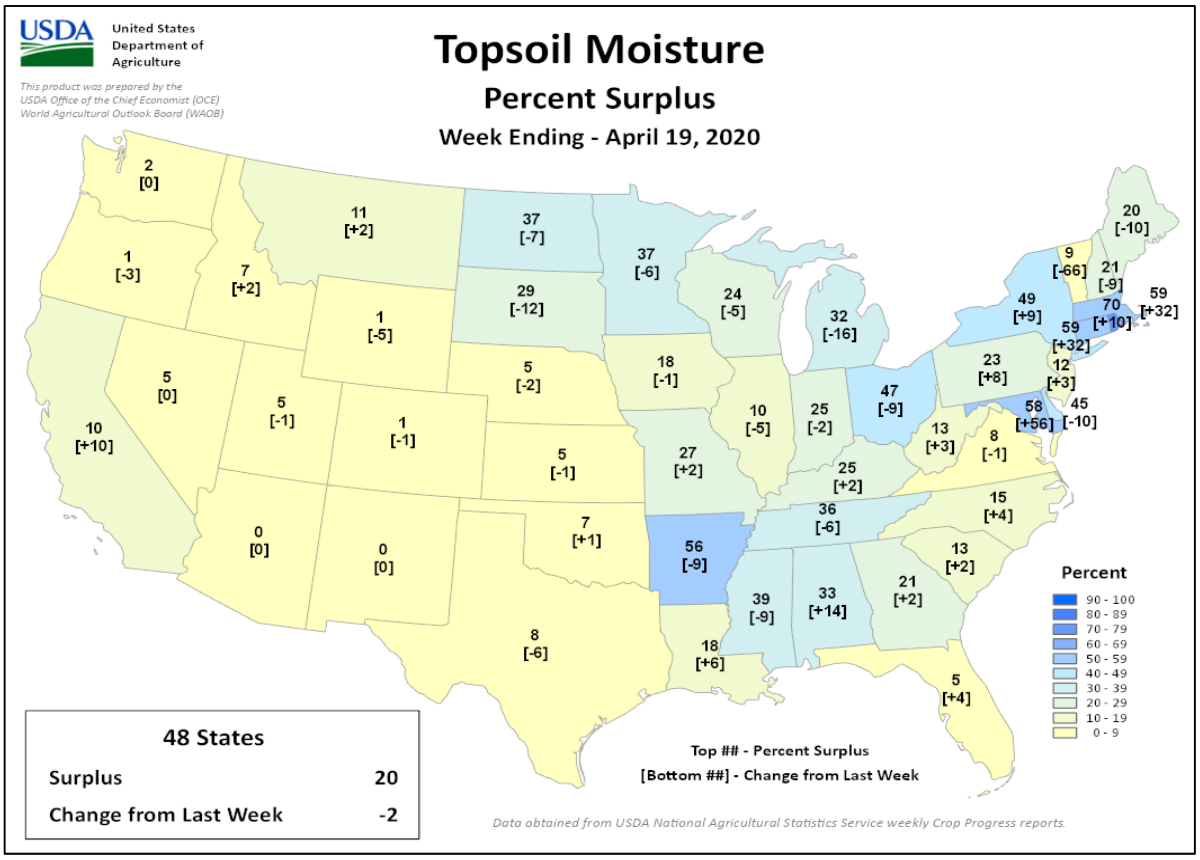
Weekly U.S. Progress and Condition Data provided by USDA/NASS

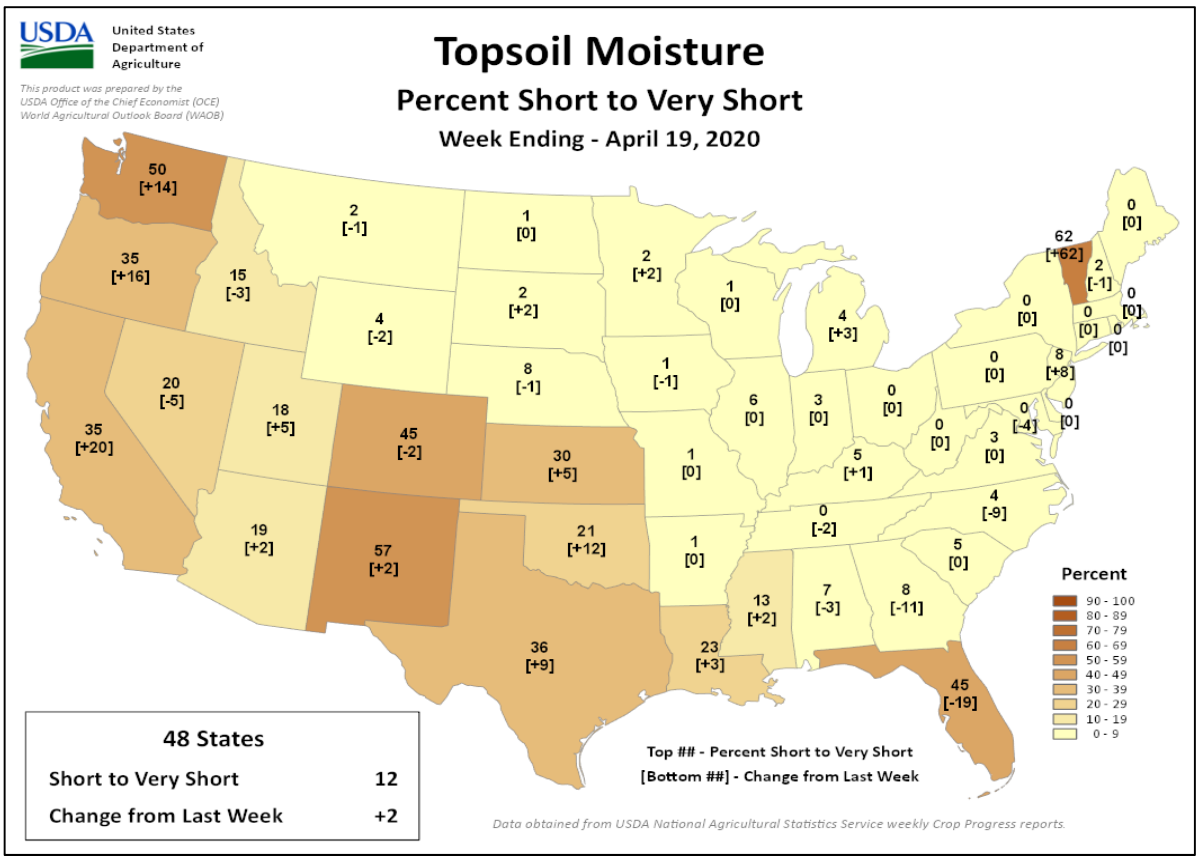


Crop Progress and Condition

Week Ending April 19, 2020

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

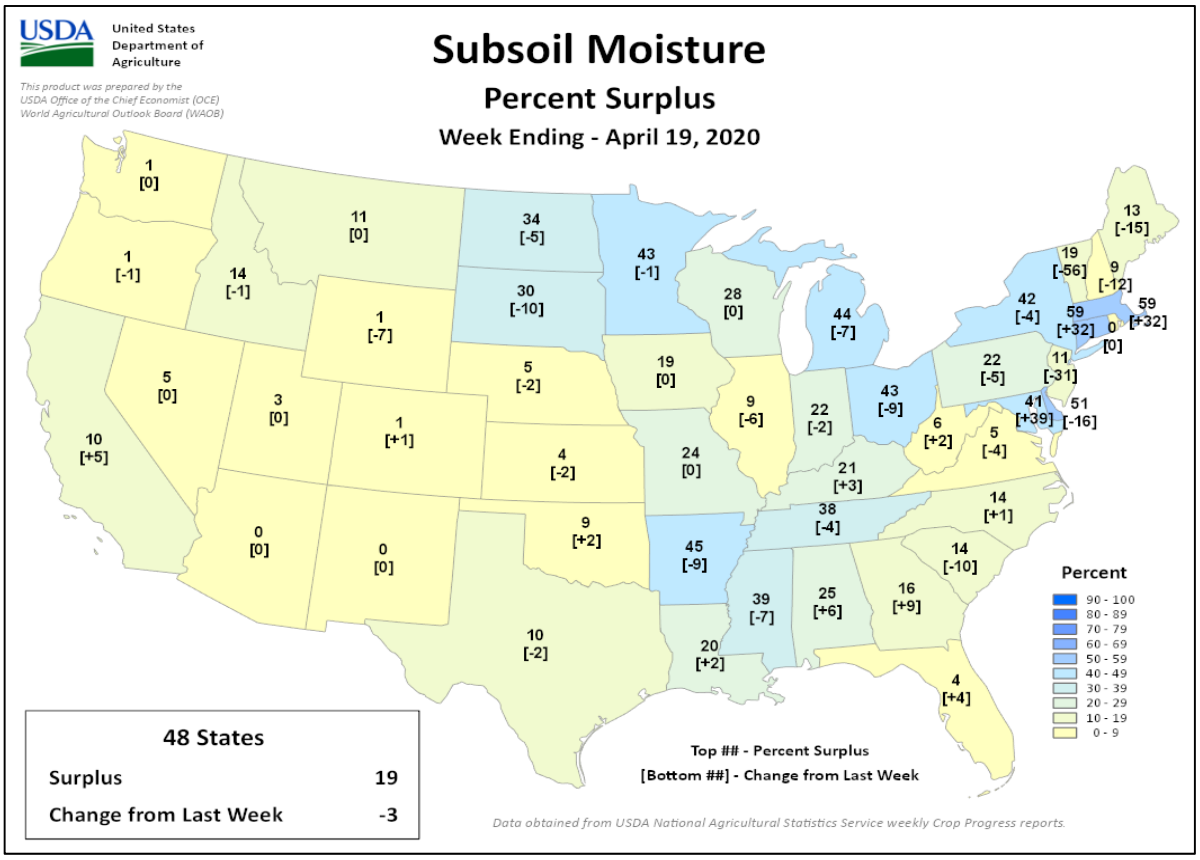


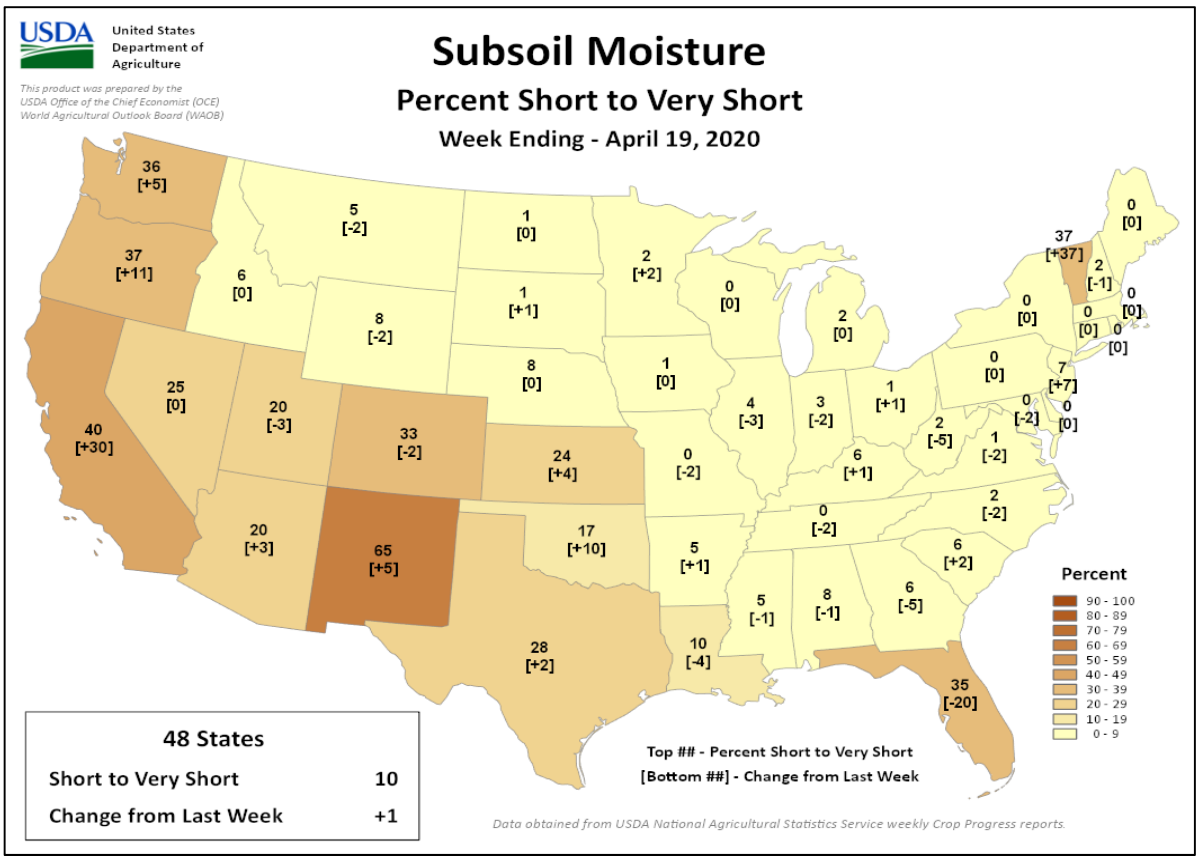


Crop Progress and Condition

Week Ending April 19, 2020

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





International Weather and Crop Summary

April 12-18, 2020

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

HIGHLIGHTS

EUROPE: Acute short-term dryness further reduced soil moisture for vegetative to reproductive winter crops across much of central and northern Europe.

WESTERN FSU: Short-term drought across the Black Sea region reduced soil moisture for vegetative winter wheat, although showers arrived at the end of the period.

MIDDLE EAST: Unsettled weather continued, with another round of moderate to heavy rain in Iran while scattered showers lingered elsewhere.

NORTHWESTERN AFRICA: Showers eased western drought but were largely too late to aid filling to maturing winter grains, while sunny, warm weather benefited wheat and barley in the east after recent timely rain.

EASTERN ASIA: Light to locally heavy showers across eastern China benefited reproductive rapeseed and wheat.

SOUTHEAST ASIA: Rainfall remained concentrated in southern extents of the region, as growers in Thailand, Indochina, and the Philippines prepare for the start of the rainy season.

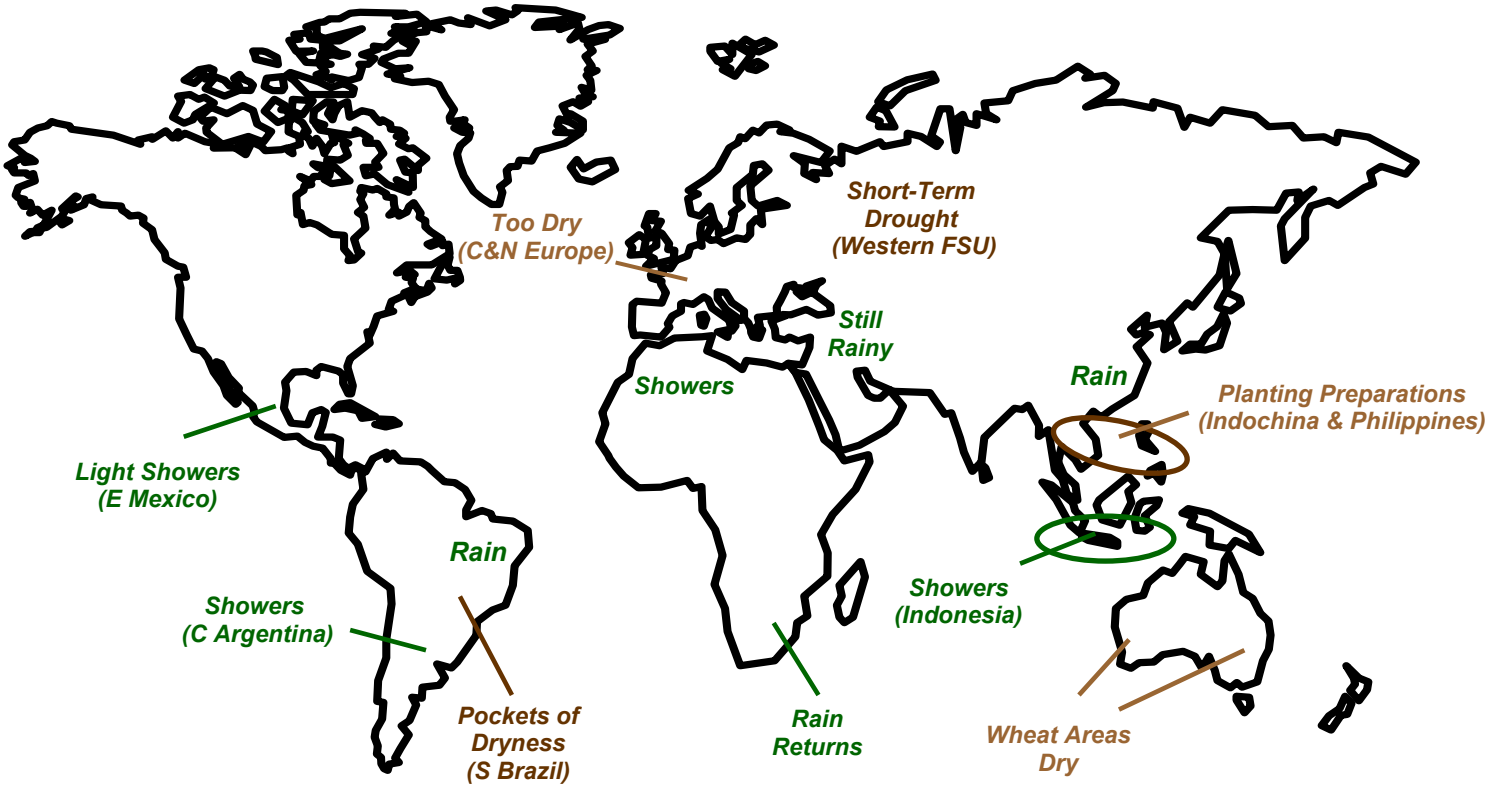
AUSTRALIA: Dry weather overspread the wheat belt.

SOUTH AFRICA: Heavy rain returned to eastern farming areas, increasing moisture for the upcoming winter wheat crop.

ARGENTINA: Showers returned to southern farming areas, favoring immature summer crops and increasing moisture for winter grains.

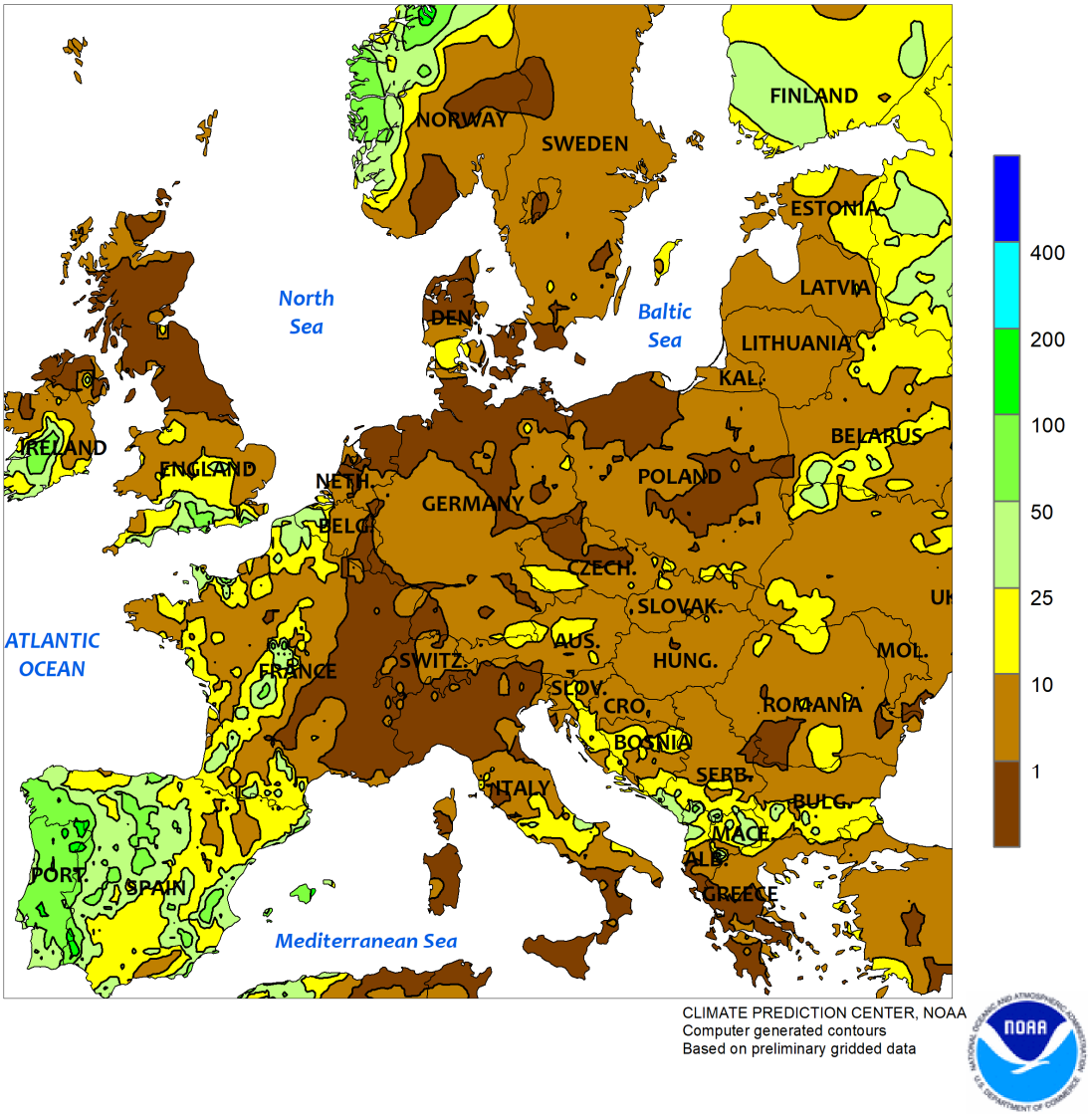
BRAZIL: Pockets of dryness lingered in southern Brazil, while heavier rain benefited corn and cotton farther north.

MEXICO: Eastern farming areas continued to receive widely scattered, generally light showers.



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

EUROPE
Total Precipitation (mm)
April 12 - 18, 2020

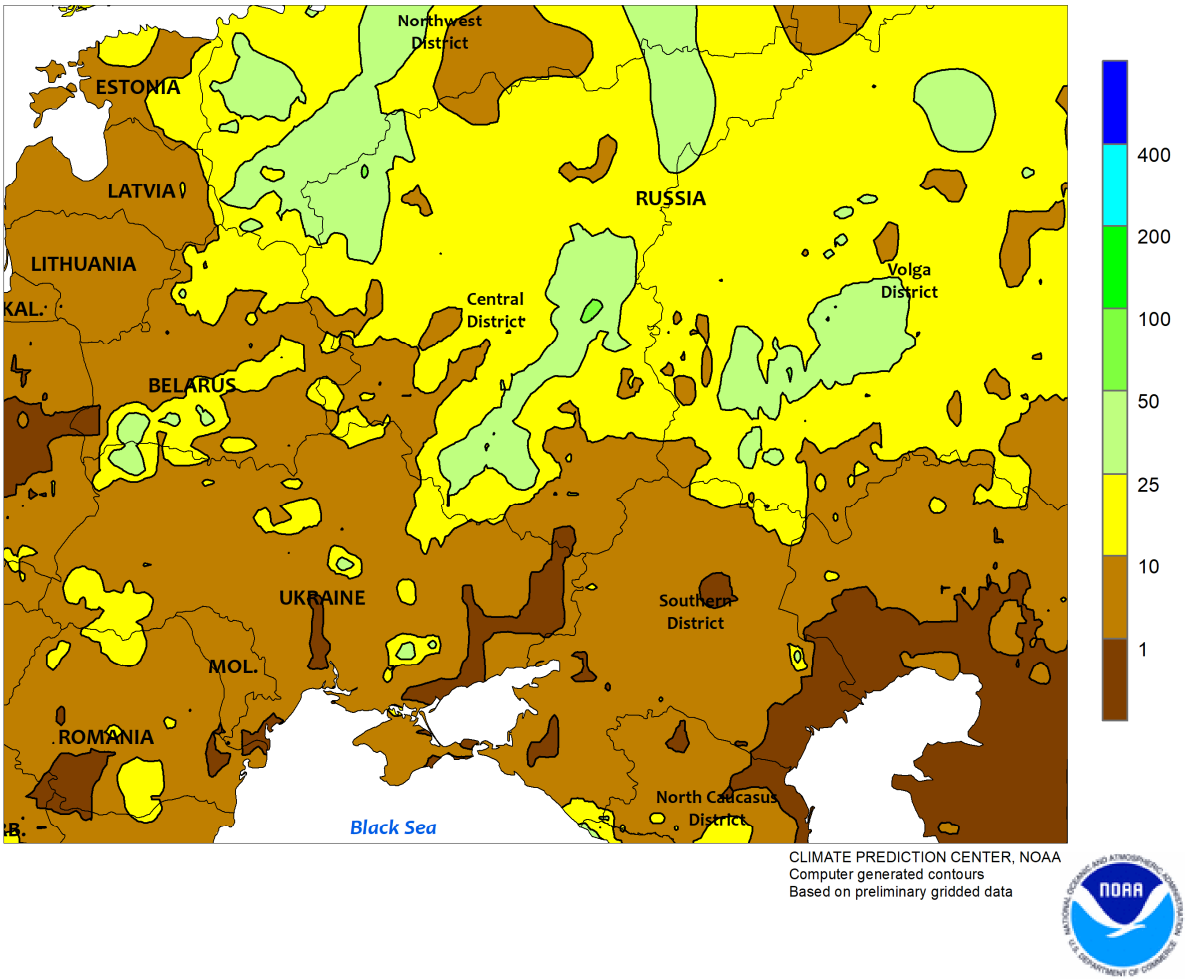


EUROPE

Acute short-term dryness lingered over central and northern Europe, though some showers worked into western portions of the continent toward the end of the week. A broad area of high pressure maintained sunny skies across the northern two thirds of Europe, facilitating seasonal fieldwork but exacerbating short-term dryness. Following a very wet winter, precipitation has become increasingly sparse during the spring; rainfall over the past 30 days has totaled less than 10 mm, with some locales reporting no rain whatsoever. As the week progressed, however, light to moderate showers worked into England and western France (1-10 mm most areas, but locally more), providing variable amounts of soil moisture. Temperatures averaged 1 to 3°C above normal over many of these same locales during the past week, but up to 5°C above normal from central France into southern Germany and northeastern Italy. The warmth accelerated wheat and rapeseed toward or through the early stages of reproduction across climatologically warmer western growing areas, but crops remained vegetative in the north and northeast. In contrast, moderate to heavy rain across Spain (10-75 mm) maintained abundant to excessive moisture supplies for reproductive wheat and barley; producers are likely in need of drier weather for summer crop planting and other seasonal fieldwork. Farther east, light to moderate showers (1-20 mm) kept soils favorably moist for winter crops across the southeastern quadrant of Europe, although some parts of the middle Danube River Valley reported no rainfall.

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

WESTERN FSU
Total Precipitation (mm)
April 12 - 18, 2020

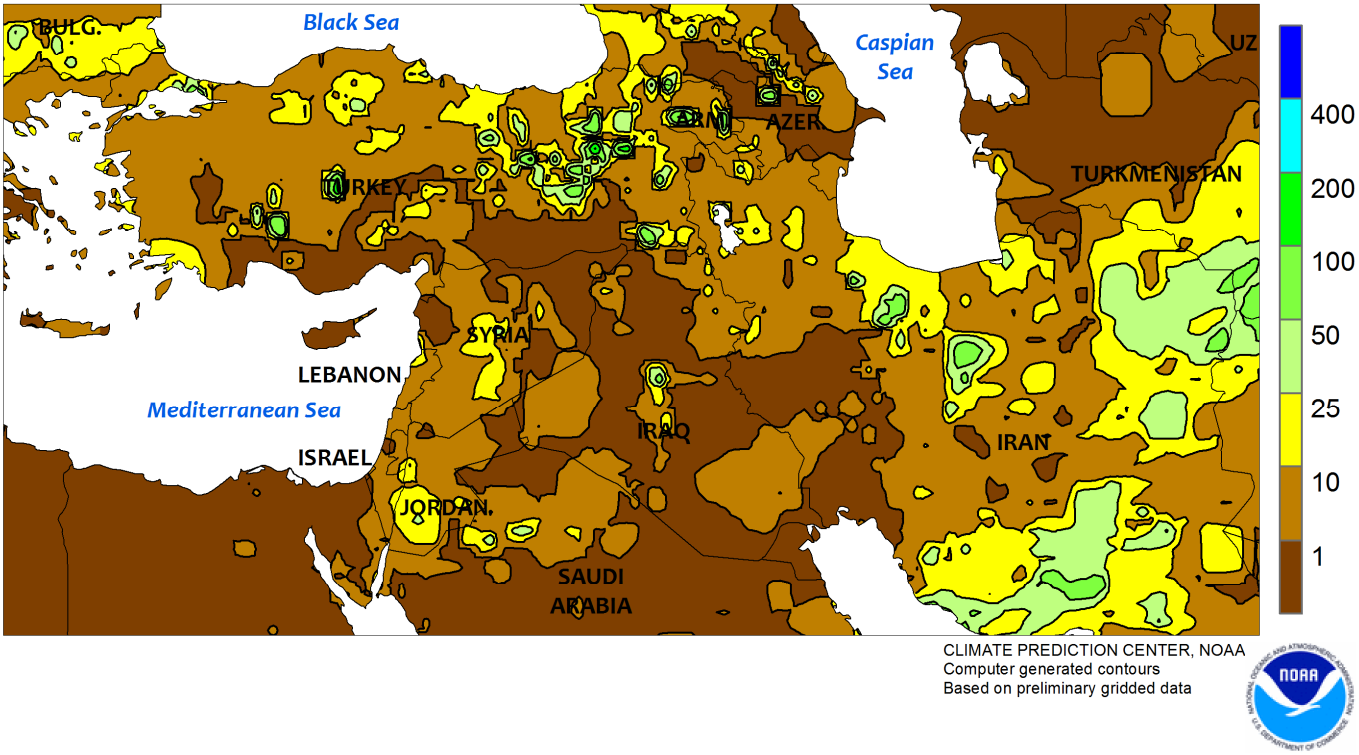


WESTERN FSU

Short-term drought intensified over the Black Sea region, although much-needed rain began to arrive at week's end. From Moldova and western Ukraine into southwestern Russia, dry weather exacerbated short-term drought and further reduced soil moisture for vegetative winter wheat. Regional-average spring rainfall to date (since March 1) remained the lowest over the past 30 years across many primary winter wheat areas of Ukraine and Russia (locally less than 25 percent of normal). However, a developing storm system at week's end brought much-needed showers to the region, with the leading edge of this rainfall (1-11 mm) arriving at the end of the monitoring period. Moisture over the upcoming weeks will be vital for this season's winter wheat prospects; crops are in the early to middle vegetative stages of development, and there is still ample opportunity to improve yields with timely rain.

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

MIDDLE EAST
Total Precipitation (mm)
April 12 - 18, 2020



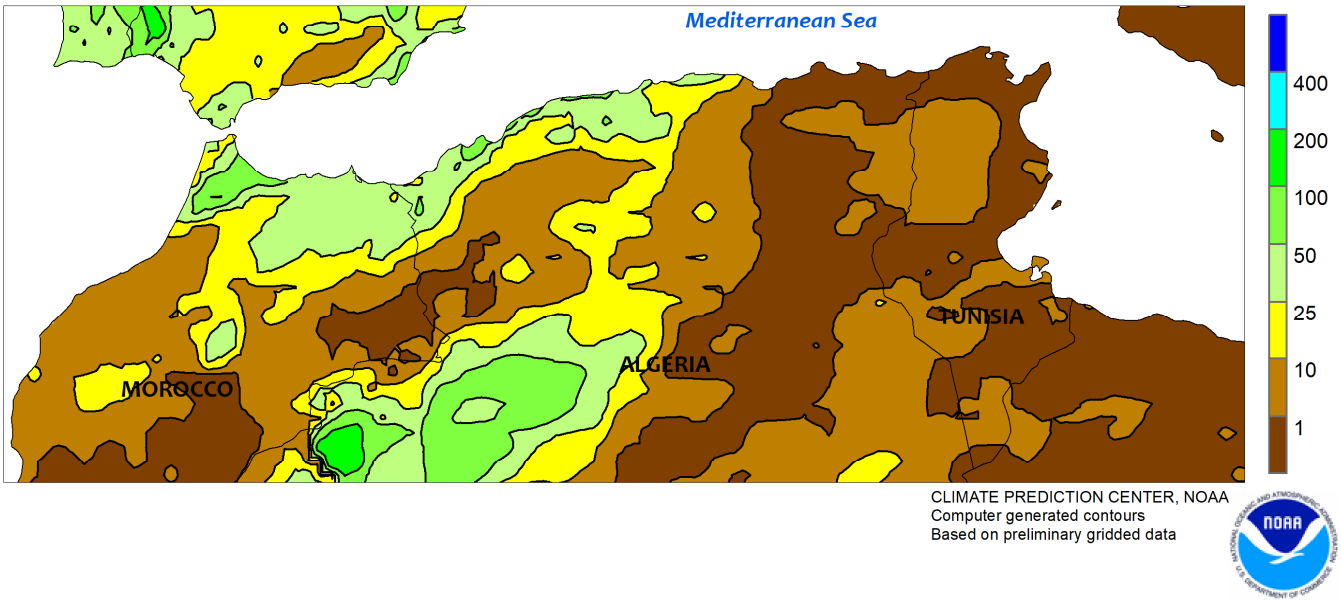
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MIDDLE EAST

A respite from recent wetness over the western half of the region contrasted with lingering heavy rain in the east. In Iran, a departing storm system was responsible for an additional 10 to 65 mm of rain from the Persian Gulf into Khorasan (northeast), with light to moderate showers (1-22 mm) lingering on the back side of the storm over the remainder of the country. This storm continued the very wet spring to date, with 60-day rainfall across southern and eastern Iran averaging 200 to more than 500 percent of normal. Farther west, scattered variable showers (trace to 15 mm) continued over western and northern Turkey as well as the eastern Mediterranean Coast, but there were enough days of sunny weather for fieldwork and winter crop development during the monitoring period. Winter grain development varied from filling in climatologically warmer southern and central growing areas to vegetative on central Turkey's Anatolian Plateau and northwestern Iran. Overall, wheat and barley yield prospects remained good to excellent across the entire region.

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

NORTHWESTERN AFRICA
Total Precipitation (mm)
April 12 - 18, 2020

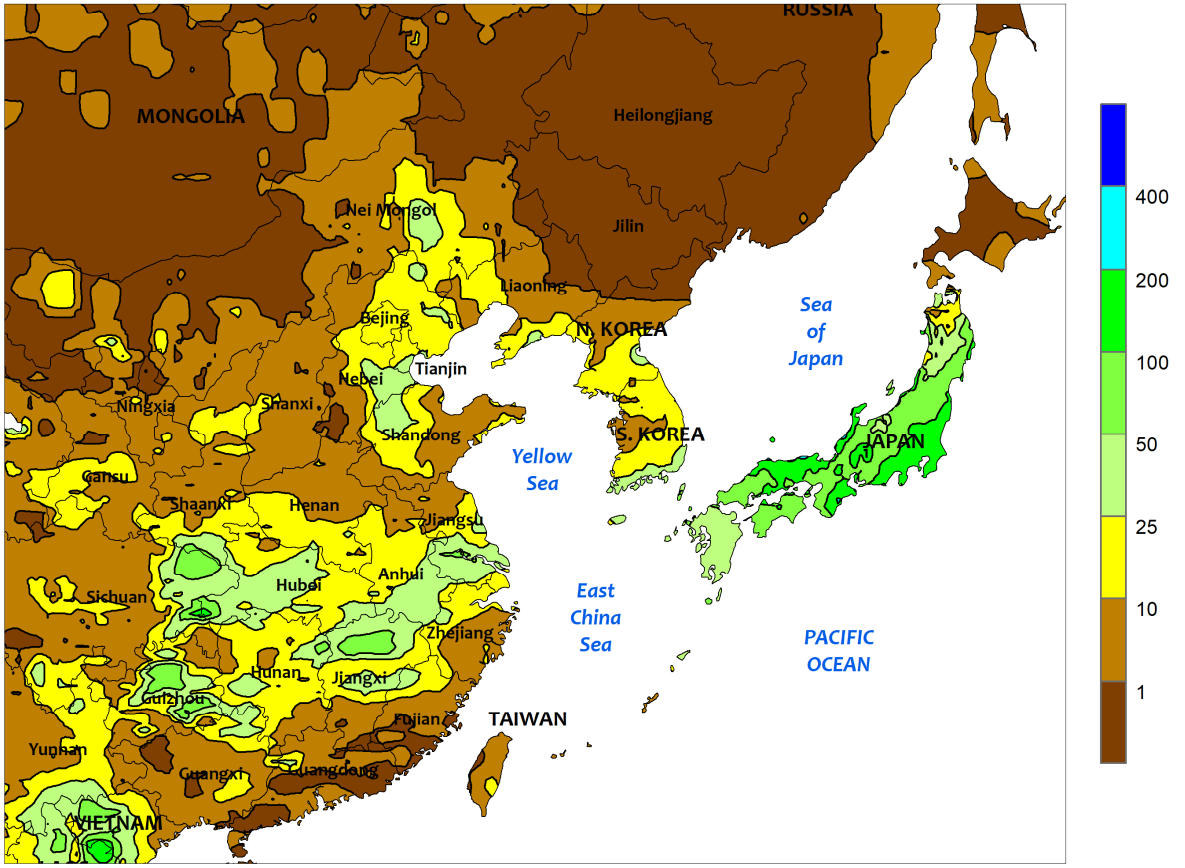


NORTHWESTERN AFRICA

Dry, warm weather in the east contrasted with late-season showers in western growing areas. In Morocco and western Algeria, widespread albeit highly variable showers (1-45 mm) provided localized moisture improvements but arrived too late to offer much benefit to maturing drought-afflicted winter wheat and barley. Conversely, sunny skies and above-normal temperatures (4-7°C above normal) accelerated winter grains toward or into the filling stage of development across Tunisia and eastern Algeria. Wheat and barley yield prospects across eastern growing areas have improved over the past several weeks due to timely rainfall from mid-March into early April, coincident with the early stages of reproduction.

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

EASTERN ASIA
Total Precipitation (mm)
April 12 - 18, 2020

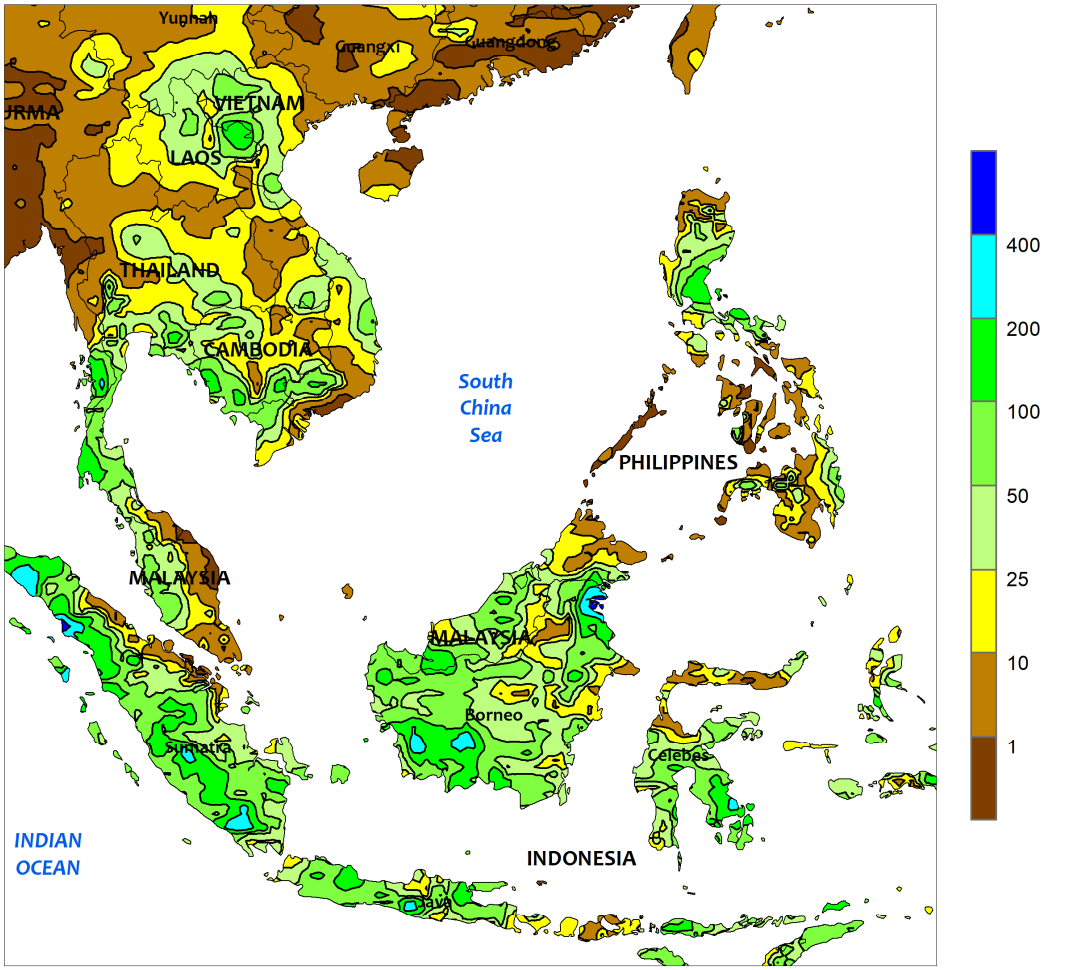


CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN ASIA

Light to locally heavy showers across eastern China benefited reproductive crops. Late-week showers in the Yangtze Valley maintained favorable soil moisture for reproductive rapeseed. Rainfall totals varied between 10 and 25 mm throughout most of the valley and upwards of 50 mm in some interior portions. Similar totals were reported in northern wheat areas (Hebei and environs), with lesser amounts (less than 10 mm) on the remainder of the North China Plain. Meanwhile, somewhat drier weather in southern China continued for another week, but seasonal (since March 1) moisture supplies remained adequate for reproductive early-crop rice. In addition, temperatures throughout the eastern growing areas were up to 3°C above average, facilitating crop development.

SOUTHEAST ASIA
Total Precipitation (mm)
April 12 - 18, 2020



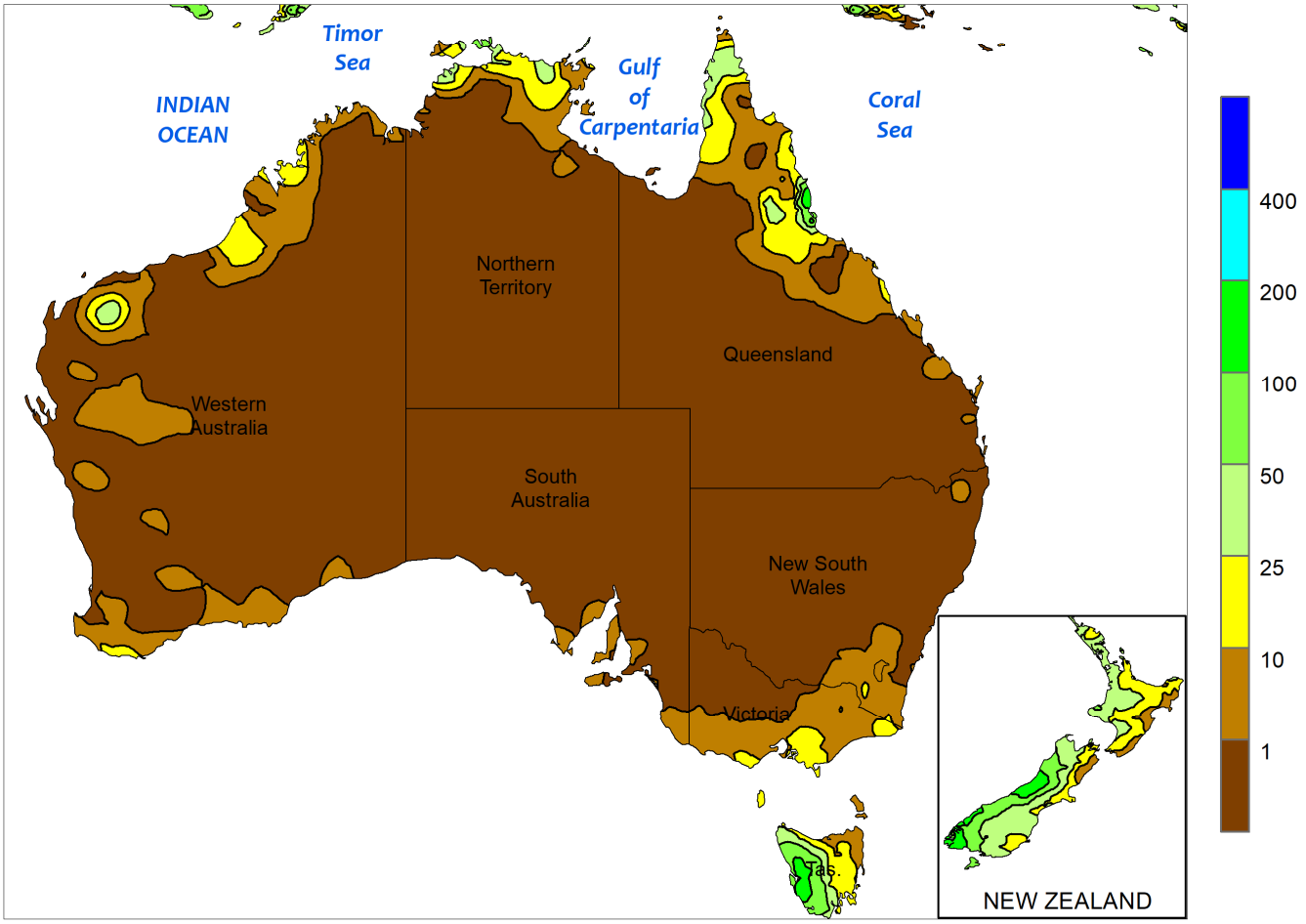
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTHEAST ASIA

Seasonal fieldwork was underway in much of Thailand and Indochina as growers prepare for the onset of the wet season next month. Seasonably hot weather (over 40°C) was building in western-most extents of Thailand, with scattered showers (10-50 mm) providing an early season moisture boost in the remainder of the environs. A similar situation was occurring in the Philippines, where heat was building (west) and rainfall was variable (10-100 mm in the east and north). Growers in the Philippines were also preparing rice paddies and corn fields for the onset of the southwest monsoon. In the meantime, most of the region's rainfall was confined to southern locales (Malaysia and Indonesia), benefiting oil palm and spring rice.

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

AUSTRALIA
Total Precipitation (mm)
April 12 - 18, 2020



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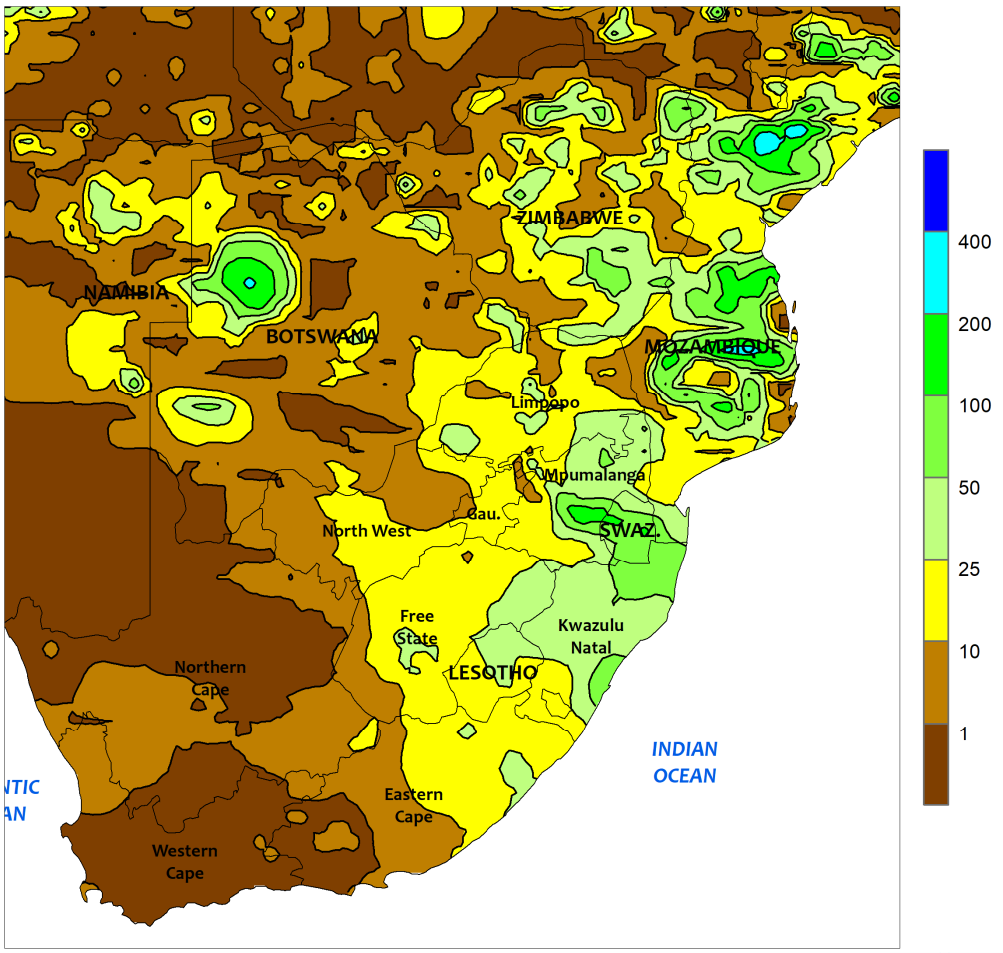
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

AUSTRALIA

Following three weeks of much-needed rainfall, dry weather returned to southern Queensland and northern New South Wales. The dryness aided cotton and sorghum drydown and harvesting and may have triggered some early winter wheat planting in northern-most growing areas. Although the dry weather favored fieldwork, continued soaking rain would be welcome to help the region further recover from severe, long-term drought. Elsewhere in the wheat belt, mostly dry weather covered southeastern and western Australia as well. Wheat, barley, and canola planting typically begins in mid-April in these areas and normally increases through May. Recent rainfall in southeastern Australia has helped condition the soil for winter crop planting, but rain would be welcome in Western Australia where six weeks of relatively dry weather have reduced topsoil moisture in advance of winter crop sowing. Temperatures averaged near normal (within 2°C of normal) throughout the wheat belt.

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

SOUTH AFRICA
Total Precipitation (mm)
April 12 - 18, 2020



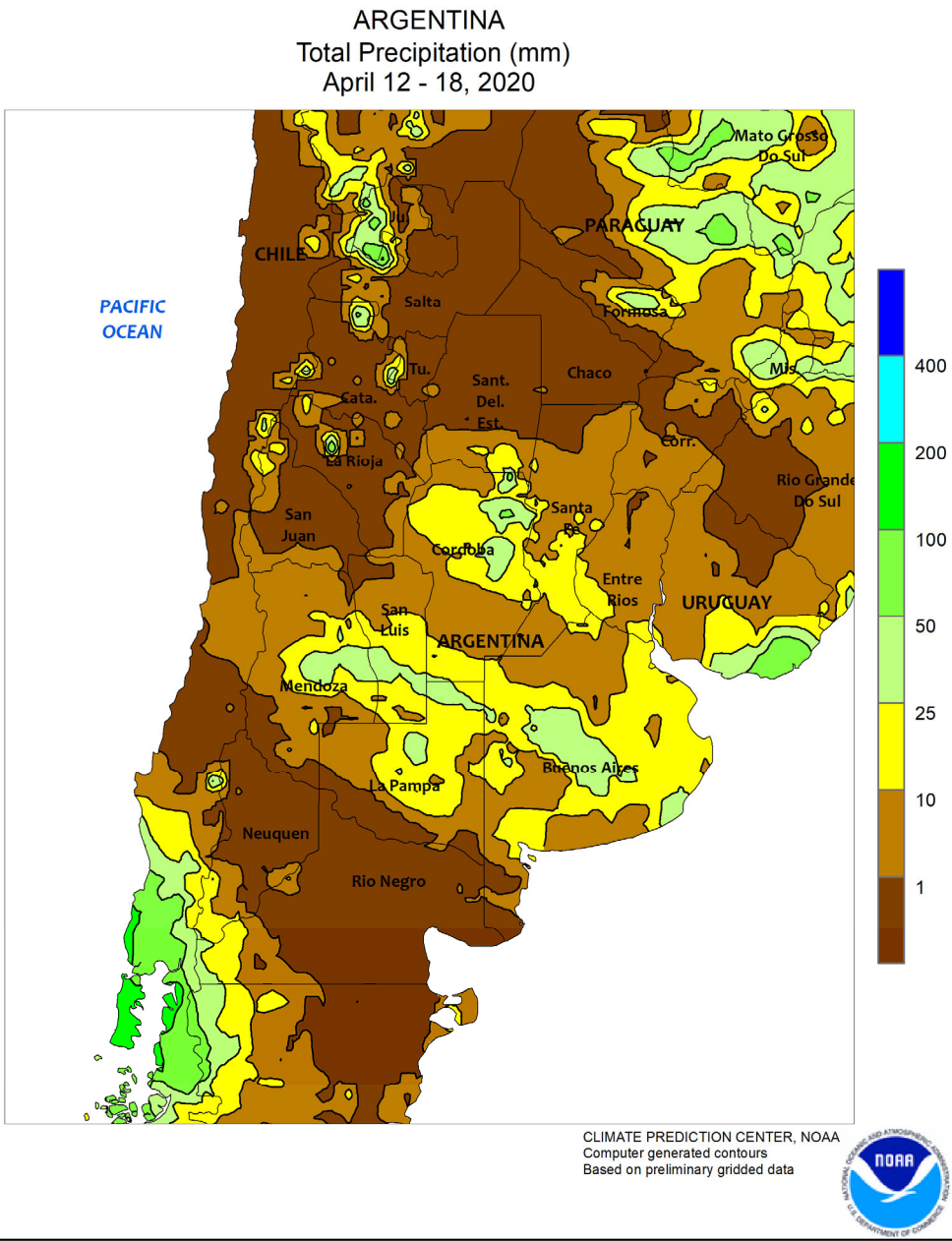
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTH AFRICA

Unseasonably heavy showers returned to many eastern commercial farming areas, maintaining adequate to abundant levels of moisture going into autumn planting. Rainfall totaled 5 to 25 mm across the corn belt (North West and Free State northeastward), with a few locations approaching 50 mm. While coming too late for summer crops, the moisture will ultimately benefit pastures and wheat. Heavier rain (15-50 mm or more) fell farther south, including sugarcane areas of KwaZulu-Natal where harvesting was likely in its initial stages. In Western Cape, light showers (less than 10 mm) kept topsoils moist for germination in wheat areas north of Cape Town.

This will be the final weekly summary of the 2019/20 growing season; coverage will resume in October upon commencement of planting 2020/21 summer crops.

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



ARGENTINA

Showers returned to central Argentina, increasing moisture for late-maturing summer crops and further increasing moisture reserves for the upcoming winter grain season. Rainfall totaled 5 to 45 mm through much of La Pampa, Buenos Aires, and nearby locations in Cordoba, Santa Fe, and Entre Rios. Drier conditions prevailed farther north, however, supporting harvesting of cotton and other summer crops. Weekly average temperatures were above normal in the main southwestern growing areas (La Pampa, southern Cordoba, and southwestern Buenos Aires) and as much as 5°C below normal in the far north, but with no widespread freeze reported. According to the government of Argentina, sunflowers were 98 percent harvested as of April 16, on par with last season's pace. Similarly, cotton was 34 percent harvested versus 32 percent last year. Meanwhile, corn was 24 percent harvested, 4 points behind last year's pace, and soybeans were 4 points ahead of last year's pace with 33 percent harvested.

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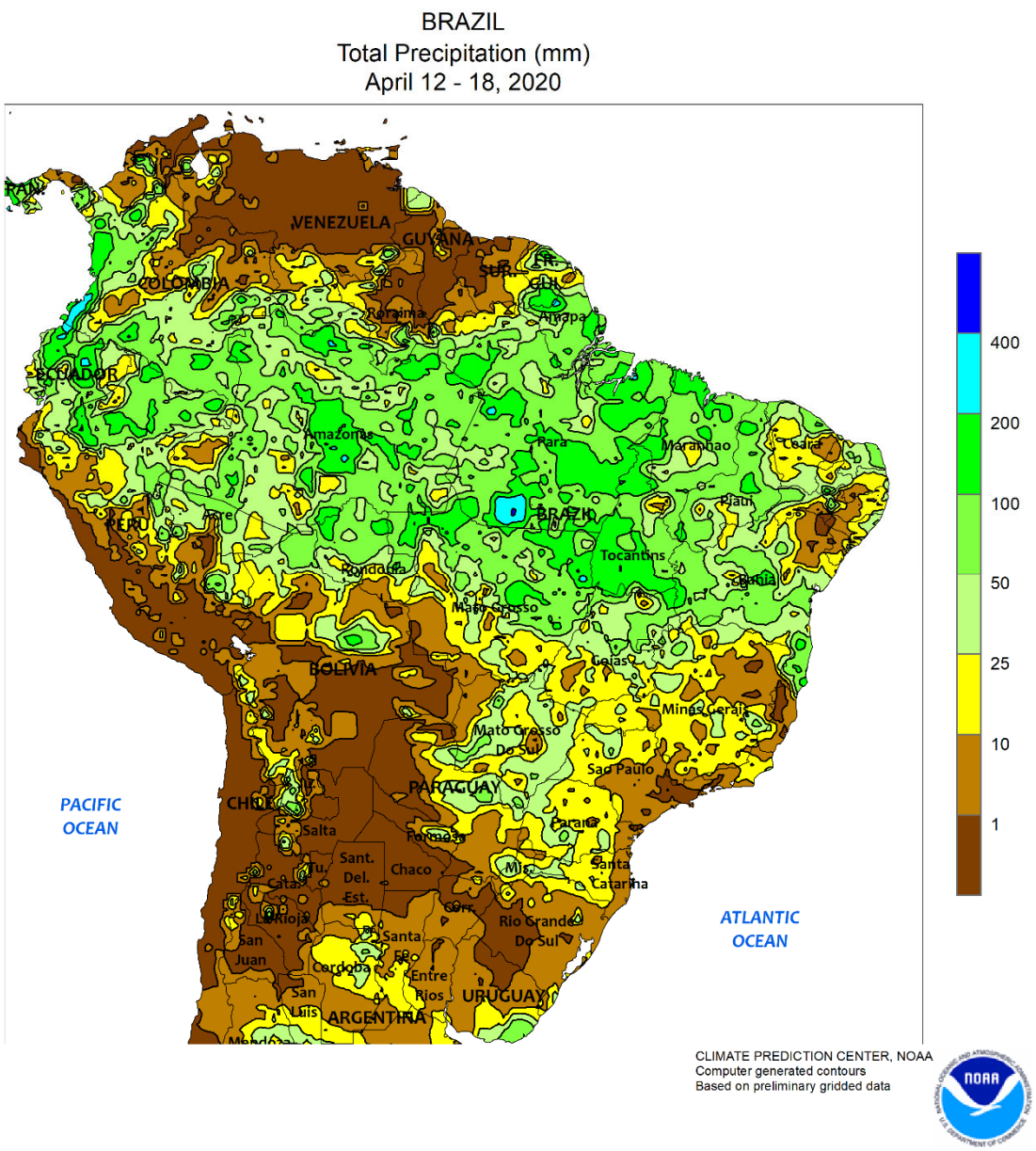

BRAZIL

Unseasonably dry conditions persisted over large sections of southern Brazil, where moisture continued to be limited for development of second-crop corn. From southern Mato Grosso southward, rainfall continued to be widely scattered, with pockets of dryness interspersed with locations recording light to moderate rainfall (greater than 10 mm). Unseasonably cool weather accompanied the dryness helping to mitigate crop moisture demands, with daytime highs generally capped in the middle and lower 20s (degrees C) in Parana and Rio Grande do Sul, and potential frost (nighttime lows dropping below 5°C) in some of the higher elevation areas to the east. According to the government of Parana, harvesting of first-crop corn and soybeans had reached 95 and 98 percent complete, respectively, as of April 6; meanwhile, second-crop corn was 28 percent flowering to filling. In Rio Grande do Sul, corn was 79 percent harvested as of April 16, with most of the remaining crop ranging from filling to mature; similarly, soybeans were 84 percent harvested, with the majority of the remaining crop mature. The drier conditions also dominated sugarcane and coffee areas of Sao Paulo and Minas Gerais but heavier rain (25-50 mm or more) fell from northern Mato Grosso eastward, maintaining favorable prospects for corn and cotton.

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MEXICO
Total Precipitation (mm)
April 12 - 18, 2020

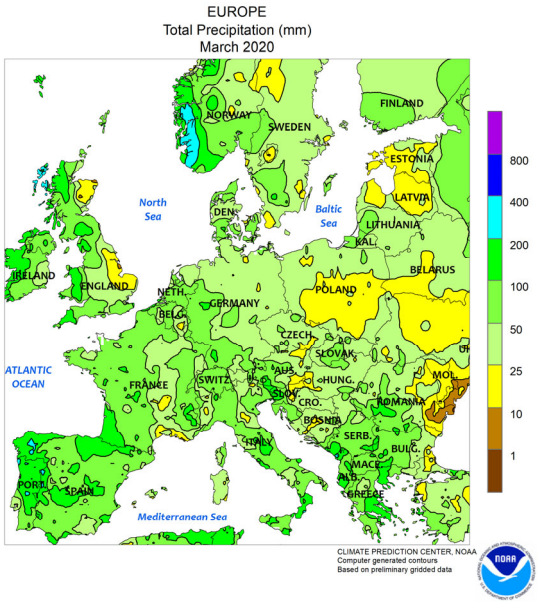
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

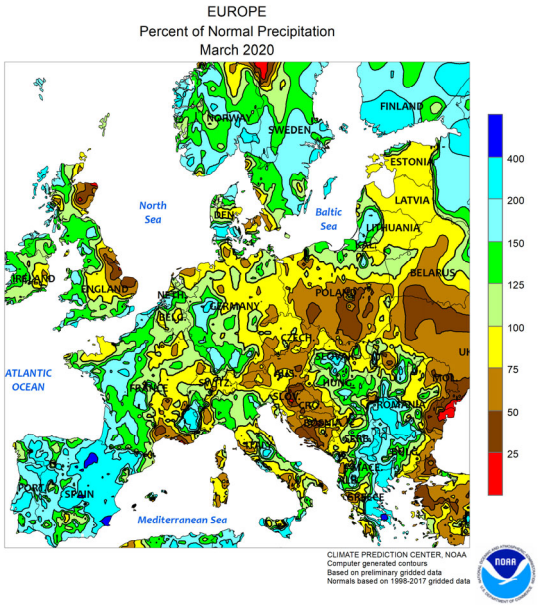
MEXICO

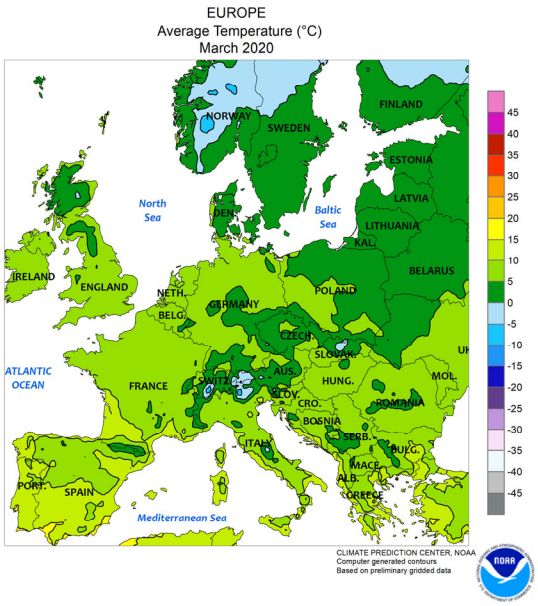
Light showers were scattered along the Gulf Coast but little rain fell farther inland, as farmers awaited the onset of seasonal rainfall for summer crop planting. In fact, coverage diminished from the previous week, with few locations recording more than 25 mm from Nuevo Leon south and eastward to Tabasco and Chiapas. Sparse rain provided limited moisture in Puebla as dry weather dominated the southern plateau corn belt. Mostly sunny, relatively mild weather (daytime highs mostly reaching the upper 20s and lower 30s degrees C) favored growth of irrigated wheat and corn in the northwest. Farther east, periodic heat (temperatures peaking above 35°C) advanced rapid development of filling to maturing winter sorghum in and around Tamaulipas.

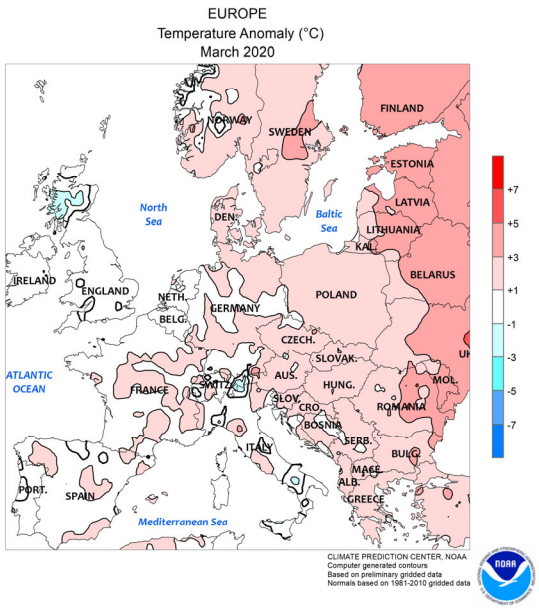
For additional information contact: mbrusberg@oce.usda.gov

March International Temperature and Precipitation Maps



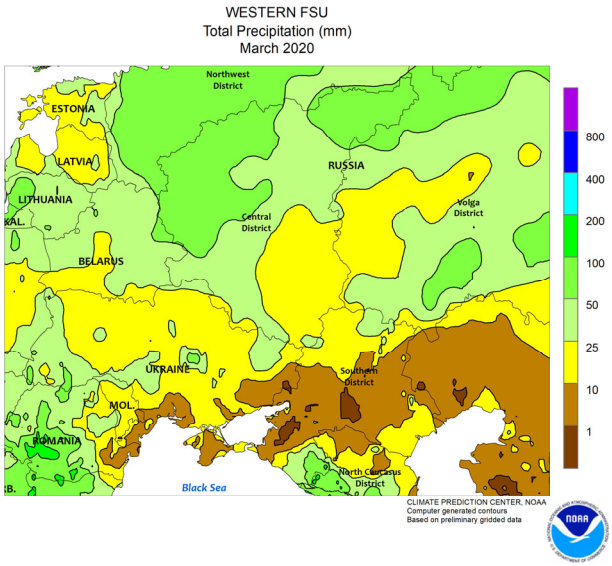


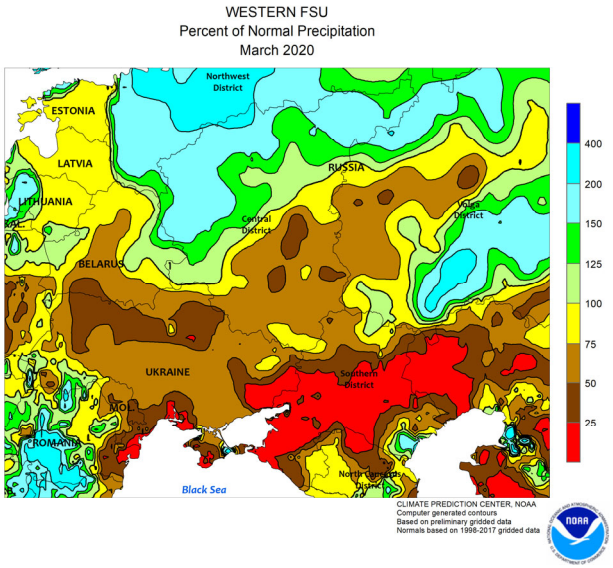


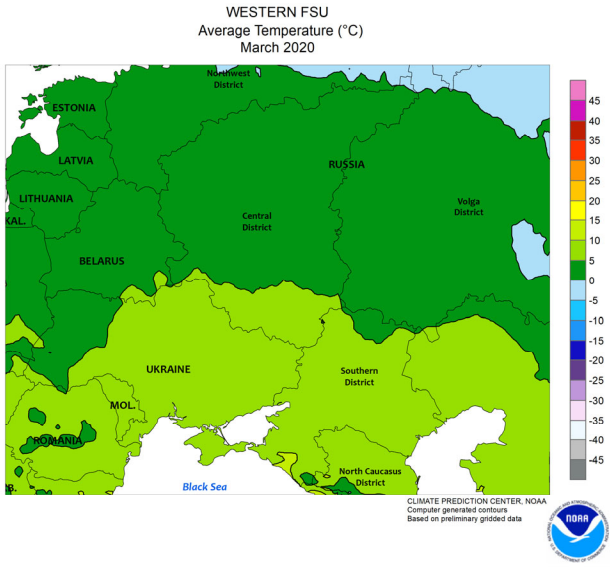


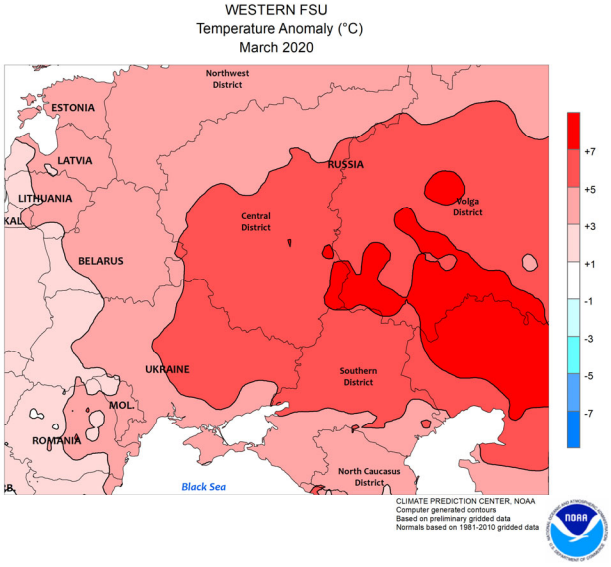
EUROPE

A sharp reversal from a very wet winter arrived in March, with cooler and increasingly dry conditions settling over most primary winter crop areas of central and northern Europe. Following one of the wettest winters on record, near- to well-below-normal rainfall from England and eastern France into Poland and the Baltic States allowed waterlogged soils to dry and seasonal fieldwork to resume. Furthermore, the record-setting winter warmth observed over much of Europe abated, with near-normal temperatures across central and western growing areas reflecting cooler weather as the month progressed. Conversely, above-normal temperatures lingered over eastern portions of the continent, where readings averaged 1 to 3°C above normal. While generally dry weather was noted over the northern two-thirds of the region, a series of slow-moving Mediterranean storms brought moderate to heavy rain (30-150 mm) to much of southern Europe, boosting moisture supplies for vegetative winter grains in Spain and Italy while improving prospects for greening winter crops in the lower Balkans. Rain also lingered across western and southern France, maintaining favorable moisture supplies for winter grains and oilseeds. However, locally excessive rainfall (up to 315 mm) in Greece caused lowland flooding and likely necessitated replanting of cotton in hardest-hit locales.





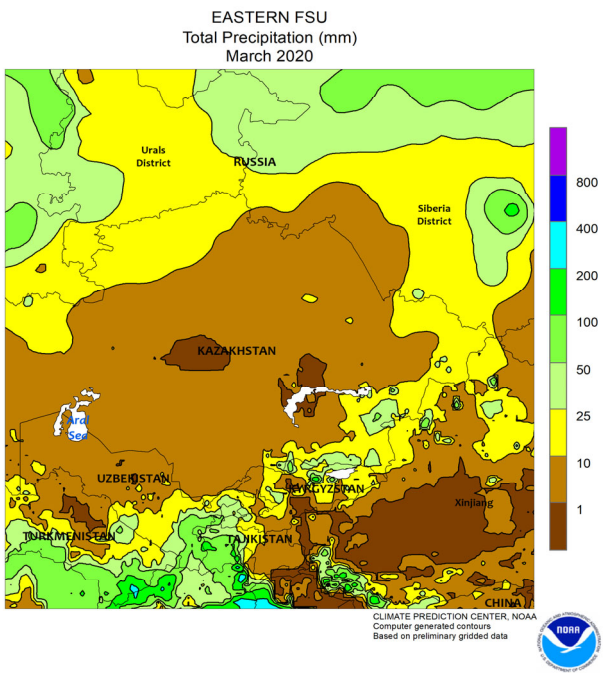


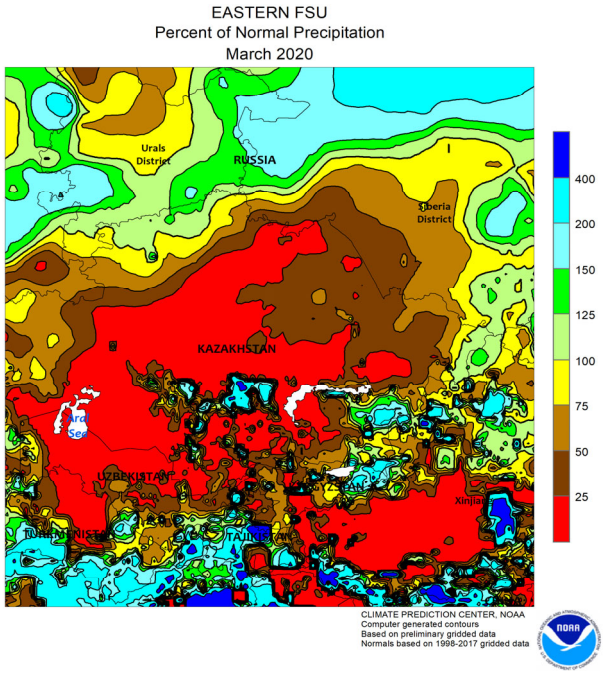


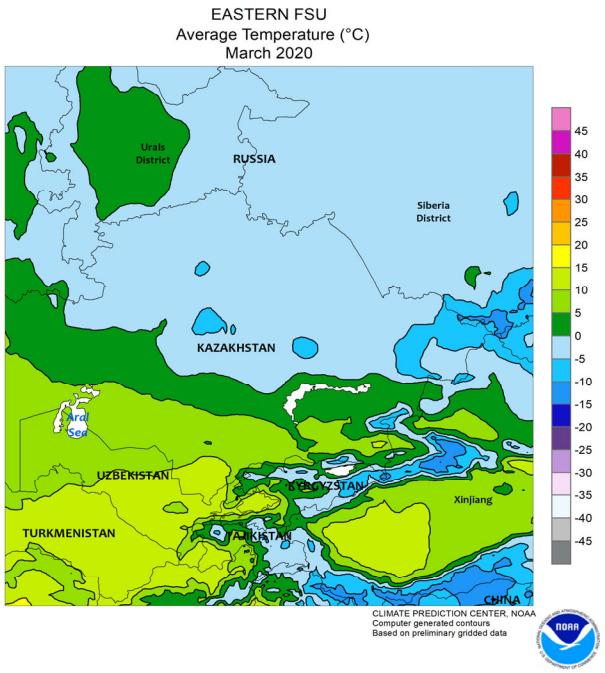
WESTERN FSU

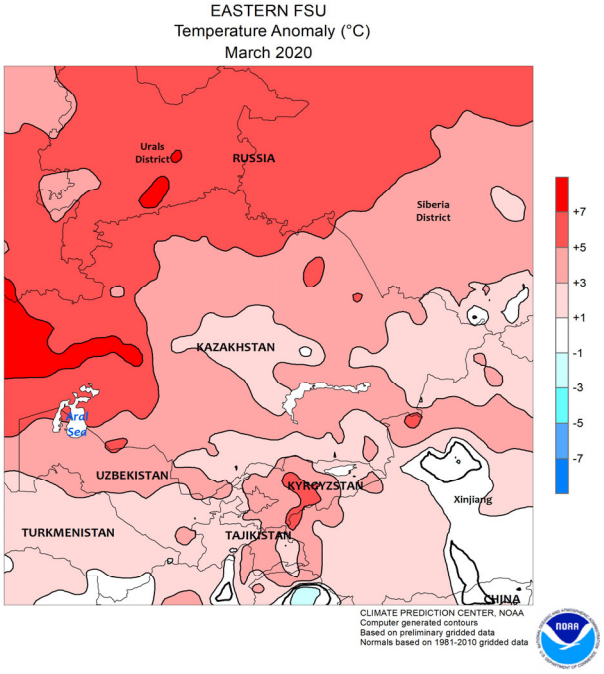
A very warm and dry March was initially favorable for winter crops, though concerns increased over developing short-term drought. The abnormal warmth (3-8°C above normal) encouraged rapid winter wheat green up and development across the region. Moisture reserves were initially overall favorable for spring growth due to a wet winter, though acute short-term dryness (less than 25 percent of normal) from the Black Sea Coast into southwestern Russia during March — in conjunction with the above-normal temperatures — heightened the need for moisture during April as wheat progressed toward reproduction.

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



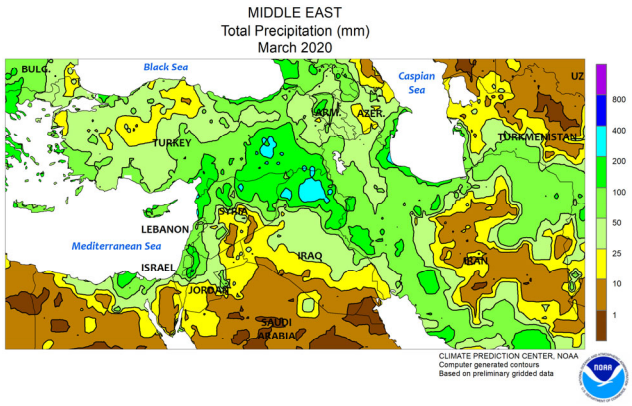


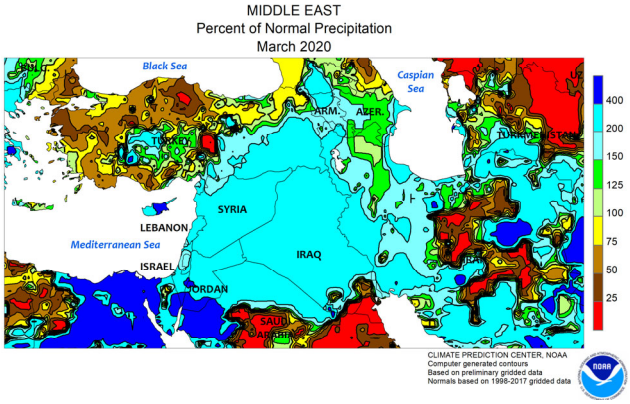


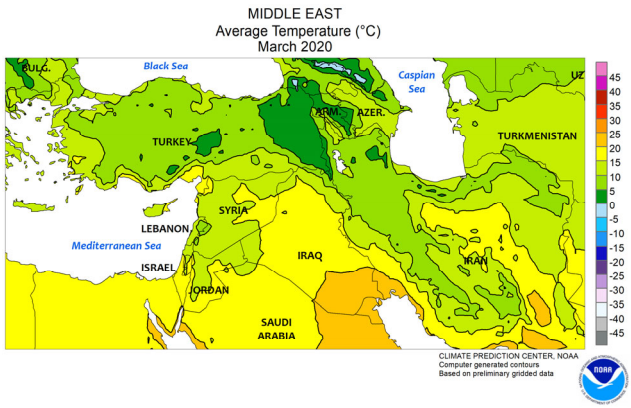


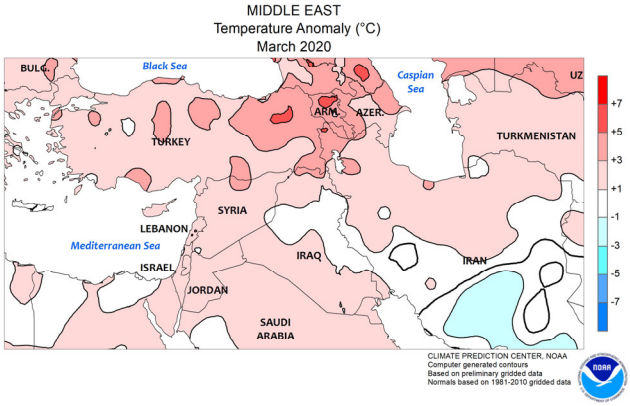
EASTERN FSU

Warm, dry weather prevailed across much of the region during March, though agricultural activity remained at a minimum. In the north, the warm conditions (up to 7°C above normal) accelerated seasonal snow melt and set the stage for early spring grain sowing in April. Meanwhile dry weather in southern portions of the region reduced topsoil moisture for vegetative winter wheat in Uzbekistan, although timely rain returned in early April as the crop entered reproduction. Cotton, which is heavily irrigated, is typically sown during April and early May.



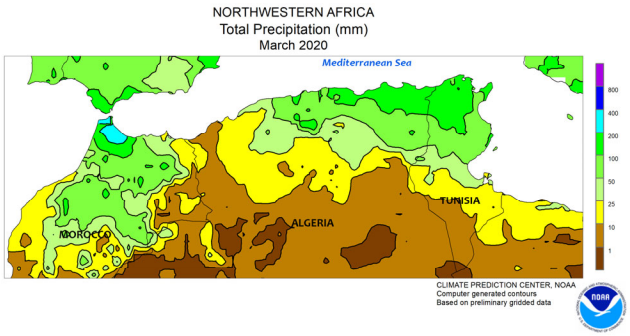


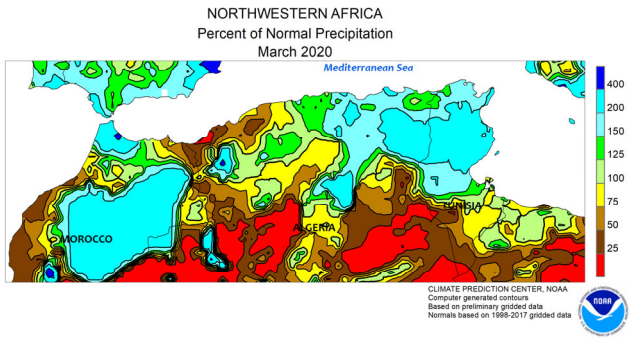


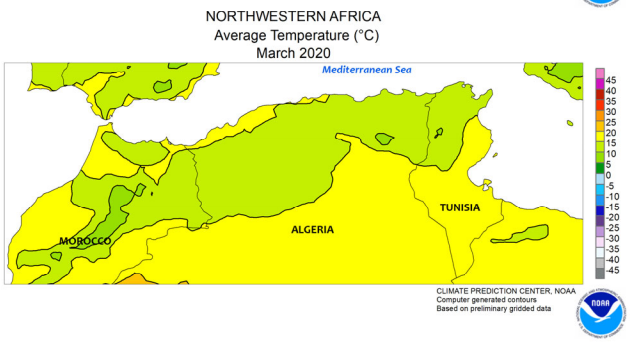


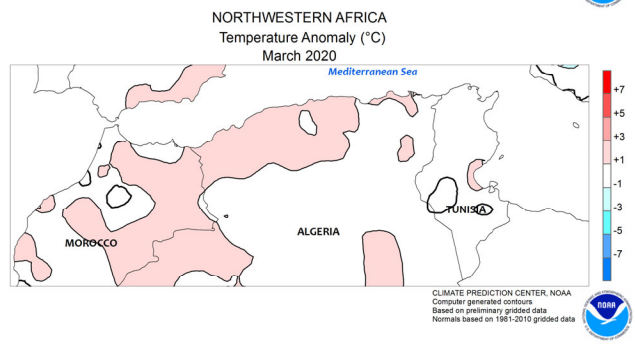
MIDDLE EAST

A very wet March across most of the region maintained good to excellent yield prospects for winter wheat and barley. A series of slow-moving storms produced a large swath of above- to much-above-normal precipitation (rain and mountain snow) from southern Turkey and the Mediterranean Coast into Iran. In climatologically arid portions of the region (Egypt into Saudi Arabia), monthly rainfall totals between 10 and 80 mm represented locally more than 10 times the normal amount (in some cases, March rain topped the yearly average). Likewise, the typically drier portions of central and southern Iran reported 25 to 210 mm, more than 200 percent of normal for the month. Winter grains progressed toward or through reproduction in southern and central growing areas, while winter crops were in the early stages of vegetative growth in central Turkey and northwestern Iran.





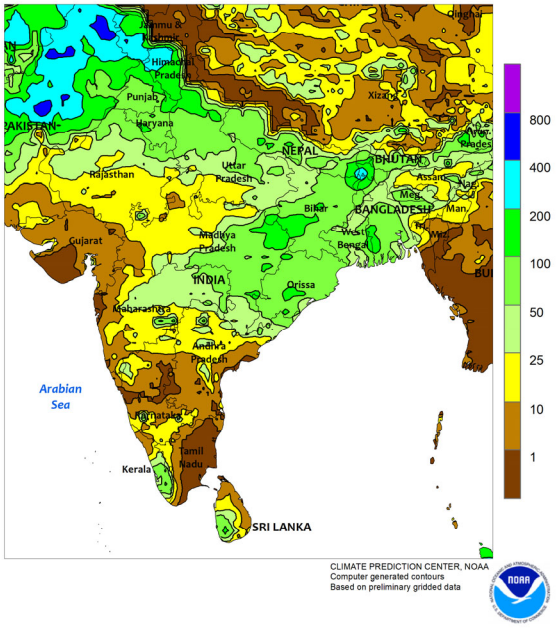




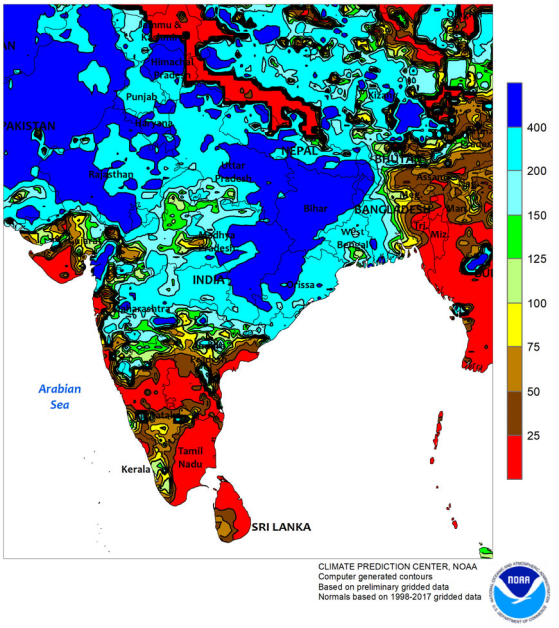
NORTHWESTERN AFRICA

Rain returned to much of the region during March, boosting yield prospects for vegetative to reproductive winter grains in the east but arriving generally too late for late-reproductive to filling wheat and barley in Morocco. Precipitation amounts in Morocco varied from less than 10 mm in the south to more than 100 mm in the north; where rain was heaviest, the moisture stabilized or improved yield prospects for later-developing wheat and barley. However, Moroccan winter grains were largely past the key reproductive stages of development when the rain arrived, and consequently suffered some irreversible yield losses. Algeria experienced highly variable conditions as well, with acute dryness in the west (10-50 percent of normal) in sharp contrast with wet weather in the east (100-220 percent of normal). In Tunisia, moderate to heavy rain across most primary crop areas (25-250 mm, 200-270 percent of normal) provided timely rain for reproductive wheat and barley. Temperatures for the month averaged near to slightly above normal, with no hard freezes or untimely heat reported.

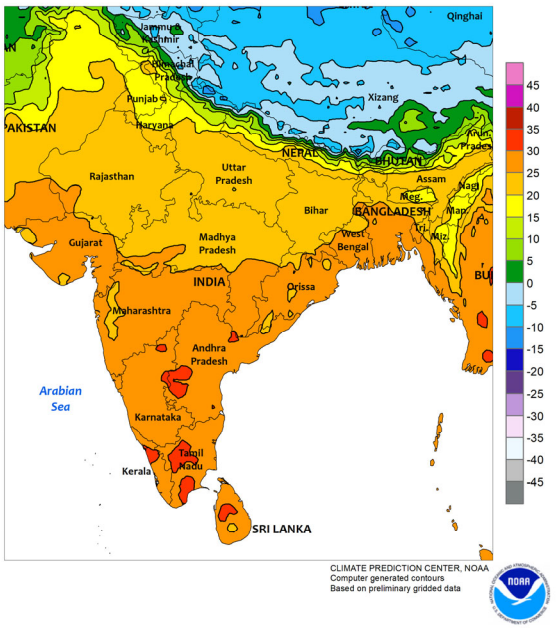
SOUTH ASIA
Total Precipitation (mm)
March 2020



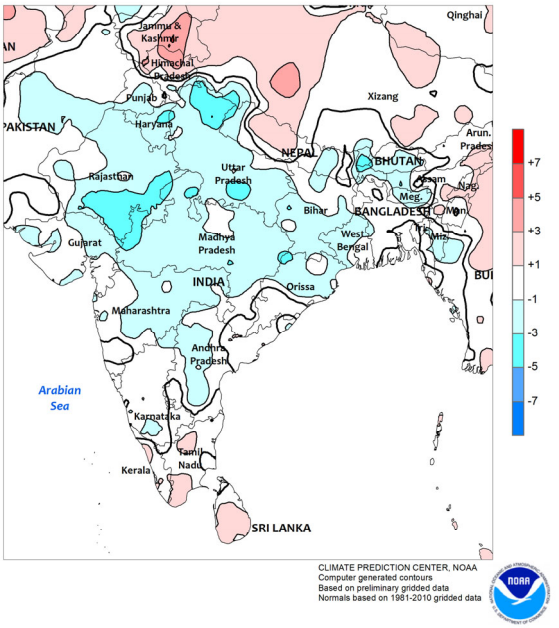
SOUTH ASIA
Percent of Normal Precipitation
March 2020



SOUTH ASIA
Average Temperature (°C)
March 2020

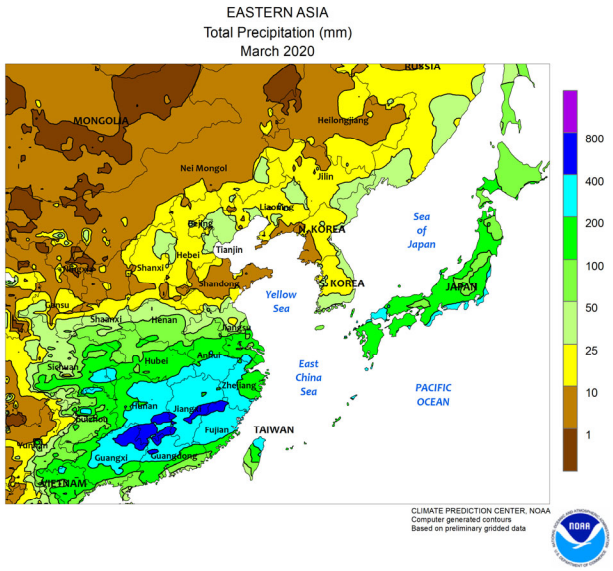


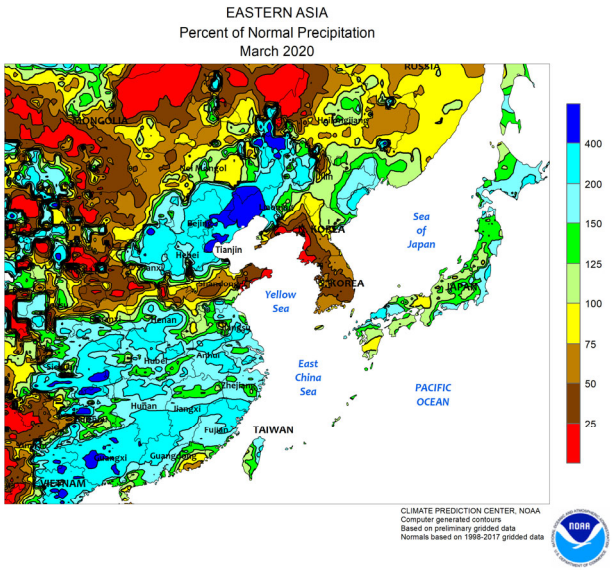
SOUTH ASIA
Temperature Anomaly (°C)
March 2020

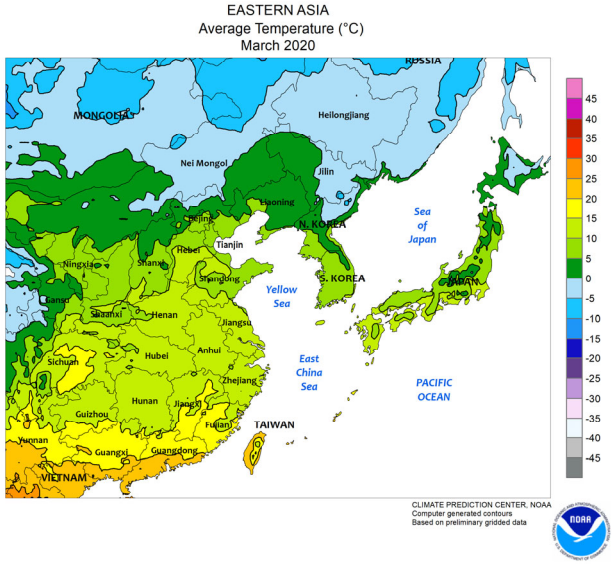


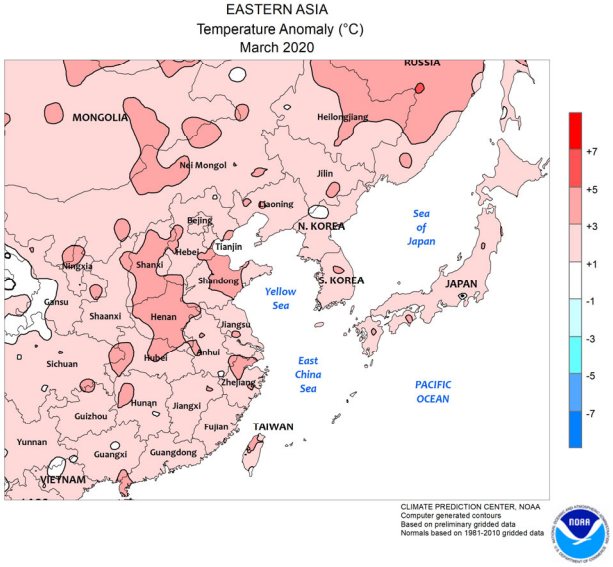
SOUTH ASIA

In March, occasional stormy weather in northern India and Pakistan caused unfavorably wet conditions for unharvested wheat and rapeseed and likely caused localized damage to the crops. Rainfall totals were between 25 and 100 mm (as much as 400 percent of normal) with most of the rain occurring in the early half of the month. Similar totals were also reported in eastern India (Chhasttisgarh and environs) and Bangladesh but were more beneficial. The wet weather in the east favored spring-sown rice and boosted moisture supplies ahead of summer sowing. In addition to the unseasonable wetness, the heavy showers brought cooler-than-normal weather (temperatures 1-3°C below normal), stemming the onset of seasonal heat (40°C or higher). Elsewhere, drier weather prevailed in the remainder of India and into Sri Lanka, supporting harvesting of crops sown in the autumn.



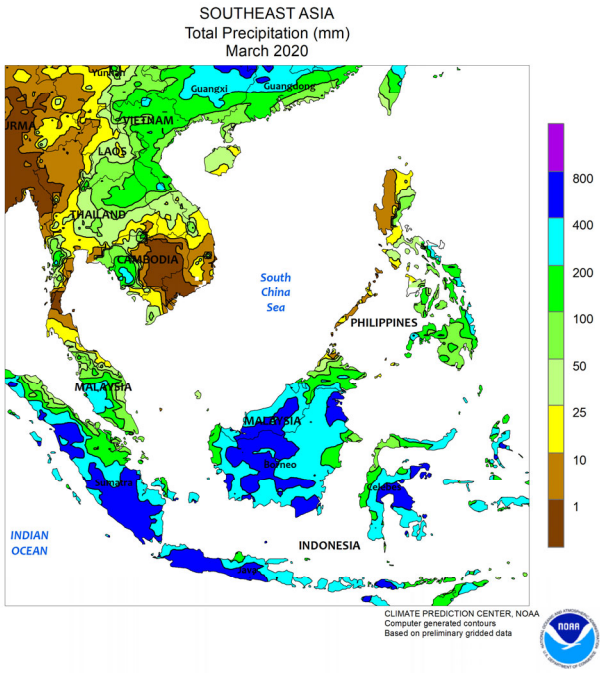


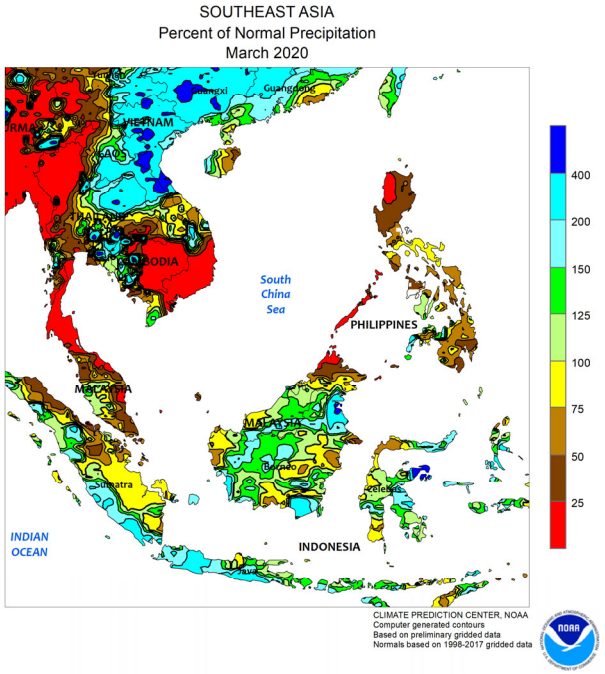


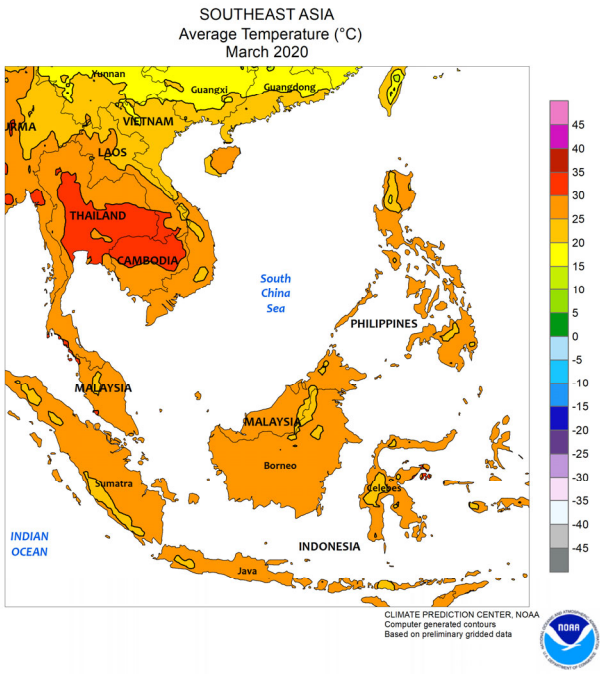


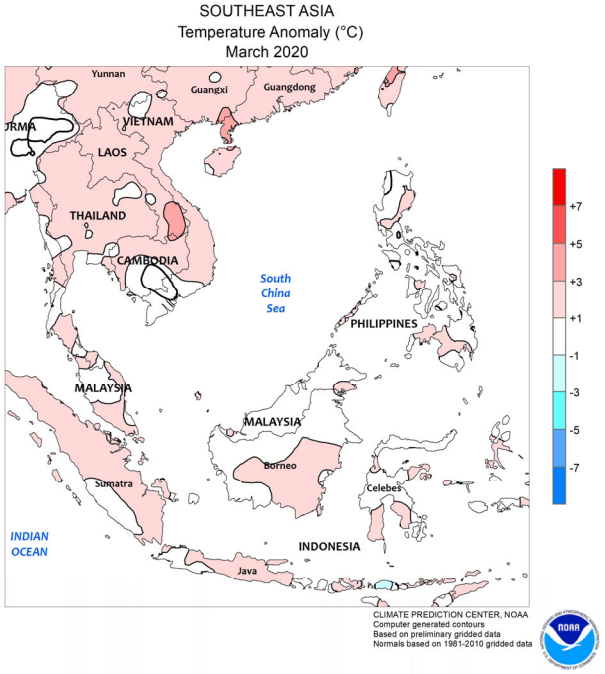
EASTERN ASIA

Drier-than-normal weather prevailed across much of eastern China during March. In wheat areas, rainfall was scant (less than 10 mm), as the crop developed at a rapid pace due to temperatures up to 6°C above normal. Meanwhile, a relatively dry start to the month in the Yangtze Valley gave way to heavy showers (25-50 mm or more) by month's end, benefiting a reproductive rapeseed crop. Farther south, rainfall was more consistent (over 100 mm) for early-crop rice establishment, although the heaviest showers were toward the end of the month as well.





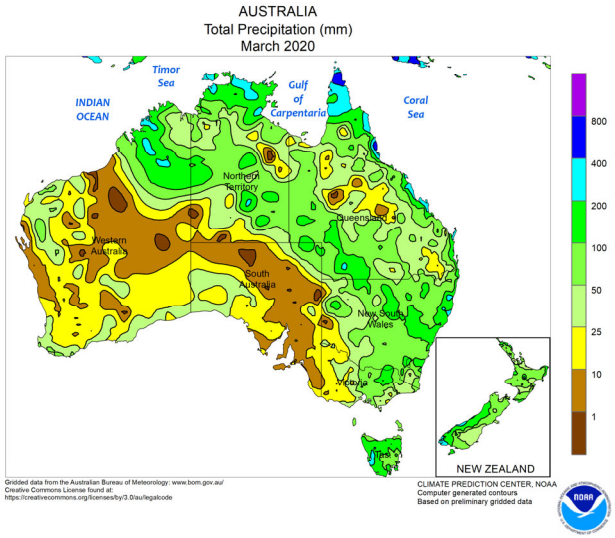


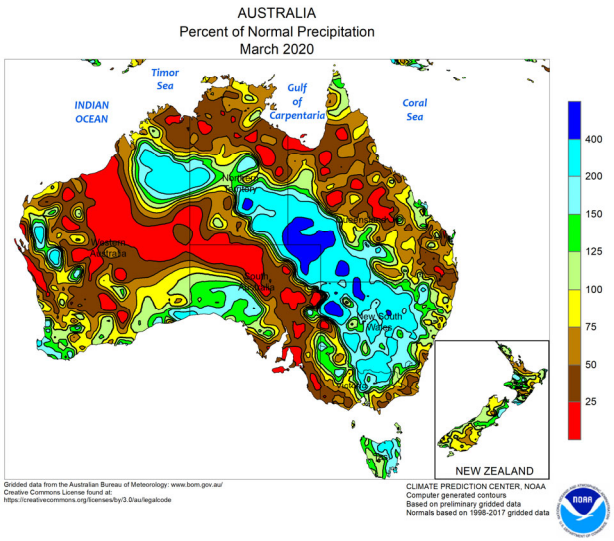


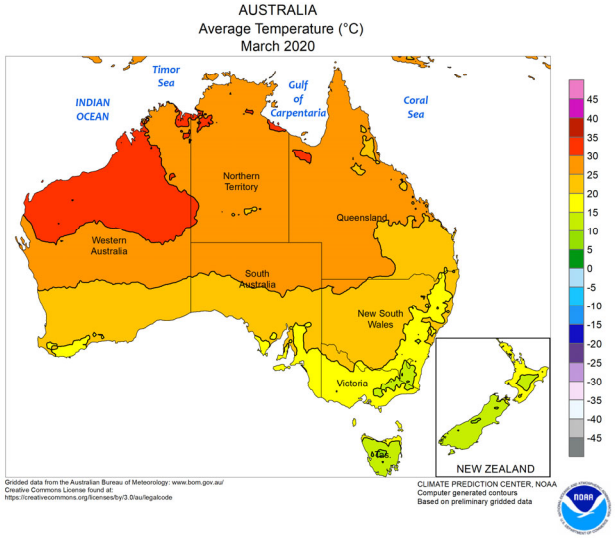
SOUTHEAST ASIA

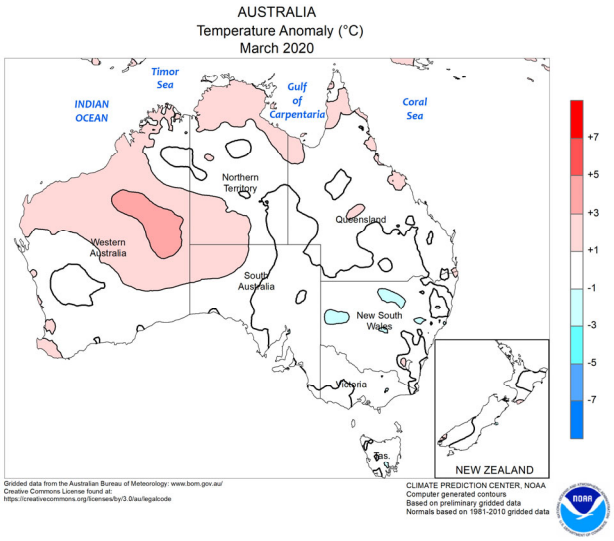
Seasonably wet weather (over 150 mm of rain) continued across southern Indonesia (Java and environs) in March. The consistently heavy rainfall ensured adequate to abundant moisture supplies for spring-sown rice, as well as rice that will be sown in the summer. The wet season can linger in Java through the spring and early summer. In contrast to the favorable moisture conditions in Java, oil palm grown in other parts of Indonesia and neighboring Malaysia received well-below-average precipitation (less than 60 percent of normal). The inconsistent rainfall exacerbated already poor soil moisture over the last 90 days, leading to reduced yield potential for the crop. Elsewhere, rainfall in the Philippines was confined to the seasonally wetter eastern-most districts, with drier conditions aiding winter rice and corn maturation and harvesting in key northern growing areas. Meanwhile, occasional heavier-than-normal showers (25-100 mm or more) in northeastern Thailand and northern Indochina provided a good boost to reservoirs, as dry-season rice harvesting progressed.

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



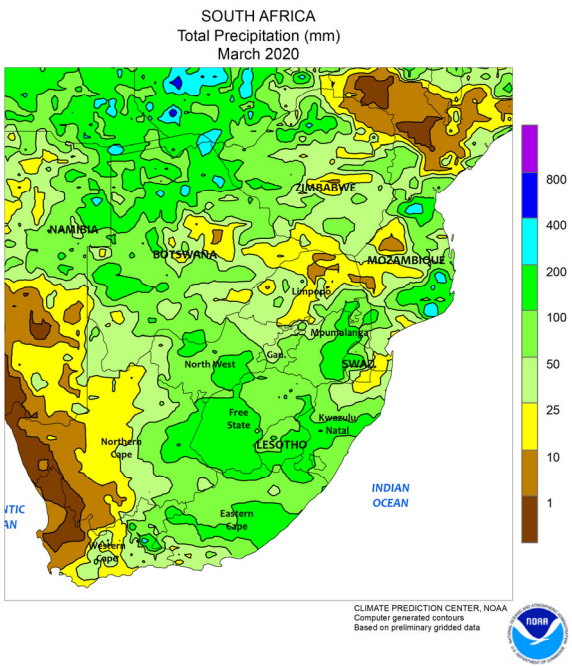


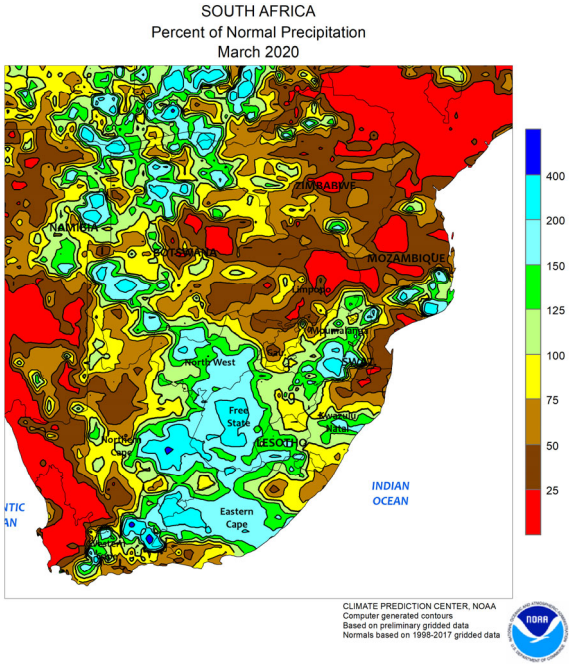


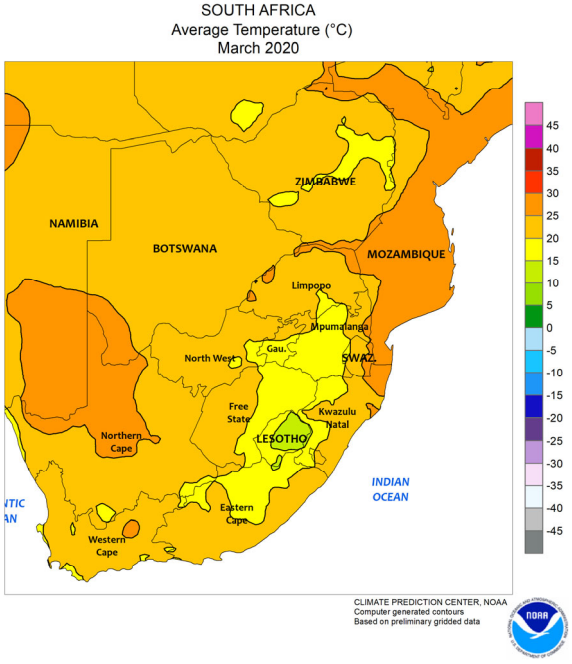


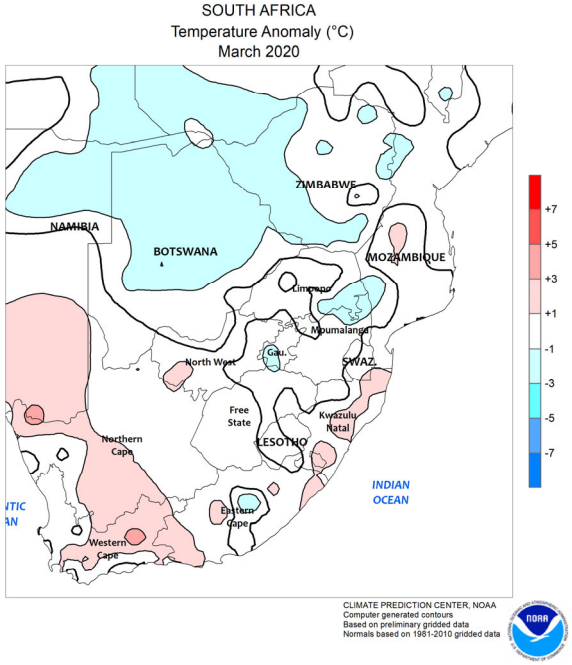
AUSTRALIA

Following the previous month's wet weather, March rainfall averaged near to somewhat below normal in Queensland, favoring cotton and sorghum maturation and harvesting. In contrast, frequent rain in New South Wales and northern Victoria slowed drydown and harvesting but helped condition the soil in advance of upcoming wheat, barley, and canola sowing. Although the recent rain has been beneficial, continued rain is necessary to help eastern Australia completely recover from severe, long-term drought.









SOUTH AFRICA

Above-normal March rainfall maintained excellent summer crop prospects in western sections of the corn belt. Monthly accumulations totaling 50 to more than 100 mm covered much of North West and Free State, including important commercial white corn areas. Unseasonably heavy rain also fell to the west and south, increasing irrigation reserves for agriculture in key locations of Northern and Eastern Cape, specifically watersheds of the Orange River. Meanwhile, scattered showers maintained generally favorable conditions for filling to maturing summer crops in eastern sections of the corn belt, though a few dry pockets lingered. A brief period of heavy rain boosted moisture for sugarcane in rainfed production areas of southern KwaZulu-Natal, though drier conditions soon returned in the run up to the start of the harvest season. In the far west, rain is needed in the farming areas of Western Cape north of Cape Town in preparation for wheat planting. March average temperatures were generally within 1°C of normal, with no reports of a widespread freeze.

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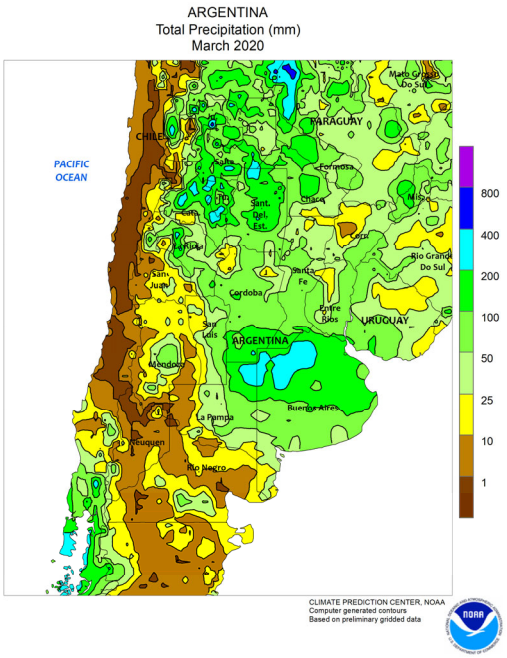
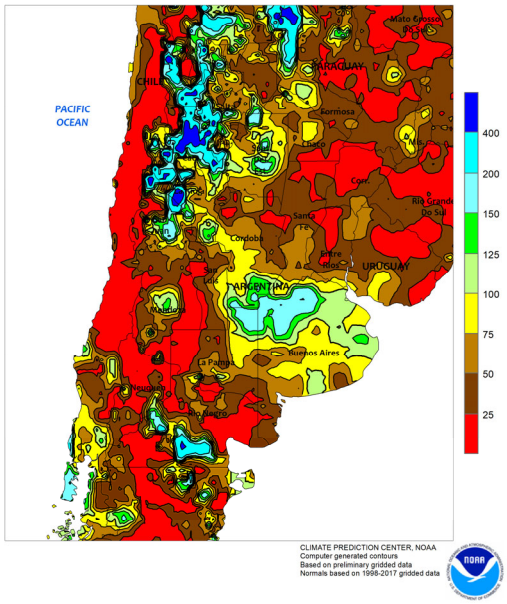
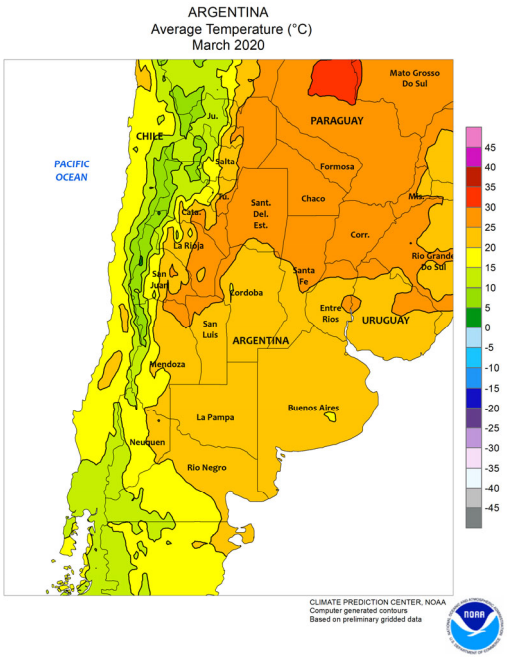
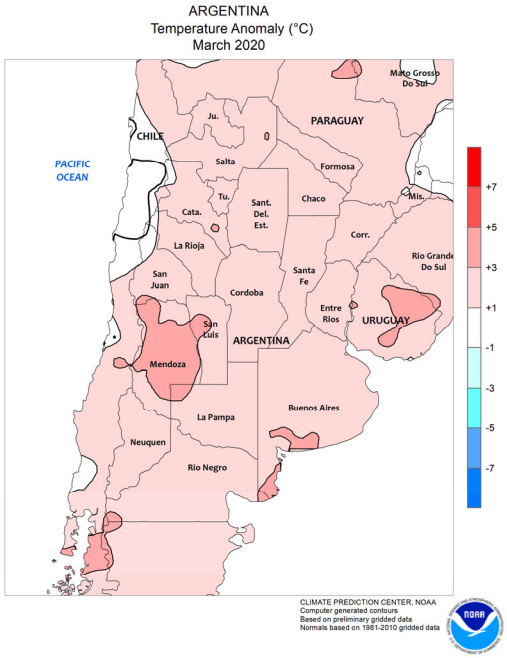


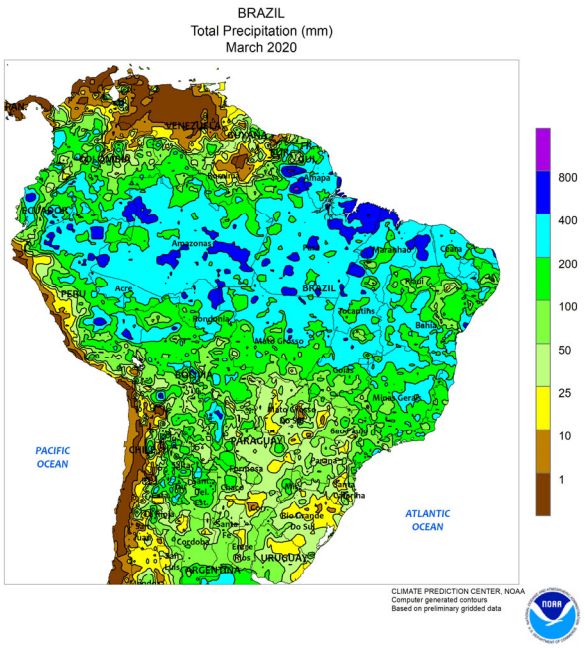


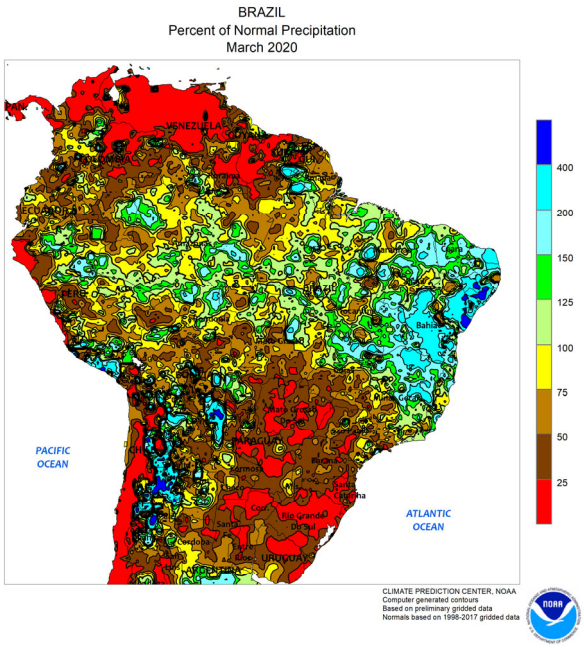


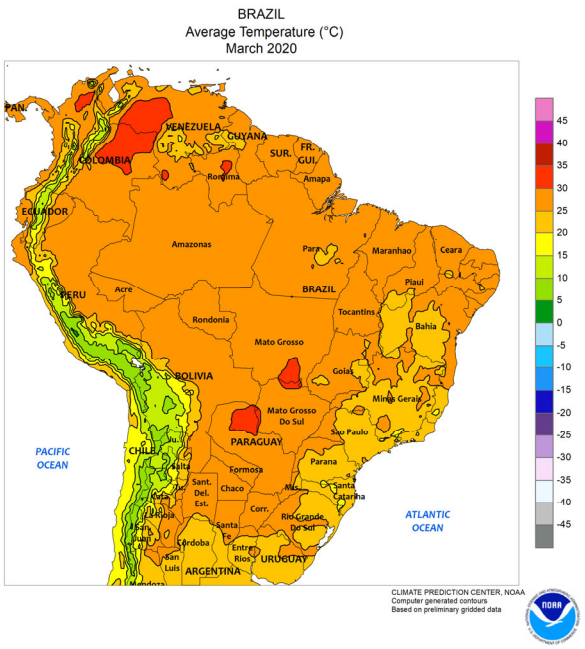


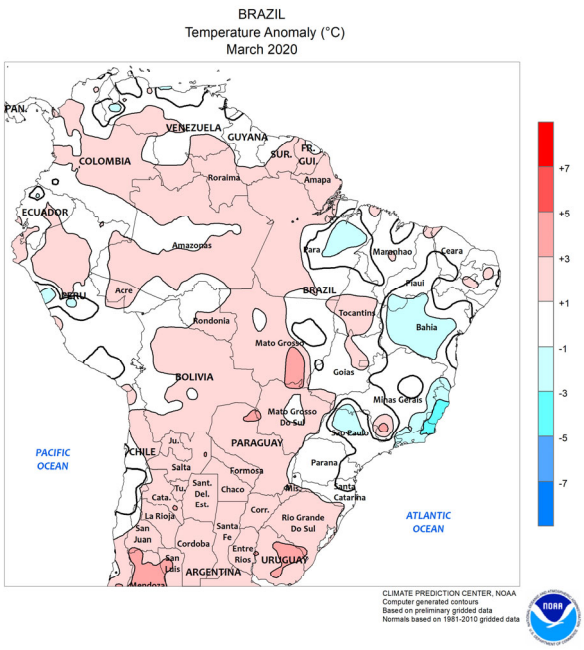
ARGENTINA

After an initial period of dryness that began in February, a wetter pattern brought needed rainfall for immature corn and soybeans in major production areas of central Argentina. The heaviest rain (monthly accumulations totaling 100 to more than 200 mm) was concentrated over the higher-yielding farming areas of northern Buenos Aires, northern La Pampa, and neighboring locations from Cordoba to Entre Rios; most other locations in the region recorded at least 50 mm. Similar amounts (greater than 100 mm total in March) were reported in north-central Argentina (notably Chaco and Formosa), increasing moisture for the upcoming winter grain season but raising concern for mature cotton. March temperatures averaged 2 to 3°C above normal, with daytime highs reaching the middle 30s (degrees C) on several days prior to the arrival of the wetter conditions, and infrequently afterwards. Despite seasonal cooling, temperatures stayed well above freezing through month's end.









BRAZIL

The drying trend that developed in February throughout southern Brazil intensified and expanded northward during March. The worsening drought lowered yield potential of later-planted soybeans and first-crop corn in Rio Grande do Sul. The encroaching dryness came too late in the growing season to significantly impact soybeans or other first-season crops from Parana to southern Mato Grosso; by month's end, however, moisture had become limited for germination and establishment of second-crop corn, increasing the importance of April rainfall in maintaining current yield prospects. A mid-month surge of unseasonable warmth, including several days with temperatures reaching the middle and upper 30s (degrees C), exacerbated stress on immature summer crops. Rainfall was nearer to normal (monthly accumulations of 50 to more than 100 mm) in northern Mato Grosso and Goias, while in the northeastern interior (western Bahia and points north and west) the trend of frequent, above-normal rainfall continued, maintaining high yield expectations for cotton, corn, and other actively growing crops.

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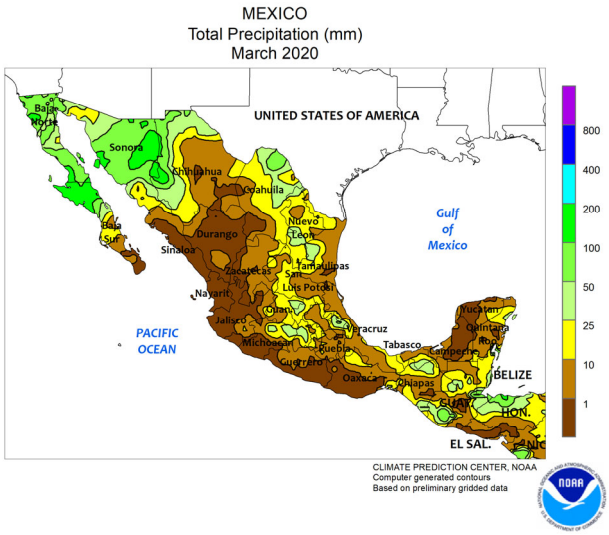
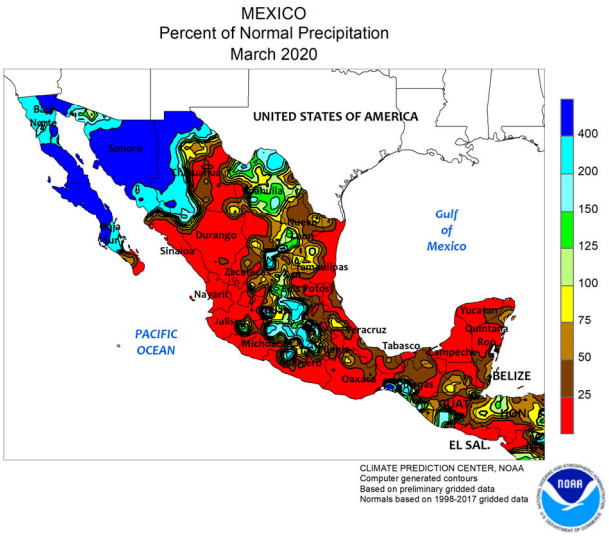
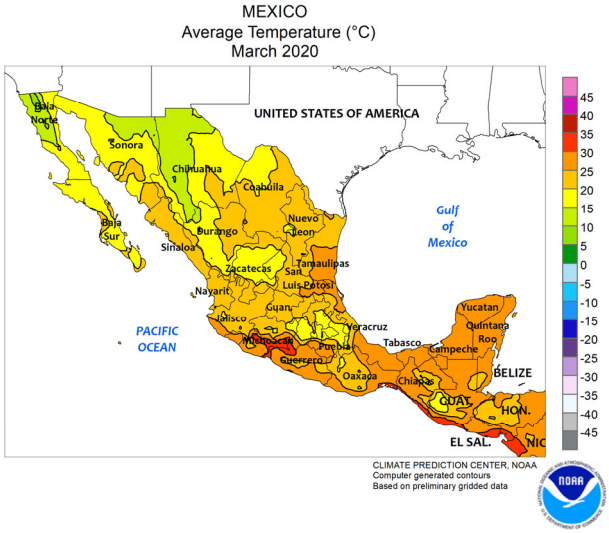
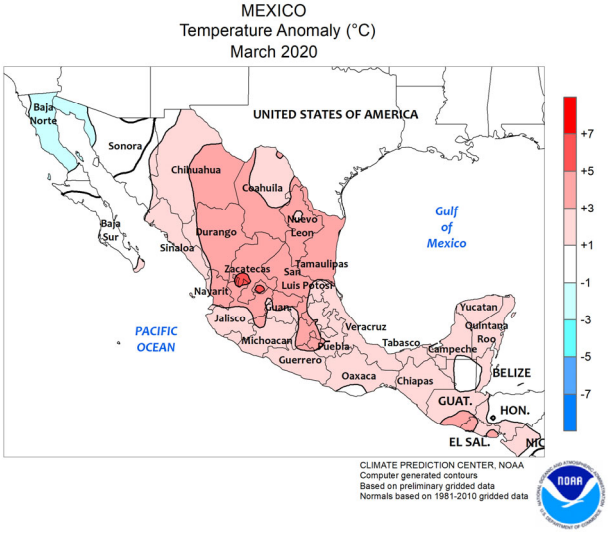




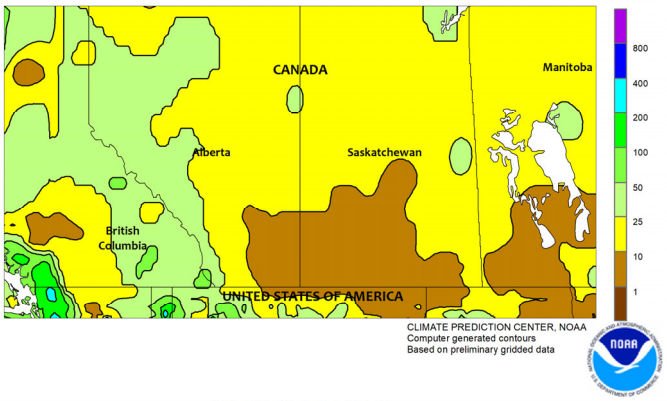




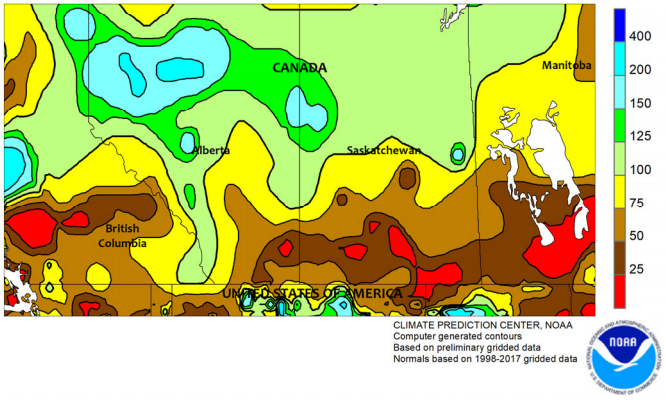
MEXICO

In March, heavy rainfall provided an unexpected boost to reservoirs in the far northwest. Total accumulations topping 25 mm (locally 50-100 mm or more) in Baja Norte, Sonora, and western Chihuahua helped to replenish moisture supplies for wheat; however, seasonable dryness continued in Sinaloa, maintaining the demand for irrigation of winter corn. Elsewhere, occasional showers benefited rainfed winter sorghum and reservoirs in the northeast (Coahuila to Tamaulipas), as well as winter wheat on sections of the southern plateau (Guanajuato and eastern Michoacan to Puebla). Showers were spotty elsewhere, with few other locations accumulating more than 25 mm. According to the government of Mexico, reservoirs were at 66 percent of capacity nationally as of March 31 and ranged from 56 to 68 percent of capacity in winter grain areas of the northwest (Sinaloa, Sonora, and Chihuahua).

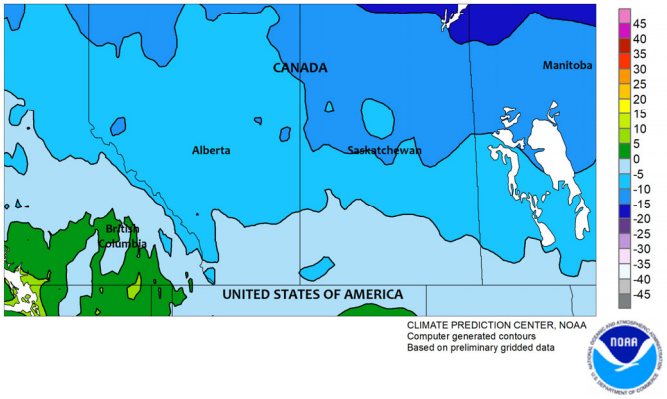
CANADIAN PRAIRIES
Total Precipitation (mm)
March 2020



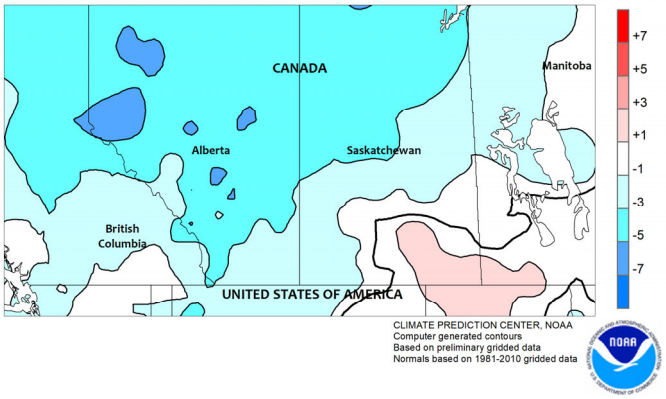
CANADIAN PRAIRIES
Percent of Normal Precipitation
March 2020



CANADIAN PRAIRIES
Average Temperature (°C)
March 2020

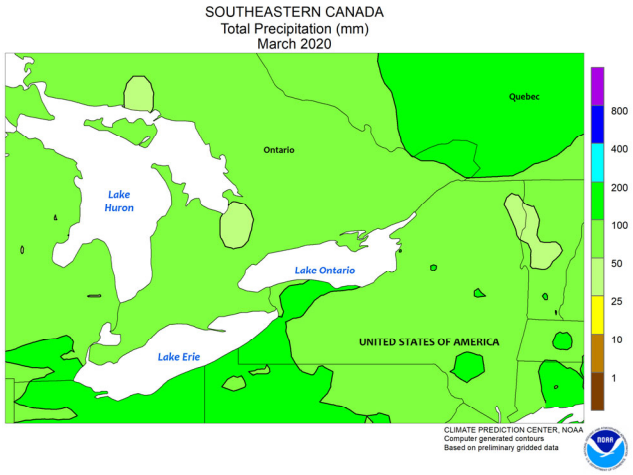


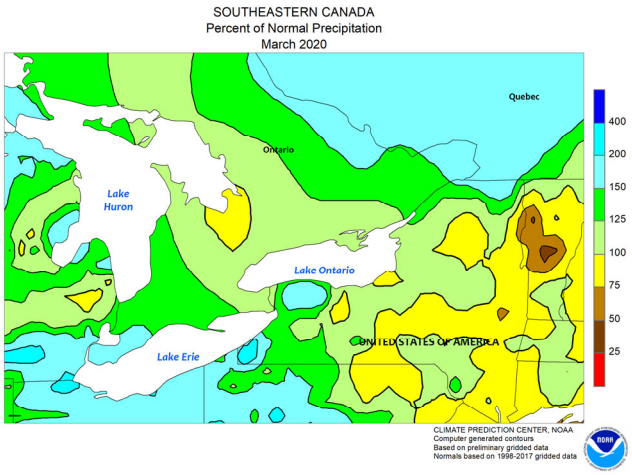
CANADIAN PRAIRIES
Temperature Anomaly (°C)
March 2020

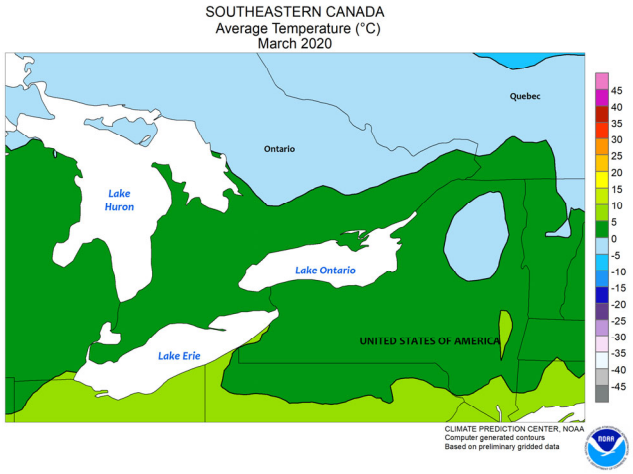


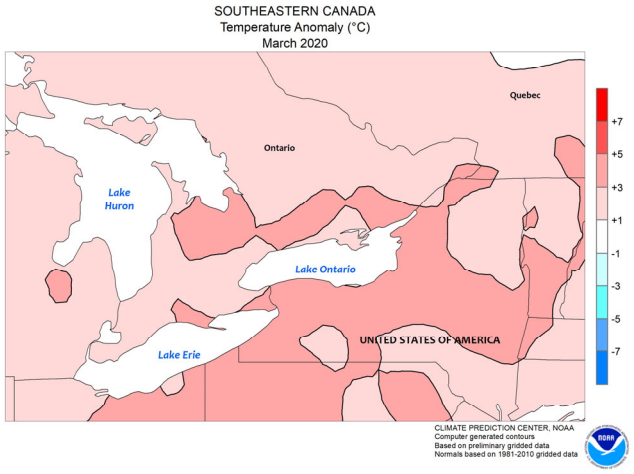
CANADIAN PRAIRIES

Winter-like temperatures prevailed across the region through the middle of March, before yielding to seasonal warming. Monthly average temperatures were several degrees C below normal in Alberta and northern farming areas of Saskatchewan, while near- to above-normal temperatures were recorded in the southeastern Prairies. However, the warmer conditions in the southeast helped to erode that region's snow cover, and an outbreak of bitter cold (nighttime lows dropping below -20°C) on March 20 may have led to some damage to overwintering wheat and pastures. Following that event, seasonal warming was evident and large sections of the southern Prairies were devoid of snow by March 31. A few locations recorded near- to above-normal precipitation during March (greater than 10 mm, total liquid equivalent), which allowed some locations to accumulate protective snow ahead of several cold outbreaks during the early part of the month.









SOUTHEASTERN CANADA

Throughout March, mild, occasionally wet weather favored overwintering grains and pastures across the region. Monthly average temperatures were 2 to 3°C above normal in most major farming areas in Ontario and Quebec, with daily average readings rising above freezing on the majority of days. Despite the warming, however, average temperatures were generally not high enough to allow winter wheat to begin breaking dormancy. Frequent precipitation, including a widespread heavy rain event at month's end, sustained high levels of soil moisture for wheat and pasture growth once temperatures reach sufficient levels. As of March 31, southern farming areas of both Ontario and Quebec were devoid of snow.

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United States Department of Agriculture

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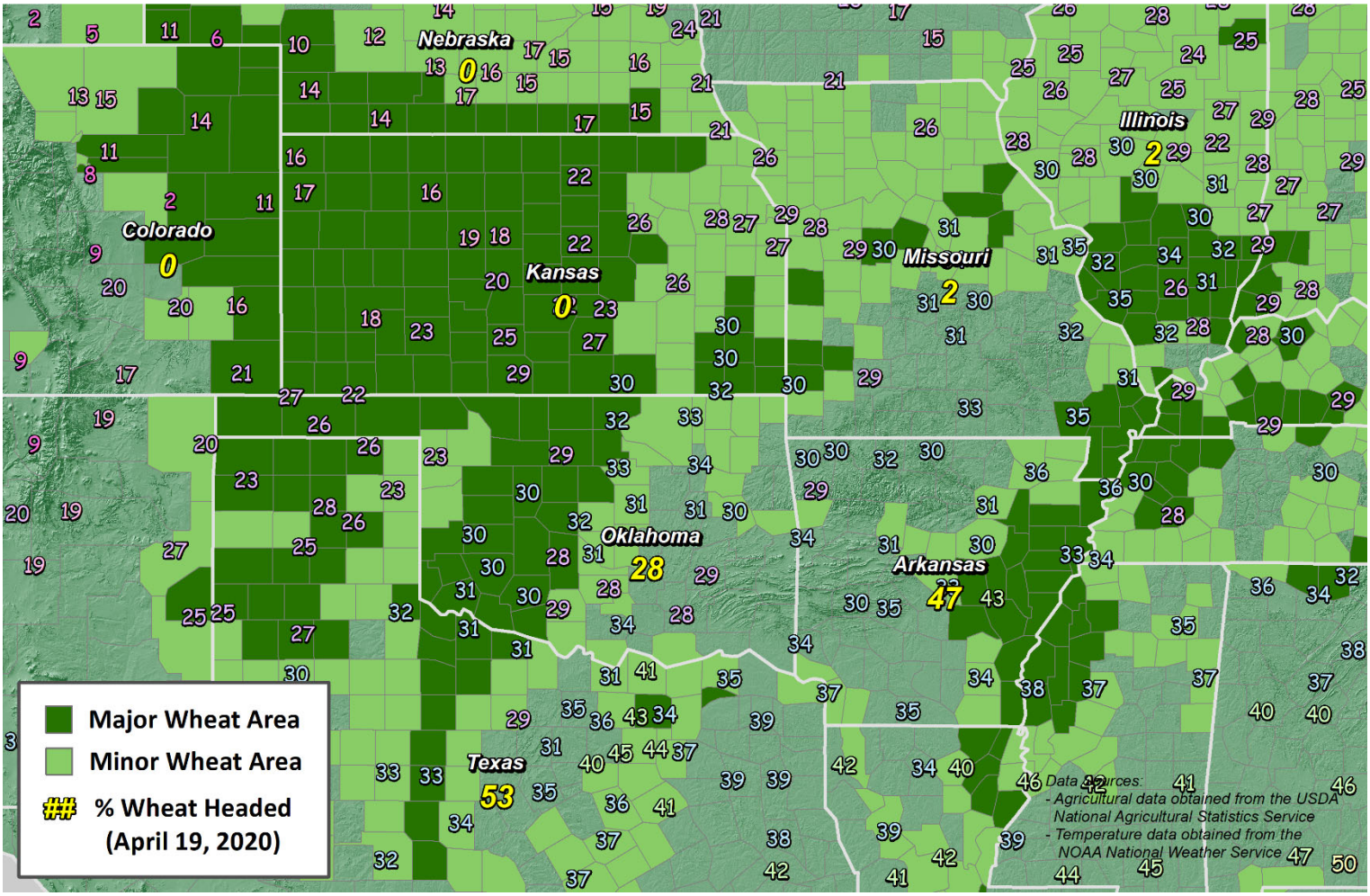
Unseasonably Cold Weather in Wheat Areas

Extreme Minimum Temperatures (°F)

April 13-15, 2020

(Updated - Apr 21, 2020)



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