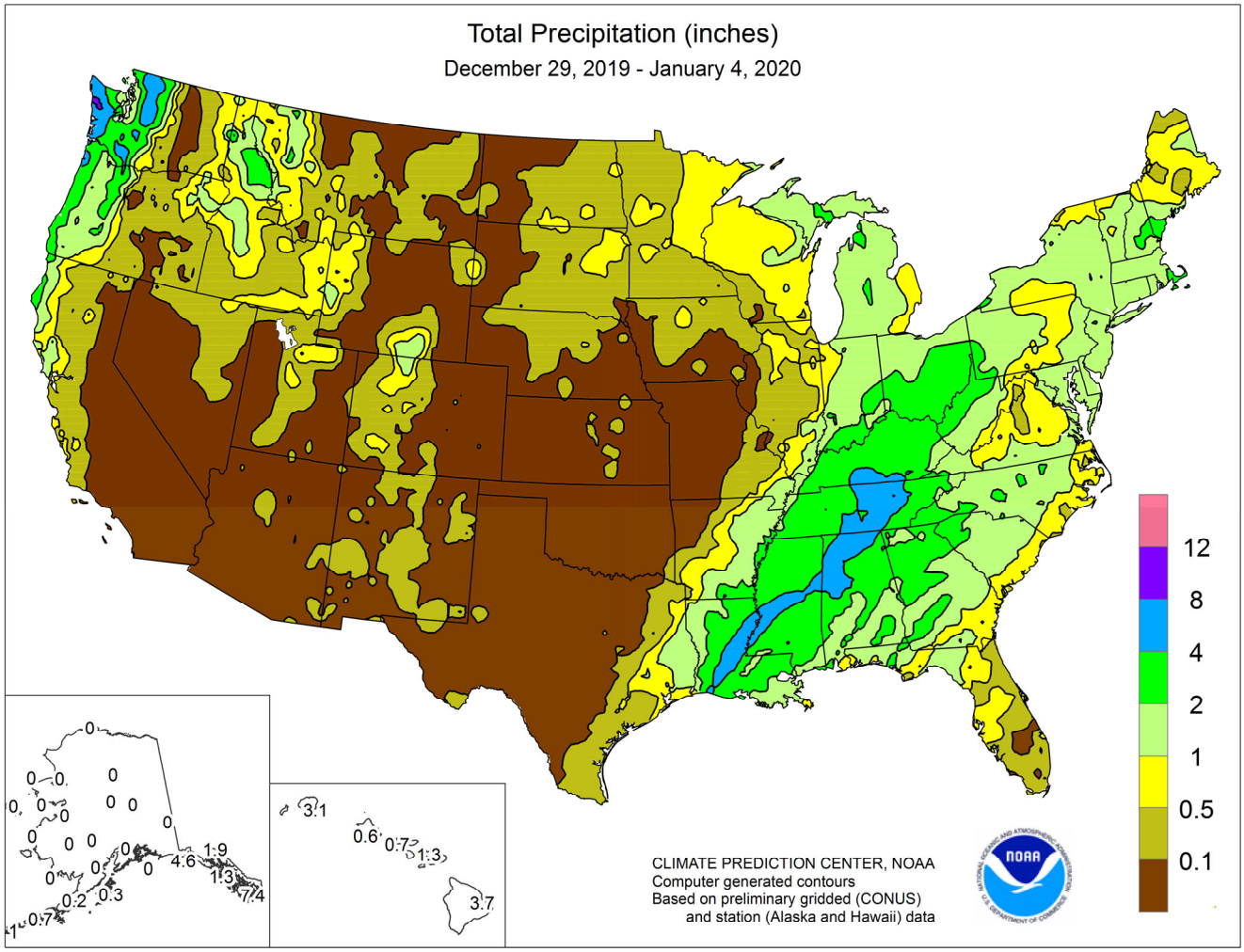
Volume 107, No. 1 http://www.usda.gov/oce/weather January 8, 2020

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

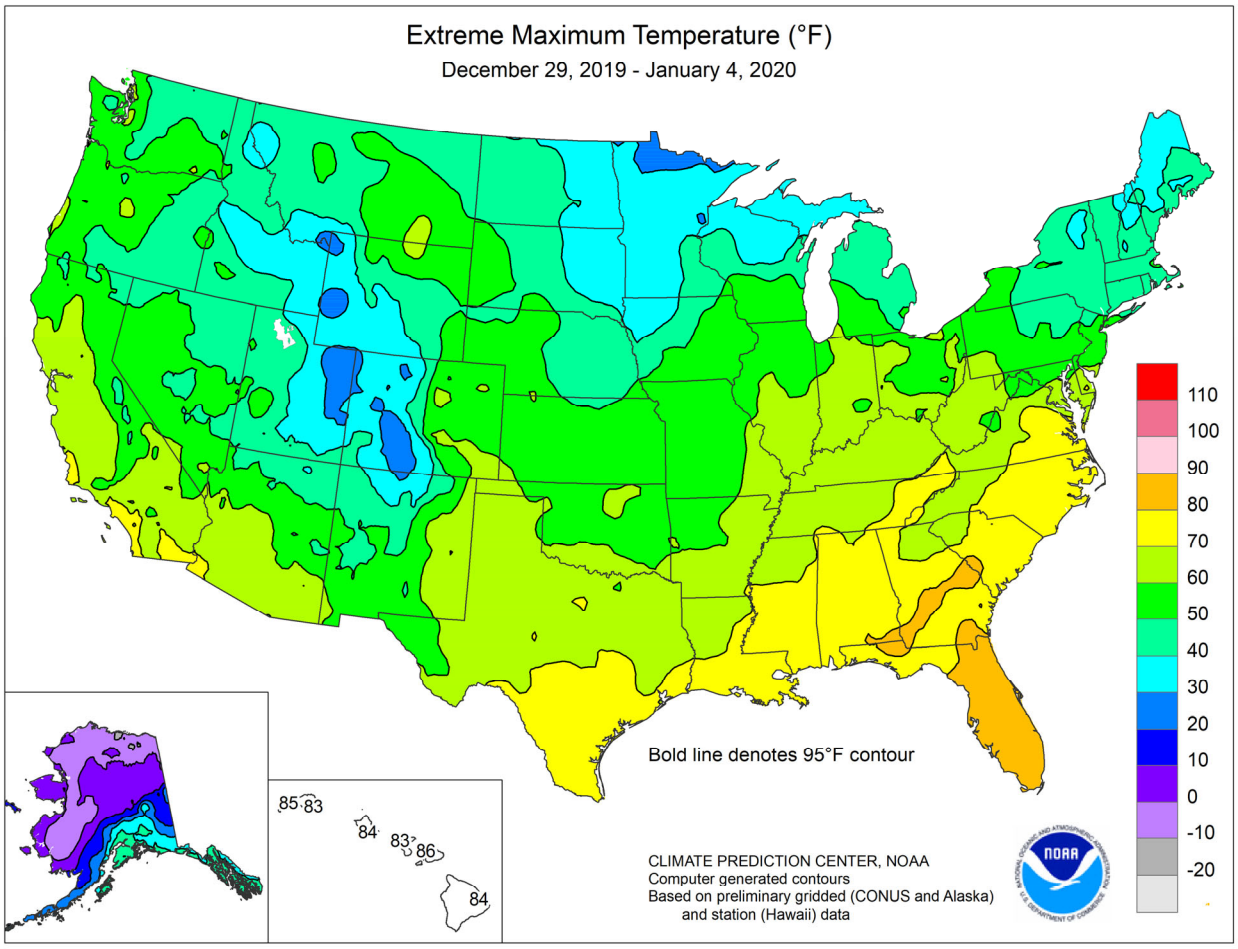
December 29, 2019 – January 4, 2020

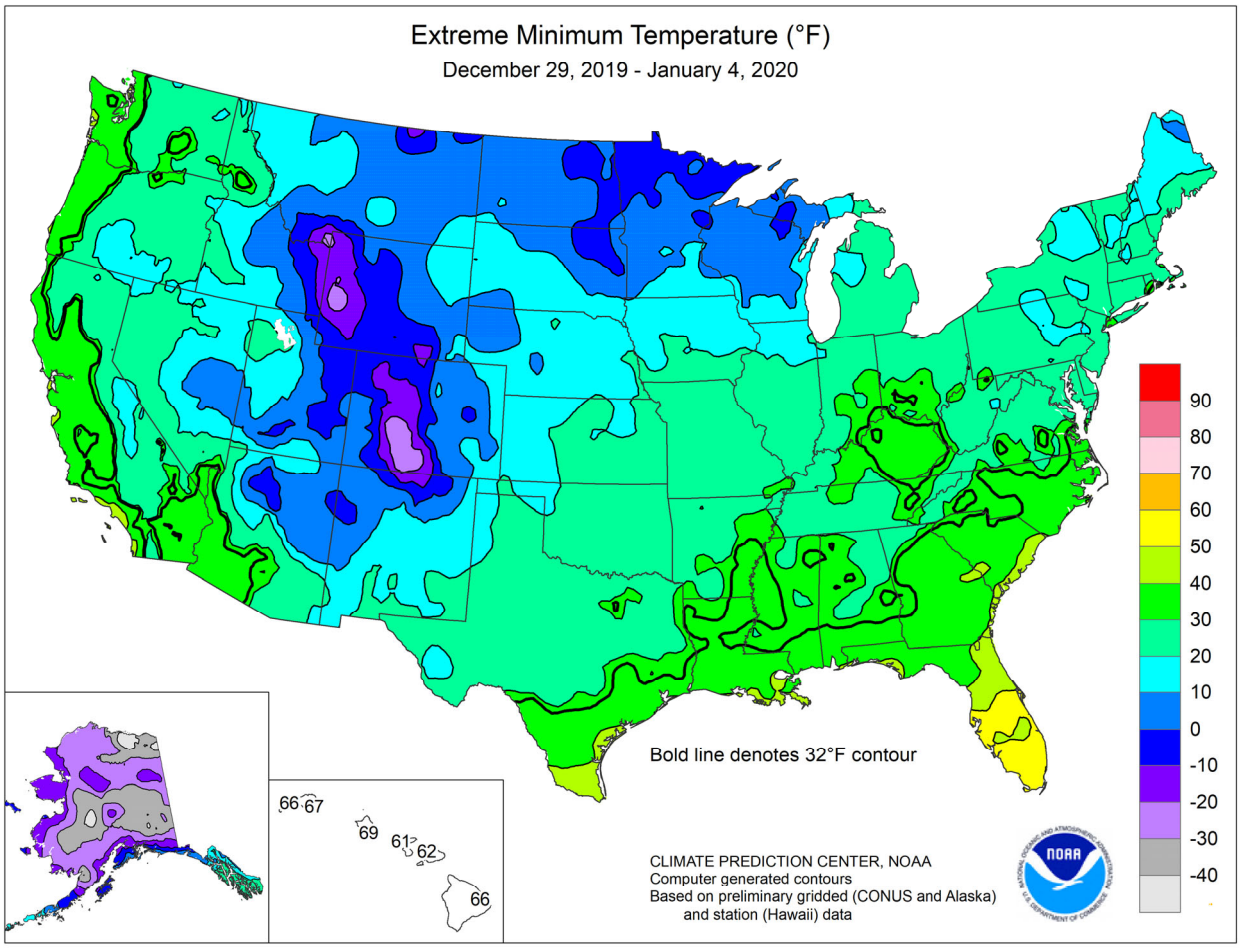
Highlights provided by USDA/WAOB

Some additional snow blanketed the **north-central U.S.**, but most of the remainder of the **nation's mid-section** experienced mild, dry weather. In contrast, significant precipitation fell along and east of a line from **coastal Texas to Wisconsin**. Rain was heavy enough in the **lower Mississippi Valley** and environs to spark lowland flooding. Meanwhile, precipitation in the **eastern Corn Belt** maintained muddy conditions in fields and feedlots. Snow remained on the ground from the **eastern Dakotas into the upper Great Lakes region**, hampering harvest

(Continued on page 3)

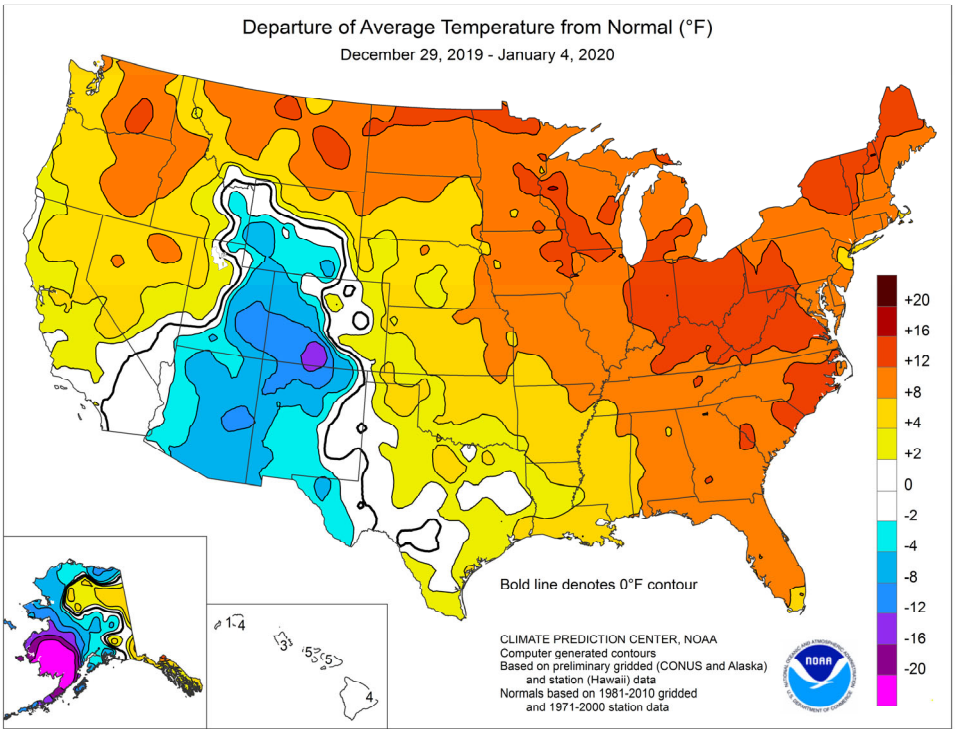
Contents


Extreme Maximum Temperature (°F)
December 29, 2019 - January 4, 2020
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
85 83
84
83
86
84
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Extreme Minimum Temperature (°F)
December 29, 2019 - January 4, 2020
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
66 67
69
61
62
66
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data

(Continued from front cover)

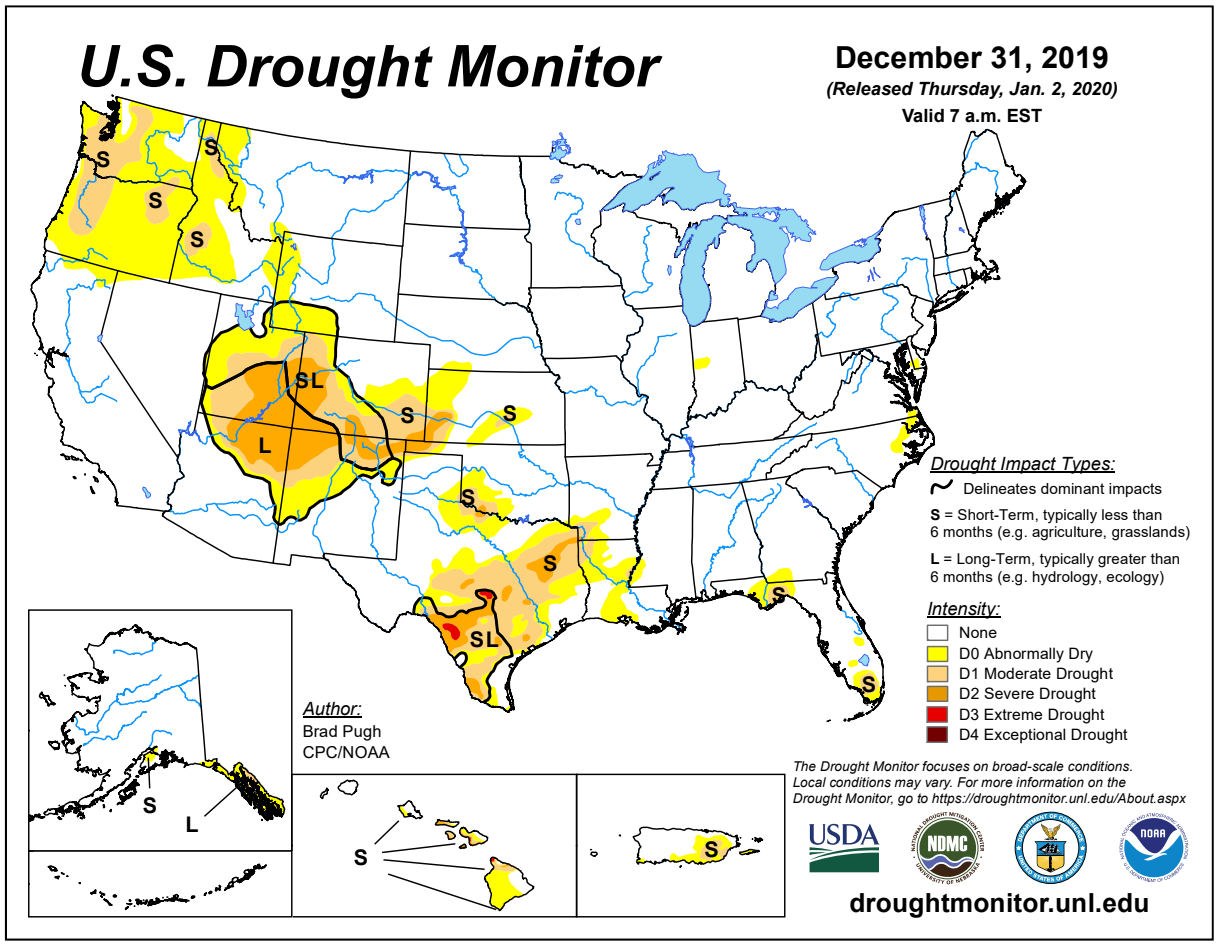
efforts. At the end of December, **North Dakota's** corn harvest was 48 percent complete, while producers in **South Dakota** had harvested 90 percent of their corn acreage. On the same date, the sunflower harvest was 66 percent complete in **North Dakota** and 87 percent complete in **South Dakota**. In the **West**, significant precipitation was confined to areas from the **northern Pacific Coast to the northern Rockies**, although **Northwestern** snowpack remained well below average. Elsewhere, dry weather returned across the **central and southern High Plains**, following the previous week's drought-easing precipitation. As 2019 ended and the new year began, mild weather continued across the **eastern half of the country** and developed in the **Far West**. Weekly temperatures averaged at least 10°F above normal across large sections of the **Midwestern, Mid-Atlantic, and Northeastern States**, and were as much as 10°F above normal across the **interior Northwest**. In contrast, chilly weather in the **Four Corners region** held temperatures at least 5°F below normal.

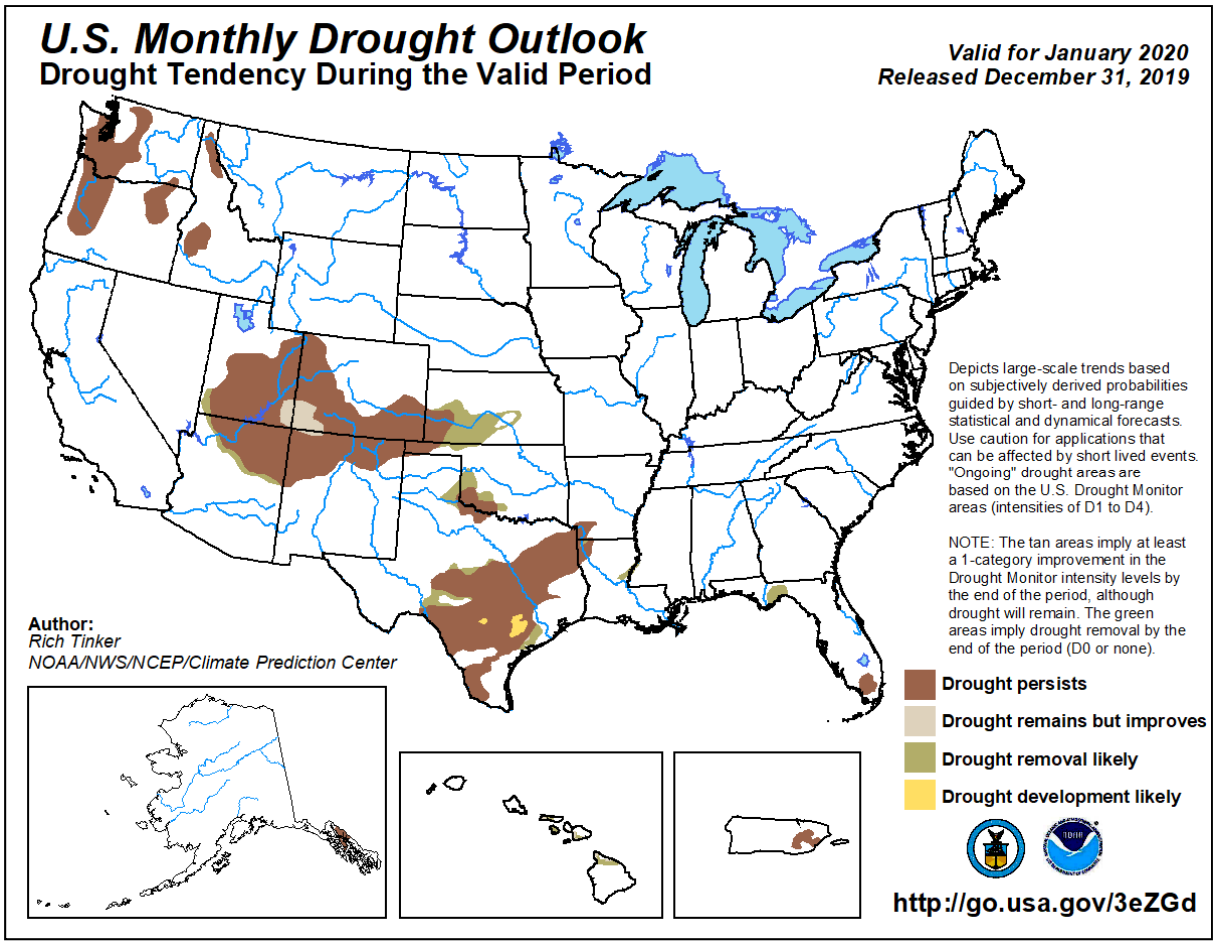


Fittingly, as the overall wet year of 2019 ended, heavy snow blanketed the **northern Plains** and **far upper Midwest**, while rain drenched parts of the **South**, **East**, and **lower Midwest**. In **South Dakota**, a multi-day (December 28-30) snow event dumped 15.0 inches in **Mitchell**, 10.1 inches in **Aberdeen**, and 10.0 inches in **Watertown**. Elsewhere, 3-day snowfall reached 12.3 inches in **Fargo, ND**, and 8.8 inches in **International Falls, MN**. Most of **Mitchell's** snow, 12.2 inches, fell on December 29. Other daily-record snowfall totals for the 29th included 9.4 inches in **Grand Forks, ND**, and 7.8 inches in **International Falls**. Elsewhere on December 29, **Duluth, MN**, clocked a wind gust to 63 mph amid a 3-day snowfall of 7.1 inches. **Midwestern** snow lingered into December 30, when daily-record amounts totaled 9.8 inches in **Marquette, MI**, and 8.2 inches in **Eau Claire, WI**. Farther south, record-setting rainfall totals for the 29th reached 2.53 inches in **Nashville, TN**; 2.39 inches in **London, KY**; and 1.73 inches in **Evansville, IN**. In **Michigan**, **Muskegon's** 2.42-inch total (6.1 inches of snow) from December 29-31 capped its wettest year on record. **Muskegon's** annual total of 47.97 inches was 143 percent of normal, surpassing its 2008 standard of 45.98 inches. Annual precipitation records were established in many other **Midwestern** locations, including **Rochester, MN** (55.16 inches; previously, 43.94 inches in 1990); **Grand Rapids, MI** (51.37 inches; previously, 48.80 inches in 2008); **Green Bay, WI** (48.63 inches; previously, 39.21 inches in 2018); and **Sioux Falls, SD** (39.54 inches; previously, 39.17 inches in 2018). At year's end, heavy precipitation began to overspread the **Pacific Northwest**, where **Quillayute, WA**, netted a daily-record sum of 3.89 inches on December 31. **Quillayute** received an additional 3.10 inches of rain during the first 4 days of 2020. By January 2, another heavy-rain event unfolded across the **South**, where daily-record amounts totaled 4.15 inches in **Jackson, MS**, and 3.42 inches in **Huntsville, AL**. The **Big Black River** near **Bentonia, MS**, crested on January 5, approximately 5.72 feet above flood stage but 1.75 feet below the highest level observed last year, on April 16. **Columbia, SC**, after completing its wettest December on record (9.31 inches, tying 2009), netted a daily-record rainfall of 1.46 inches on January 3. Meanwhile, some additional snow blanketed the **north-central U.S.**; **Watertown, SD**, measured a daily-record total of 3.5 inches on January 3.

Warmth in advance of the late-December storm resulted in numerous daily-record highs. December 29 featured record-setting highs in locations such as **Knoxville, TN** (78°F); **Montgomery, AL** (77°F); and **Muskegon, MI** (58°F). Along the **Atlantic Seaboard**, lingering warmth on the 30th led to daily-record highs in **Norfolk, VA** (78°F), and **Salisbury, MD** (72°F). The warmest year on record occurred in several **Eastern** communities, including **Key West, FL**, with an annual average temperature of 80.3°F; **Savannah, GA** (69.8°F); and **Elkins, WV** (53.5°F). Meanwhile, **Northwestern** warmth resulted in the highest New Year's Day temperatures on record in **Washington** locations such as **Ephrata** (54°F) and **Wenatchee** (51°F). From January 1-4, **Omak, WA**, posted four consecutive daily-record highs (49, 45, 49, and 48°F). Late in the week, warmth continued in the **Northwest** and returned across the **Southeast**. On January 3, daily-record highs climbed to 61°F in **Bellingham, WA**, and **Pendleton, OR**. On the same date, record-setting **Southeastern** highs soared to 85°F in **Jacksonville, FL**, and 82°F in **Augusta, GA**. **Jacksonville** also tied a monthly record, originally set on January 30, 2013. Elsewhere in **Florida**, the week ended on January 3-4 with consecutive daily-record highs in **Vero Beach** (86°F both days) and **Fort Pierce** (87°F both days). On the **northern High Plains**, daily-record highs for January 4 rose to 65°F in **Sheridan, WY**, and 58°F in **Miles City, MT**.

Frigid conditions lingered in **western Alaska**, while temperatures moderated across the remainder of the mainland. In **King Salmon**, the low of -41°F on January 2 represented the lowest reading in that location since February 2, 2006. Meanwhile, heavy precipitation fell across parts of **southern Alaska**. From December 31 – January 2, **Anchorage** received 10.2 inches of snow. From December 29 – January 1, **Valdez** reported 4.57 inches of precipitation, as well as 17.8 inches of snow. Weekly precipitation in **Yakutat** totaled 4.30 inches. Farther south, spotty **Hawaiian** showers accompanied a continuation of warm conditions. **Honolulu, Oahu**, posted a daily-record high of 85°F on December 29. **Lihue, Kauai**, ended 2019 with consecutive daily-record highs of 83°F on December 30-31. **Kahului, Maui**, completed its warmest December and warmest year on record, with average temperatures of 76.5 and 78.4°F, respectively. **Kahului's** previous records had been 75.9 and 77.8°F, respectively, with both marks having been set in 1980. Elsewhere, December rainfall at the state's major airport observation sites ranged from 1.69 inches (52 percent of normal in **Honolulu** to 11.19 inches (97 percent) in **Hilo**, on the **Big Island**.


U.S. Drought Monitor
December 31, 2019
(Released Thursday, Jan. 2, 2020)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brad Pugh
CPC/NOAA
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
USDA
NDMC
NOAA
droughtmonitor.unl.edu


U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period
Valid for January 2020
Released December 31, 2019
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely
Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center
http://go.usa.gov/3eZGd

National Weather Data for Selected Cities

Weather Data for the Week Ending January 4, 2020

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 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	62	44	72	32	53	13	3.89	3.09	2.36	8.44	175	3.34	982	90	49	0	1	4	3
	HUNTSVILLE	57	42	70	31	49	11	5.65	4.75	3.40	11.53	193	3.80	1027	85	67	0	2	4	2
	MOBILE	66	46	75	36	56	11	2.85	2.07	2.26	8.55	171	2.67	809	96	60	0	0	3	1
	MONTGOMERY	68	47	77	31	57	14	1.76	1.02	1.22	7.22	137	1.72	555	88	53	0	1	4	1
AK	ANCHORAGE	24	9	46	-9	17	-4	0.45	0.30	0.35	1.28	115	0.36	600	80	70	0	7	5	0
	BARROW	-9	-15	-2	-24	-12	-12	0.06	0.05	0.04	0.13	100	0.00	0	79	70	0	7	2	0
	FAIRBANKS	-2	-16	11	-35	-9	-12	0.00	-0.12	0.00	0.01	1	0.00	0	73	72	0	7	0	0
	JUNEAU	38	30	43	20	34	6	2.55	1.68	1.73	7.92	138	0.42	120	89	82	0	4	6	1
	KODIAK	32	14	46	-3	23	-8	0.52	-0.82	0.25	10.30	126	0.27	49	77	70	0	7	5	0
	NOME	4	-5	8	-10	-1	-15	0.03	-0.12	0.02	0.40	37	0.03	43	66	59	0	7	2	0
AZ	FLAGSTAFF	37	9	52	-7	23	-7	0.00	-0.31	0.00	3.14	160	0.00	0	87	38	0	7	0	0
	PHOENIX	61	41	68	35	51	4	0.00	-0.17	0.00	0.70	71	0.00	0	69	46	0	0	0	0
	PRESCOTT	48	24	62	17	36	1	0.00	-0.22	0.00	1.46	106	0.00	0	79	34	0	7	0	0
	TUCSON	60	35	70	29	48	3	0.02	-0.17	0.02	1.23	111	0.02	25	78	52	0	2	1	0
AR	FORT SMITH	55	34	60	28	45	9	0.00	-0.42	0.00	0.87	24	0.00	0	90	50	0	3	0	0
	LITTLE ROCK	55	35	61	20	45	7	0.94	0.31	0.55	2.19	44	0.58	232	92	46	0	3	3	1
CA	BAKERSFIELD	60	39	65	37	50	8	0.00	-0.16	0.00	1.53	184	0.00	0	82	72	0	0	0	0
	FRESNO	59	39	67	36	49	8	0.01	-0.27	0.01	2.35	160	0.00	0	90	79	0	0	1	0
	LOS ANGELES	67	51	73	47	59	9	0.00	-0.37	0.00	4.42	227	0.00	0	69	50	0	0	0	0
	REDDING	61	40	69	34	51	10	0.09	-0.81	0.05	7.69	152	0.04	11	88	66	0	0	2	0
	SACRAMENTO	58	38	63	33	48	7	0.34	-0.14	0.25	4.58	172	0.09	43	97	61	0	0	2	0
	SAN DIEGO	68	48	74	45	58	8	0.00	-0.29	0.00	4.05	281	0.00	0	82	54	0	0	0	0
	SAN FRANCISCO	58	47	61	41	53	9	0.47	-0.10	0.43	3.74	119	0.00	0	85	77	0	0	2	0
	STOCKTON	60	40	61	36	50	9	0.14	-0.21	0.13	3.48	177	0.01	7	91	84	0	0	2	0
CO	ALAMOSA	21	-19	29	-26	1	-18	0.00	-0.05	0.00	0.52	144	0.00	0	76	63	0	7	0	0
	CO SPRINGS	45	19	57	12	32	3	0.00	-0.07	0.00	0.32	70	0.00	0	58	20	0	7	0	0
	DENVER INTL	44	17	62	3	31	2	0.00	-0.06	0.00	0.22	63	0.00	0	62	34	0	7	0	0
	GRAND JUNCTION	30	14	35	11	22	-6	0.13	0.03	0.13	0.69	121	0.13	260	80	63	0	7	1	0
	PUEBLO	51	15	62	8	33	3	0.00	-0.07	0.00	0.31	72	0.00	0	69	33	0	7	0	0
CT	BRIDGEPORT	44	36	47	29	40	8	1.67	1.08	0.92	7.59	204	0.23	92	85	71	0	2	5	1
	HARTFORD	41	32	47	27	37	8	2.62	2.03	1.75	7.87	204	0.22	88	89	68	0	5	4	2
DC	WASHINGTON	56	41	66	32	49	14	1.44	0.91	0.60	3.86	118	0.56	255	93	60	0	1	4	1
DE	WILMINGTON	49	35	55	24	42	9	1.40	0.84	0.60	5.17	142	0.49	213	91	63	0	3	4	1
FL	DAYTONA BEACH	75	57	81	47	66	15	0.34	-0.13	0.32	3.66	126	0.32	160	97	57	0	0	2	0
	JACKSONVILLE	75	52	85	40	63	16	0.37	-0.13	0.26	2.68	94	0.07	32	89	52	0	0	3	0
	KEY WEST	82	74	85	71	78	18	0.00	-0.37	0.00	7.71	335	0.00	0	88	76	0	0	0	0
	MIAMI	82	68	87	61	75	17	0.87	0.57	0.80	6.50	281	0.06	46	86	55	0	0	3	1
	ORLANDO	79	61	85	53	70	17	0.88	0.51	0.47	5.42	220	0.41	273	84	62	0	0	2	0
	PENSACOLA	71	52	79	42	61	14	0.99	0.26	0.62	8.05	188	0.87	281	91	69	0	0	4	1
	TALLAHASSEE	72	51	78	34	61	15	0.43	-0.35	0.25	3.84	87	0.29	88	87	57	0	0	4	0
	TAMPA	76	63	81	56	70	17	1.04	0.69	1.04	4.76	194	1.04	693	84	56	0	0	1	1
	WEST PALM BEACH	82	67	88	56	75	18	0.11	-0.36	0.05	9.40	281	0.03	15	83	58	0	0	3	0
GA	ATHENS	60	44	70	37	52	13	2.63	1.96	1.18	8.07	202	2.31	825	83	57	0	0	5	2
	ATLANTA	61	45	71	36	53	13	2.24	1.57	0.97	7.18	175	2.03	725	81	60	0	0	5	2
	AUGUSTA	68	46	82	37	57	16	1.85	1.22	1.21	9.51	279	1.38	511	85	55	0	0	5	1
	COLUMBUS	67	48	77	33	57	14	1.37	0.64	1.05	9.38	200	1.32	440	90	46	0	0	5	1
	MACON	69	47	81	35	58	16	1.18	0.47	0.72	9.54	226	0.82	273	88	46	0	0	5	1
	SAVANNAH	71	52	80	40	61	17	0.61	0.04	0.27	7.09	232	0.27	113	85	53	0	0	3	0
HI	HILO	83	67	85	66	75	15	0.94	-0.48	0.43	11.71	106	0.52	90	82	71	0	0	6	0
	HONOLULU	83	70	85	68	77	15	0.16	-0.32	0.16	1.91	63	0.16	84	77	68	0	0	1	0
	KAHULUI	83	65	87	62	74	13	0.56	-0.03	0.35	2.77	83	0.56	224	82	73	0	0	2	0
	LIHUE	82	71	84	67	76	15	0.43	-0.36	0.32	6.56	128	0.41	124	87	79	0	0	4	0
ID	BOISE	42	32	50	28	37	7	0.26	0.04	0.20	1.43	97	0.20	200	79	64	0	5	3	0
	LEWISTON	48	37	55	33	43	10	0.33	0.16	0.28	1.41	126	0.05	71	75	62	0	0	2	0
	POCATELLO	35	20	42	10	27	1	0.08	-0.11	0.06	0.98	83	0.06	75	82	70	0	7	3	0
IL	CHICAGO/O'HARE	42	31	57	21	37	11	1.15	0.83	0.95	1.59	62	0.03	23	88	70	0	4	4	1
	MOLINE	42	29	59	21	36	11	0.23	-0.07	0.12	1.74	75	0.16	133	84	67	0	5	4	0
	PEORIA	44	30	60	22	37	11	1.12	0.82	1.00	2.54	101	0.11	92	88	69	0	5	4	1
	ROCKFORD	40	28	57	15	34	10	0.79	0.53	0.61	1.70	78	0.02	18	90	74	0	5	4	1
	SPRINGFIELD	45	32	61	24	38	10	0.38	0.04	0.35	0.75	28	0.03	21	89	67	0	5	3	0
IN	EVANSVILLE	50	38	64	30	44	12	2.47	1.99	1.73	3.67	98	0.73	384	81	68	0	2	5	1
	FORT WAYNE	45	34	61	27	40	13	1.55	1.17	0.94	2.85	98	0.02	13	90	72	0	4	4	2
	INDIANAPOLIS	49	37	62	30	43	14	1.74	1.31	1.07	3.49	109	0.47	261	92	69	0	3	5	1
	SOUTH BEND	45	32	61	24	38	11	1.51	1.09	0.70	2.15	66	0.11	65	86	75	0	5	4	2
IA	BURLINGTON	44	29	59	22	36	10	0.09	-0.17	0.08	1.04	47	0.01	9	87	65	0	5	2	0
	CEDAR RAPIDS	39	24	55	15	32	9	0.10	-0.08	0.07	1.18	76	0.03	43	97	75	0	7	2	0
	DES MOINES	40	26	52	21	33	9	0.01	-0.16	0.01	1.08	77	0.01	14	85	74	0	7	1	0
	DUBUQUE	38	24	54	14	31	9	0.01	-0.20	0.01	0.48	27	0.00	0	92	82	0	7	1	0
	SIOUX CITY	35	22	41	14	28	5	0.43	0.33	0.41	1.86	262	0.02	40	88	77	0	7	3	0
	WATERLOO	40	25	53	16	32	10	0.19	0.06	0.14	1.05	90	0.14	233	85	74	0	6	4	0
KS	CONCORDIA	45	28	50	24	37	8	0.07	-0.06	0.07	1.98	215	0.00	0	75	58	0	7	1	0
	DODGE CITY	46	25	54	20	36	5	0.00	-0.13	0.00	1.33	160	0.00	0	83	49	0	7	0	0
	GOODLAND	45	21	57	15	33	4	0.00	-0.08	0.00	0.30	68	0.00	0	76	51	0	7	0	0
	TOPEKA	49	29	59	24	39	10	0.00	-0.18	0.00	2.23	150	0.00	0	72	55	0	6	0	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 4, 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 DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	50	28	56	22	39	8	0.01	-0.18	0.01	1.79	125	0.01	13	77	56	0	6	1	0
KY	JACKSON	54	41	61	32	47	13	3.19	2.58	1.93	7.27	161	1.00	400	92	63	0	1	5	1
	LEXINGTON	54	42	64	35	48	15	2.70	2.09	1.78	6.83	160	0.89	356	76	63	0	0	5	2
	LOUISVILLE	54	43	65	36	48	15	2.56	2.01	1.51	4.63	118	0.99	450	80	60	0	0	5	2
	PADUCAH	53	39	67	28	46	13	1.86	1.29	1.02	2.95	64	0.84	365	78	58	0	2	3	1
LA	BATON ROUGE	65	46	77	36	55	10	2.82	1.92	1.95	5.41	96	2.58	697	92	53	0	0	4	2
	LAKE CHARLES	66	47	74	37	57	11	2.29	1.48	1.64	2.97	60	1.99	569	88	52	0	0	3	1
	NEW ORLEANS	69	52	78	47	61	14	2.23	1.45	1.85	5.10	94	2.22	673	78	61	0	0	4	1
	SHREVEPORT	59	39	67	32	49	7	1.17	0.45	0.84	2.64	54	0.84	280	86	51	0	1	2	1
ME	CARIBOU	32	21	38	11	27	9	0.42	-0.10	0.38	2.96	87	0.04	18	86	68	0	7	2	0
	PORTLAND	40	30	46	25	35	9	2.54	1.86	1.66	8.36	185	0.18	64	81	63	0	5	4	2
MD	BALTIMORE	54	39	62	25	46	13	1.27	0.70	0.60	4.02	112	0.44	183	86	68	0	2	4	1
MA	BOSTON	47	37	57	34	42	11	1.77	1.16	1.26	5.96	149	0.13	50	75	57	0	0	4	1
	WORCESTER	38	30	44	27	34	7	2.02	1.37	1.45	7.28	179	0.27	100	92	69	0	5	4	1
MI	ALPENA	37	29	45	26	33	9	0.92	0.61	0.45	2.40	122	0.02	15	88	68	0	7	4	0
	GRAND RAPIDS	43	31	54	21	37	10	2.14	1.79	1.06	3.62	127	0.00	0	87	66	0	4	3	2
	HOUGHTON LAKE	35	27	41	21	31	8	1.99	1.72	1.41	3.26	175	0.02	18	84	76	0	7	4	1
	LANSING	42	31	52	24	36	10	2.40	2.12	1.30	3.82	168	0.00	0	83	74	0	4	3	2
	MUSKEGON	43	33	58	24	38	11	2.37	1.98	1.40	3.49	125	0.01	6	80	70	0	4	4	2
	TRAVERSE CITY	39	31	45	20	35	9	1.69	1.23	1.15	3.20	112	0.00	0	86	63	0	5	3	2
MN	DULUTH	29	18	34	6	23	7	0.81	0.69	0.71	3.97	397	0.06	100	87	81	0	7	5	1
	INT'L FALLS	24	13	27	-3	18	6	0.62	0.51	0.51	1.19	159	0.03	60	89	78	0	7	5	1
	MINNEAPOLIS	34	23	42	13	29	10	0.82	0.67	0.42	1.84	172	0.00	0	86	77	0	6	2	0
	ROCHESTER	32	21	42	11	26	8	0.34	0.21	0.19	1.24	115	0.01	17	87	81	0	7	3	0
	ST. CLOUD	30	19	37	6	24	8	2.91	2.80	2.57	3.94	532	0.02	40	91	75	0	6	3	1
MS	JACKSON	62	42	74	33	52	10	5.36	4.47	4.15	10.28	180	4.43	1197	86	53	0	0	3	2
	MERIDIAN	64	43	76	31	53	11	3.56	2.68	2.82	7.29	128	3.33	900	87	58	0	1	3	2
	TUPELO	59	42	68	33	51	13	3.04	2.10	1.82	8.33	128	2.29	603	85	63	0	0	3	2
MO	COLUMBIA	47	32	57	26	40	10	0.05	-0.25	0.05	1.63	63	0.00	0	80	55	0	3	1	0
	KANSAS CITY	47	29	58	22	38	9	0.00	-0.21	0.00	1.73	100	0.00	0	80	54	0	6	0	0
	SAINT LOUIS	50	35	62	29	43	12	0.79	0.43	0.79	1.91	63	0.00	0	74	63	0	2	1	1
	SPRINGFIELD	48	31	57	26	40	8	0.00	-0.35	0.00	1.31	40	0.00	0	80	66	0	3	0	0
MT	BILLINGS	44	25	56	14	35	9	0.02	-0.11	0.02	0.17	23	0.02	33	68	34	0	5	1	0
	BUTTE	36	16	42	2	26	5	0.00	-0.09	0.00	0.11	19	0.00	0	79	55	0	7	0	0
	CUT BANK	41	20	48	6	30	7	0.00	-0.06	0.00	0.07	19	0.00	0	82	46	0	6	0	0
	GLASGOW	33	13	46	0	23	5	0.03	-0.04	0.01	0.39	95	0.03	75	83	73	0	7	3	0
	GREAT FALLS	43	23	50	14	33	8	0.00	-0.13	0.00	0.17	23	0.00	0	68	39	0	5	0	0
	HAVRE	41	22	52	6	31	10	0.12	0.03	0.12	0.46	84	0.12	300	81	75	0	7	1	0
	MISSOULA	35	25	43	19	30	5	0.53	0.34	0.32	1.05	85	0.38	475	98	84	0	7	6	0
NE	GRAND ISLAND	36	23	44	16	30	4	0.02	-0.07	0.02	1.44	206	0.00	0	75	65	0	7	1	0
	LINCOLN	42	23	47	18	32	6	0.00	-0.12	0.00	2.57	279	0.00	0	80	62	0	7	0	0
	NORFOLK	37	22	45	14	29	5	0.21	0.13	0.20	1.08	157	0.01	25	83	69	0	7	2	0
	NORTH PLATTE	40	17	54	8	28	2	0.22	0.15	0.21	0.96	218	0.01	25	87	58	0	7	2	0
	OMAHA	40	24	47	20	32	7	0.22	0.11	0.22	2.12	216	0.00	0	88	66	0	7	1	0
	SCOTTSBLUFF	41	21	57	9	31	5	0.00	-0.09	0.00	0.34	57	0.00	0	81	60	0	7	0	0
	VALENTINE	38	20	53	12	29	5	0.21	0.16	0.20	0.89	247	0.00	0	76	63	0	7	2	0
NV	ELY	40	14	51	4	27	0	0.10	-0.01	0.09	0.63	115	0.09	180	82	67	0	7	2	0
	LAS VEGAS	55	38	61	33	47	5	0.00	-0.08	0.00	0.93	211	0.00	0	62	42	0	0	0	0
	RENO	52	31	58	26	41	9	0.02	-0.13	0.02	1.70	179	0.00	0	77	59	0	4	1	0
	WINNEMUCCA	47	26	53	21	36	7	0.04	-0.10	0.04	1.35	153	0.04	57	76	60	0	7	1	0
NH	CONCORD	38	27	41	23	32	7	1.84	1.37	1.27	5.69	180	0.28	140	90	72	0	7	4	1
NJ	NEWARK	46	35	52	26	41	8	1.10	0.50	0.58	6.56	171	0.13	50	88	62	0	2	4	1
NM	ALBUQUERQUE	41	23	50	15	32	-2	0.00	-0.09	0.00	0.30	57	0.00	0	65	38	0	7	0	0
NY	ALBANY	42	32	47	26	37	10	1.73	1.32	0.74	4.88	172	0.32	188	81	63	0	3	4	2
	BINGHAMTON	38	28	43	23	33	7	0.94	0.52	0.46	4.08	128	0.22	129	92	76	0	6	4	0
	BUFFALO	43	33	55	29	38	10	1.69	1.13	0.89	5.56	138	0.20	91	84	66	0	5	4	1
	ROCHESTER	43	32	52	27	37	9	1.38	0.98	0.76	3.80	131	0.25	156	81	71	0	5	4	1
	SYRACUSE	43	31	51	25	37	10	1.61	1.18	0.75	4.56	138	0.42	233	84	67	0	5	4	1
NC	ASHEVILLE	56	39	65	32	48	13	1.29	0.72	0.58	5.18	143	0.90	375	80	62	0	2	5	1
	CHARLOTTE	61	44	70	32	52	13	1.45	0.87	0.52	6.50	190	1.19	476	87	52	0	1	4	1
	GREENSBORO	59	41	71	35	50	14	1.74	1.21	0.84	5.37	164	1.44	655	91	63	0	0	4	1
	HATTERAS	66	51	73	38	59	16	1.09	0.21	0.72	7.02	142	0.72	195	88	61	0	0	3	1
	RALEIGH	63	43	76	35	53	15	2.17	1.60	1.36	5.44	166	2.08	867	86	60	0	0	4	1
	WILMINGTON	68	49	77	39	59	17	0.87	0.21	0.60	4.47	110	0.60	214	91	49	0	0	3	1
ND	BISMARCK	33	16	44	2	24	7	0.26	0.19	0.16	0.73	152	0.10	250	87	74	0	7	3	0
	DICKINSON	33	19	41	11	26	6	0.08	0.03	0.06	0.08	22	0.08	267	89	64	0	7	2	0
	FARGO	27	11	34	-4	19	4	0.31	0.20	0.23	1.31	208	0.08	133	90	81	0	7	3	0
	GRAND FORKS	23	9	32	-3	16	2	0.22	0.12	0.15	0.73	122	0.06	120	92	78	0	7	3	0
	JAMESTOWN	30	14	40	2	22	6	0.03	-0.06	0.02	0.37	77	0.02	50	96	77	0	7	2	0
	WILLISTON	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0	0	0	0
OH	AKRON-CANTON	48	34	60	27	41	12	1.97	1.54	1.07	4.41	140	0.59	328	90	80	0	3	6	1
	CINCINNATI	51	39	62	33	45	14	2.26	1.76	1.02	4.79	137	1.20	571	79	73	0	0	5	2
	CLEVELAND	48	35	61	28	42	13	1.08	0.65	0.53	3.27	99	0.41	241	86	69	0	3	5	1
	COLUMBUS	49	37	58	32	43	12	2.50	2.07	1.21	3.94	127	1.13	628	80	72	0	1	5	2
	DAYTON	49	38	61	32	44	15	2.48	2.03	1.16	4.45	136	1.14	600	88	69	0	1	5	2
	MANSFIELD	47	35	58	27	41	13	1.87	1.41	1.10	4.06	118	0.49	258	96	72	0	3	5	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 4, 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 DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	47	35	62	27	41	14	1.54	1.18	1.02	2.47	89	0.02	13	76	67	0	2	4	1
	YOUNGSTOWN	47	33	60	27	40	12	1.61	1.20	0.68	4.63	148	0.56	329	82	72	0	4	5	1
OK	OKLAHOMA CITY	52	31	57	23	41	5	0.00	-0.28	0.00	0.67	34	0.00	0	84	42	0	5	0	0
	TULSA	54	35	58	28	44	9	0.00	-0.30	0.00	0.96	38	0.00	0	69	51	0	2	0	0
OR	ASTORIA	52	43	61	41	47	8	2.68	1.12	1.07	11.92	108	1.35	214	94	85	0	0	7	1
	BURNS	42	26	45	22	34	8	0.06	-0.15	0.06	1.39	100	0.06	67	84	75	0	7	1	0
	EUGENE	53	39	61	35	46	9	0.96	-0.26	0.36	5.75	65	0.56	114	91	83	0	0	4	0
	MEDFORD	47	36	56	29	42	6	0.88	0.47	0.51	3.02	98	0.19	112	95	73	0	2	4	1
	PENDLETON	50	37	61	31	43	10	0.15	-0.08	0.12	0.90	57	0.12	120	73	61	0	3	2	0
	PORTLAND	54	42	62	40	48	11	0.67	-0.17	0.26	4.71	78	0.45	132	81	72	0	0	4	0
	SALEM	52	41	59	39	47	10	1.04	0.10	0.40	5.50	80	0.58	153	89	78	0	0	4	0
PA	ALLENTOWN	45	32	52	20	39	9	1.06	0.51	0.57	3.71	102	0.30	130	81	68	0	3	5	1
	ERIE	47	33	61	28	40	10	1.28	0.78	0.41	5.21	133	0.33	165	81	67	0	4	6	0
	MIDDLETOWN	47	34	52	23	41	10	1.01	0.55	0.37	3.97	116	0.32	168	90	60	0	3	4	0
	PHILADELPHIA	48	36	54	27	42	9	1.35	0.79	0.61	5.58	158	0.36	157	87	75	0	2	4	1
	PITTSBURGH	49	34	60	28	41	11	2.04	1.61	0.97	4.59	151	1.24	689	95	66	0	4	7	2
	WILKES-BARRE	44	32	48	24	38	9	0.89	0.52	0.27	2.88	107	0.38	253	87	62	0	3	5	0
	WILLIAMSPORT	44	32	50	20	38	9	0.83	0.40	0.31	3.15	101	0.35	194	92	72	0	3	5	0
RI	PROVIDENCE	45	35	50	29	40	9	1.83	1.14	1.38	8.27	187	0.15	54	89	67	0	1	4	1
SC	CHARLESTON	68	50	77	41	59	15	0.78	0.17	0.64	6.67	191	0.09	35	88	55	0	0	3	1
	COLUMBIA	66	46	77	34	56	15	1.99	1.32	1.52	11.05	302	1.72	614	83	56	0	0	5	1
	FLORENCE	68	48	79	39	58	17	1.82	1.15	0.77	7.58	202	0.90	321	85	44	0	0	5	2
	GREENVILLE	59	41	69	30	50	11	2.81	2.13	1.45	9.49	229	2.47	882	87	53	0	1	4	2
SD	ABERDEEN	31	11	37	-3	21	3	0.38	0.30	0.25	0.96	229	0.12	300	86	78	0	7	4	0
	HURON	32	14	38	4	23	3	0.21	0.14	0.14	0.55	128	0.06	150	93	77	0	7	3	0
	RAPID CITY	41	21	53	9	31	6	0.03	-0.04	0.03	0.25	57	0.00	0	78	49	0	7	1	0
	SIOUX FALLS	33	18	37	10	26	6	0.55	0.48	0.52	1.07	191	0.00	0	82	75	0	7	2	1
TN	BRISTOL	55	37	74	27	46	12	1.94	1.40	0.72	4.71	130	1.53	695	90	58	0	2	5	2
	CHATTANOOGA	59	44	72	30	52	14	2.64	1.85	1.74	7.40	144	2.49	755	86	55	0	1	4	2
	KNOXVILLE	58	40	78	33	49	13	3.23	2.50	1.62	7.92	165	3.06	1020	83	56	0	0	5	2
	MEMPHIS	56	40	68	31	48	10	3.04	2.29	1.41	5.67	95	1.63	543	86	54	0	1	3	2
	NASHVILLE	56	43	67	33	50	14	4.18	3.51	2.53	6.66	138	1.65	611	78	51	0	0	4	2
TX	ABILENE	59	35	70	24	47	7	0.00	-0.20	0.00	0.98	72	0.00	0	65	38	0	2	0	0
	AMARILLO	50	26	61	20	38	4	0.00	-0.13	0.00	1.00	149	0.00	0	69	33	0	6	0	0
	AUSTIN	64	38	73	28	51	6	0.02	-0.36	0.02	0.80	31	0.02	13	69	40	0	2	1	0
	BEAUMONT	68	45	75	33	57	10	0.75	-0.17	0.62	1.79	32	0.72	189	82	58	0	0	4	1
	BROWNSVILLE	71	56	76	47	64	12	0.23	0.06	0.23	0.97	82	0.23	329	80	57	0	0	1	0
	CORPUS CHRISTI	66	50	72	41	58	9	0.31	0.03	0.25	4.33	233	0.31	282	86	58	0	0	2	0
	DEL RIO	66	40	72	32	53	8	0.00	-0.09	0.00	0.05	6	0.00	0	61	33	0	2	0	0
	EL PASO	53	30	59	25	41	0	0.04	-0.07	0.04	0.76	93	0.04	80	68	31	0	6	1	0
	FORT WORTH	57	39	61	31	48	7	0.00	-0.40	0.00	1.19	44	0.00	0	76	41	0	1	0	0
	GALVESTON	67	55	74	49	61	12	0.78	0.18	0.40	1.50	40	0.52	200	86	43	0	0	3	0
	HOUSTON	65	46	70	36	56	10	1.04	0.45	0.73	1.46	37	0.31	124	79	52	0	0	3	1
	LUBBOCK	54	30	64	25	42	6	0.00	-0.09	0.00	0.65	92	0.00	0	74	38	0	5	0	0
	MIDLAND	57	31	65	25	44	4	0.03	-0.07	0.03	0.54	78	0.03	75	70	41	0	4	1	0
	SAN ANGELO	61	33	70	24	47	6	0.00	-0.14	0.00	1.30	130	0.00	0	63	44	0	3	0	0
	SAN ANTONIO	64	41	72	33	53	8	0.00	-0.30	0.00	0.52	25	0.00	0	75	34	0	0	0	0
	VICTORIA	68	44	73	36	56	9	0.20	-0.21	0.12	0.89	34	0.17	100	74	52	0	0	3	0
	WACO	61	34	68	26	48	6	0.00	-0.39	0.00	0.72	25	0.00	0	81	49	0	3	0	0
	WICHITA FALLS	57	34	63	25	45	7	0.00	-0.24	0.00	0.59	33	0.00	0	72	43	0	4	0	0
UT	SALT LAKE CITY	38	29	46	22	33	3	0.21	0.00	0.17	1.81	137	0.18	200	81	59	0	5	3	0
VT	BURLINGTON	38	30	44	22	34	10	0.91	0.58	0.46	1.84	78	0.20	133	86	68	0	6	4	0
VA	LYNCHBURG	59	41	70	30	50	16	1.29	0.74	0.51	3.48	101	0.62	270	83	55	0	1	5	1
	NORFOLK	64	44	78	35	54	15	1.01	0.44	0.49	3.02	92	0.94	392	87	60	0	0	3	0
	RICHMOND	62	41	73	30	51	15	0.83	0.26	0.37	3.84	114	0.57	238	92	64	0	1	4	0
	ROANOKE	57	41	67	34	49	14	0.46	-0.01	0.17	3.13	102	0.29	145	75	57	0	0	5	0
	WASH/DULLES	54	37	63	23	46	14	1.31	0.82	0.46	3.66	112	0.68	340	90	70	0	2	4	0
WA	OLYMPIA	50	42	57	36	46	10	2.83	1.64	1.55	10.68	128	1.24	258	93	82	0	0	6	1
	QUILLAYUTE	50	42	52	36	46	8	7.39	5.20	3.94	17.54	114	2.84	323	95	90	0	0	7	4
	SEATTLE-TACOMA	52	43	62	40	48	10	1.01	0.18	0.27	8.68	146	0.70	212	86	75	0	0	6	0
	SPOKANE	41	31	49	23	36	8	0.49	0.17	0.41	2.21	93	0.06	46	88	64	0	5	4	0
	YAKIMA	47	33	56	27	40	11	0.18	-0.04	0.16	0.82	56	0.16	178	77	61	0	4	2	0
WV	BECKLEY	54	37	67	28	45	13	0.64	0.14	0.27	3.61	109	0.61	290	74	62	0	3	4	0
	CHARLESTON	55	38	65	26	47	13	1.36	0.86	0.59	5.92	168	1.17	557	86	61	0	2	5	2
	ELKINS	54	32	66	19	43	12	1.17	0.63	0.44	6.11	167	0.89	405	82	62	0	3	5	0
	HUNTINGTON	54	41	61	32	47	14	2.55	2.02	1.35	6.91	192	1.04	473	86	64	0	1	5	2
WI	EAU CLAIRE	34	22	44	5	28	9	0.55	0.40	0.34	1.36	124	0.00	0	86	71	0	6	2	0
	GREEN BAY	38	27	49	14	32	11	1.53	1.34	0.78	2.21	148	0.00	0	85	72	0	5	2	2
	LA CROSSE	39	25	54	13	32	10	0.50	0.34	0.30	1.46	112	0.02	29	84	66	0	5	4	0
	MADISON	40	27	54	16	33	10	0.86	0.65	0.59	1.53	87	0.00	0	81	73	0	5	3	1
	MILWAUKEE	43	29	56	16	36	11	1.36	1.06	1.06	1.96	84	0.00	0	79	67	0	4	3	1
WY	CASPER	31	16	41	8	23	-2	0.01	-0.08	0.01	0.59	89	0.00	0	70	62	0	7	1	0
	CHEYENNE	37	21	55	12	29	1	0.00	-0.07	0.00	0.43	86	0.00	0	55	42	0	7	0	0
	LANDER	31	8	44	-7	19	-5	0.00	-0.09	0.00	0.09	14	0.00	0	81	47	0	7	0	0
	SHERIDAN	45	20	65	9	32	8	0.03	-0.10	0.02	0.24	32	0.02	33	76	50	0	7	2	0

Based on 1971-2000 normals

***** Not Available**

December State Agricultural Summaries

These summaries, issued weekly through the summer growing season, provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Crop Progress and Condition Reports published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service. The crop reports are available on the Internet through the NASS Home Page on the World Wide Web at http://www.nass.usda.gov.

ALABAMA: Average temperatures ranged from 46.2 to 58.5 degrees Fahrenheit throughout the state during this month. Total precipitation ranged from no rain in multiple locations to 12.17 inches in Limestone County. According to the U.S. Drought Monitor, 32 percent of the state was in abnormally dry to drought stages on December 10. Producers wrapped up planting wheat and winter grazing by the beginning of the month. The vast majority of field crops were harvested with only a small amount of cotton remaining in the fields by month's end. A majority of the wheat and winter forages were in mostly good condition by the end of the month due to adequate rainfall and warm temperatures. Some wheat was in poor condition due to excessive rain. Cattle were looking good throughout the state with normal pasture conditions and some producers needing to supplement with hay and feed. Hay was in short supply due to drought conditions that hurt pastures in the fall.

ALASKA: DATA NOT AVAILABLE

ARIZONA: This report for Arizona is for the entire month of December 2019. By the end of the month, cotton harvest was 95 percent complete compared to 91 percent on the last report, according to the Mountain Regional Field Office of the National Agricultural Statistics Service, USDA. Thirty-eight percent of barley has been planted and 35 percent has emerged. Fifty-six percent of Durum wheat has been planted and 53 percent has emerged. Alfalfa conditions were rated mostly good to fair, depending on location last week with harvesting taking place on slightly over one-half of the alfalfa acreage across the State. For the entire State, pasture and range conditions were rated mostly poor to fair. In the north central and northwestern part of the State, soil moisture has been replenished and water tanks are full. In addition, positive precipitation was reported this week in the south central part of the State.

ARKANSAS: The month of December has been wet with average to above average temperatures. The last week of the month saw unusually warm temperatures with the statewide average at 14.5 degrees above normal. By the end of the month, the State had received approximately 1.82 inches higher than the average rainfall for December. Agents were reporting unseasonably warm temperatures with good soil moisture. Many livestock producers began feeding hay to cattle. Fieldwork was scarce as many producers had just finished 2019 harvest. Winter wheat is being reported as fair to above average in regards to condition.

CALIFORNIA: Topsoil moisture 5% very short, 10% short, 45% adequate, 40% surplus. Subsoil moisture 25% short, 45% adequate, 30% surplus. Temperatures for the month averaged 49.8 degrees, 2.8 degrees above normal. Statewide average precipitation was 3.85 inches. Crop land in preparation for next planting. Winter wheat has emerged and looks good. Pushed out citrus groves were prepared for planting. Pecan harvest continued. Harvested nut orchards were cleaned and young trees were irrigated. Carrots, lettuce, and Brussels sprouts were planted. Carrots progressed well and broccoli harvested. Rangeland and non-irrigated pasture remained in fair to good condition. More precipitation is needed for fall grass germination. In some areas, cattle continued to be provided supplemental feed.

COLORADO: This report for Colorado is for the entire month of December 2019. Topsoil moisture 17% very short, 25% short, 58% adequate. Subsoil moisture 19% very short, 28% short, 53% adequate. Winter wheat condition 7% very poor, 12% poor, 24% fair, 41% good, 16% excellent. Livestock condition 2% very poor, 2% poor, 14% fair, 71% good, 11% excellent. Pasture and range condition 7% very poor, 11% poor, 33% fair, 45% good, 4% excellent. Mostly dry weather across the state during the month of December coincided with a few seasonal snow storms. Overall, soil moisture supplies declined from the previous report, as did the condition of winter wheat. Reporters in eastern counties noted moisture was needed and received snow did not contain much moisture content. High winds, detrimental to winter wheat, were also reported. Livestock producers were utilizing feed and supplement sources and/or grazing crop residue. In southeastern counties, a reporter noted some producers chiseled their wheat crop to help prevent blowing soil. In the San Luis Valley, a reporter noted hay supplies were mostly adequate, but livestock supplemental feeding was higher than normal due to snow cover. As of January 1, 2020, snowpack was 119 percent measured as percent of median snowfall.

DELAWARE: During the month of December, temperatures and precipitation fluctuated across the state. There was occasional snowfall but no real accumulation. While some experienced hard rains and winds at times, others reported spells of unseasonably mild temperatures. Field crops are all harvested for the most part. Yields reportedly varied heavily by locale due to varying weather. Unharvested acreage remains for some, as poor field conditions have prevented final harvesting. Livestock producers are preparing for lambing, calving, and foaling for the New Year. Overall, producers are readying their equipment for next year and attending farm meetings for education credits.

FLORIDA: Total rainfall for the month ranged from no rain in multiple locations to 9.4 inches in Broward County. According to the December 31, 2019 U.S. Drought Monitor, 24.14 percent of the State was experiencing

abnormally dry conditions at the month's end, down significantly from 60.54 percent on December 17, 2019. Average mean temperatures ranged from 41.6°F in Okaloosa County to 78.1°F in Monroe County. Pasture conditions remained mostly fair to good, improving most notably later in the month. Pastures throughout the state experienced seasonal decline. At the beginning of the month, several pastures in the Panhandle and northern peninsula received some frost damage. Cattle remained in mostly good to excellent condition throughout the month. Cotton harvesting finished at the beginning of the month. Several producers reported planting cover crops. Many vegetable growers were able to prepare land for spring plantings toward the end of the month. Citrus grove operations were normal for this time of year and included mowing, spraying, fertilizing, and general grove maintenance. Grapefruit, early and midseason oranges, and tangerines were harvested throughout the month. Processing plants were open and ran early and mid-season oranges as well as red and white grapefruit.

GEORGIA: Total rainfall for the month ranged from 2.0 inches in Bartow County to 11.9 inches in Richmond County. According to the U.S. Drought Monitor, December began with 23 percent of the state in a moderate to severe drought. By the month's end, the state was drought free. Temperatures averaged 3 to 7 degrees above normal for the month. The mild temperatures, paired with adequate rainfall, allowed pastures to improve from the summer and fall drought. Due to the late-season drought conditions, some small grain and winter grazing plantings were delayed or prevented. Grazing potential statewide was a concern, based on the decreased planting and slow recovery of fields. Small grains and winter grazing were generally in good condition by the month's end, but winter grazing was not yet developed enough to offset hay feeding. In the northern portion of the state, the drought resulted in insufficient hay production, so many farmers were searching for hay to purchase. Most farmers in the southern portion of the state who produced sufficient hay stocks had already sold their surplus, so they only had enough left to feed their livestock through the winter. Ample rain during the last two weeks of the month caused fields to saturate, limiting fieldwork and making livestock feeding difficult. Some cotton and pecans had yet to be harvested. Overall livestock condition was good.

HAWAII: DATA NOT AVAILABLE

IDAHO: The statewide temperatures in Idaho for the month of December were normal to above average throughout the state. Some storm activity picked up in the latter part of December. Much of that moisture fell as rain in northern, south central, and southwestern Idaho. No concerns were reported in northern Idaho at this point. Winter wheat cover looked adequate for surviving adverse conditions. Considerable moisture fell in the form of rain over the last couple of weeks of the month. Southwestern Idaho reported good hay availability and excellent calving conditions. South central Idaho also reported mild December weather. Some reporters expressed initial concerns over the lack of major storm activity in the mountain areas. Larger snowpack levels are needed to build snowpack for summer irrigation. The good news was there was also very little moisture or cold weather to adversely affect livestock in the area. Southeastern Idaho also reported a mild month with less snow on the valley floor. This allowed some grass-fed cattle producers to keep the animals out on pasture for most of the month without having to supplement their diet with hay. Very little snow was reported in Bannock and Bingham Counties. In Fremont and Oneida Counties, snow was reported covering several fields and pastures. Hay and straw was readily available for livestock producers.

ILLINOIS: For the week ending on December 29, 2019. Topsoil moisture 3% short, 68% adequate, 29% surplus. Subsoil moisture 6% short, 78% adequate, 16% surplus. Winter wheat condition 6% very poor, 10% poor, 36% fair, 46% good, 2% excellent. Statewide, the average temperature in December was 35.2 degrees, 5.4 degrees above normal. Precipitation averaged 2.01 inches, 0.68 inches below normal.

INDIANA: Topsoil moisture for the month of December was 1% very short, 5% short, 70% adequate, and 24% surplus. Subsoil moisture for the month of December was 1% very short, 10% short, 72% adequate, and 17% surplus. Winter wheat condition for the month of December rated 2% very poor, 8% poor, 35% fair, 47% good, and 8% excellent. Statewide temperatures averaged 36.0 degrees, 4.8 degrees above normal for the month of December. Statewide average precipitation was 3.35 inches, 0.30 inches above normal. The month of December started off warmer than normal. The middle of the month saw temperatures drop below normal resulting in some significant snow events throughout the State. However, the cold temperatures were rather short-lived, and the month ended with unusually high temperatures. The warmer temperatures and above average precipitation led to some muddy conditions around the State. Livestock were reported to be doing well, despite muddy conditions in some feedlots. However, hay and forage quality and supply remained a concern. The warmer than normal temperatures allowed for fall tillage and lime applications. Other activities for the month included hauling grain, caring for livestock, cleaning equipment, purchasing supplies for next year, and attending Extension workshops.

IOWA: The month of December brought unseasonably warm temperatures across Iowa. Corn and soybean harvest was nearly complete across the State with only a few fields left to be harvested. Other fieldwork activities such as fall tillage, installing tile and applying nitrogen and manure took place where conditions allowed as mud from rain and snow made it challenging. There was some grain movement across the State, but most reported it as being slow. Livestock continue to graze on corn stalks. The warmer temperatures were beneficial for livestock with no major issues reported. However, muddy feedlots have been a struggle.

KANSAS: For the month of December 2019, topsoil moisture supplies rated 9% very short, 31% short, 56%

adequate, and 4% surplus. Subsoil moisture supplies rated 10% very short, 28% short, 60% adequate, and 2% surplus. Winter wheat condition rated 5% very poor, 16% poor, 39% fair, 36% good, and 4% excellent. Cotton harvested 97%.

KENTUCKY: For the month of December, Kentucky saw above normal temperatures and precipitation. December marked the third straight month with above normal rainfall following drought conditions through September. Temperatures for the period averaged 43 degrees across the State, which was 5 degrees warmer than normal. Precipitation (liq. equ.) for the period totaled 5.10 inches Statewide which was 0.65 inches above normal and 115% of normal. December was very mild with scattered precipitation. Periods of unseasonably warm and dry weather benefited pastureland to a degree, however heavy rain at the end of the month muddied up ground making them vulnerable. Hay supplies have been depleted in some areas as this past summer saw a long drought period which relegated farmers to feeding hay as pastureland suffered. For the month of December, hay supplies 9% very short, 32% short, 57% adequate, 2% surplus. Despite stressed pastureland, the condition of livestock was mostly good. Livestock conditions 1% very poor, 5% poor 26% fair, 63% good, 5% excellent. Condition of winter wheat 1% very poor, 2% poor, 7% fair, 53% good, 37% excellent. Tobacco stripping 82% complete.

LOUISIANA: The month of December has been wet and soils are saturated in many areas. Fieldwork was being done in the beginning of the month, but recent consistent rain has brought fieldwork to a halt for the last several weeks, and it appears this is likely to continue for several more weeks. Mild temperatures have resulted in low livestock stress and have benefited ryegrass pastures. The state average rainfall was about 2.3 inches for the month of December with an average temperature of about 55 degrees. Overall, average temperatures for the State are higher than normal for this time of year.

MARYLAND: During the month of December, temperatures and precipitation fluctuated across the state. There was occasional snowfall but no real accumulation. While some experienced hard rains and winds at times, others reported spells of unseasonably mild temperatures. Field crops are all harvested for the most part. Yields reportedly varied heavily by locale due to varying weather. Unharvested acreage remains for some, as poor field conditions have prevented final harvesting. Livestock producers are preparing for lambing, calving, and foaling for the New Year. Overall, producers are readying their equipment for next year and attending farm meetings for education credits.

MICHIGAN: Topsoil moisture 0% very short, 2% short, 42% adequate and 56% surplus. Subsoil moisture 0% very short, 2% short, 31% adequate, and 67% surplus. Winter wheat condition rated 5% very poor, 13% poor, 33% fair, 37% good, and 12% excellent. Precipitation for the month of December averaged 3.53 inches throughout the State, 1.27 inches above normal. Temperature for the month of December averaged 28.7 degrees, 3.8 degrees above normal. The month of December was, on a whole, warmer and wetter than normal. The week of Christmas had record breaking high temperatures. Soybean and corn harvest continued throughout the month. Soybean harvest was complete by the end of the month. Grain condition degraded quickly after December 1. Corn harvest continued in certain locales into 2020. Manure spreading was difficult due to wet soil conditions. Ground was not frozen in the southern part of the Lower Peninsula. Long term sugarbeet storage was a concern with warmer than normal temperatures. Livestock remained in good condition.

MINNESOTA: December brought above normal precipitation and mild temperatures. Some sunflower harvest continued during December and there is still corn standing that will likely not be harvested until spring. Producers leaving corn harvest until spring cite high moisture and poor test weights as being a big concern, while for other producers it's an issue with field conditions. Limited fall tillage was completed. Some livestock producers are feeding hay much earlier than anticipated due to the loss of pasture because of localized flooding. Overall December livestock conditions have been favorable with mild and consistent temperatures.

MISSISSIPPI: Conditions for the month of December have been very wet. Most crops made it out of fields, but there were a few areas with crops left in the field due to weather related issues. At this time, rain has halted most fieldwork. Mild temperatures have allowed wheat and ryegrass to progress and resulted in good livestock conditions in most areas. However, in some areas, excess rain has caused stressful conditions for livestock. Supplemental feeding has begun in most areas. The State average rainfall was about 4.1 inches for the month of December with an average temperature of about 50 degrees. Overall, rainfall has been typical for this time of year in the State, but average temperatures are higher than normal.

MISSOURI: For the week ending December 29, 2019. Topsoil moisture 1% short, 79% adequate, 20% surplus. Subsoil moisture 1% short, 89% adequate, 10% surplus. Winter wheat condition 1% very poor, 6% poor, 59% fair, 31% good, 3% excellent. Conditions overall for the month were warmer and drier than normal with the state averaging 2.76 inches of precipitation for the month, 0.92 inches below average. Temperatures for the month averaged 38.3 degrees for the state, 5.2 degrees above normal.

MONTANA: This report for Montana is for the entire month of December 2019. Topsoil moisture 14% short, 73% adequate, 13% surplus. Subsoil moisture 7% short, 79% adequate, 14% surplus. Winter wheat - condition 4% very poor, 12% poor, 29% fair, 25% good, 30% excellent. Winter wheat – wind damage 70% none, 15% light, 13% moderate, 2% heavy. Winter wheat – freeze and drought damage 61% none, 19% light, 16% moderate, 4% heavy. Winter wheat – protectiveness of snow cover 12% very

poor, 17% poor, 31% fair, 25% good, 15% excellent. Pasture and range - condition 1% very poor, 3% poor, 20% fair, 56% good, 20% excellent. Livestock grazing accessibility – 55% open, 30% difficult, 15% closed. Livestock receiving supplemental feed – cattle and calves 75% fed. Livestock receiving supplemental feed – sheep and lambs 83% fed. The month of December was relatively warm and dry for the state of Montana, with many statewide temperatures averaging two to six degrees above normal. High temperatures ranged from the high 20s to the mid 60s. Low temperatures ranged from the mid 40s to the teens. Precipitation levels for December were below normal for most of the state, with some areas receiving only 5 to 25 percent of their normal precipitation amount.

NEBRASKA: For the month of December 2019, topsoil moisture supplies rated 1% very short, 10% short, 80% adequate, and 9% surplus. Subsoil moisture supplies rated 1% very short, 8% short, 84% adequate, and 7% surplus. Winter wheat condition rated 2% very poor, 4% poor, 24% fair, 64% good, and 6% excellent.

NEVADA: Topsoil moisture 45% short, 55% adequate. Subsoil moisture 5% very short, 25% short, 70% adequate. Temperatures for the month averaged 35.1 degrees, 3.3 degrees above normal. Statewide average precipitation was 1.15 inches. Rain and snow bringing overall soil moisture levels up for December, leading to an optimistic water situation for the coming spring and good current soil moisture.

NEW ENGLAND: New England states experienced a warmer than usual December with some rain and below average snow for the month. Many areas reported unharvested field crops as a result of poor field conditions because of a wet summer and fall. Most areas reported some ice covered fields and pastures. The warmer temperature changes during the month caused some concern for small fruits and tree fruit plants as they are sensitive to large temperature fluctuations. Operations continue to provide much of their focus to farm and equipment maintenance.

NEW JERSEY: Field crops about all harvested. Yields varied considerably by locale due to varying weather. Things are wet for the nursery industry. Demand is good. Agri-tourism overall enjoyed good weather, but a couple of key weekends saw rain. Recent ice storm in North Jersey meant roads closed, lines down, and power out for a good part of a day. Animal health up and down with the weather. Preparing for lambing, calving, and foaling for the New Year. Vine pruning season in wine grapes. Bad year in general for vegetables and peaches. As of December 18, harvesting brussel sprouts, cauliflower, and cabbage were still in progress. These late crops were providing better prices.

NEW MEXICO: This report for New Mexico is for the entire month of December 2019. Topsoil moisture 17% very short, 45% short, 34% adequate, 4% surplus. Subsoil moisture 26% very short, 48% short, 25% adequate, 1% surplus. Pecans condition 3% fair, 25% good, 72% excellent. Winter wheat condition 19% poor, 44% fair, 35% good, 2% excellent. Red chili harvested 93% complete. Corn harvested for grain 99% complete. Cotton harvested 97% complete. Pecans harvested 49% complete. Cattle receiving supplemental feed 76%. Cattle condition 1% very poor, 21% poor, 37% fair, 28% good, 13% excellent. Sheep receiving supplemental feed 77%. Sheep and lamb condition 1% very poor, 9% poor, 55% fair, 35% good. Hay and roughage supplies 22% very short, 35% short, 41% adequate, 2% surplus. Stock water supplies 24% very short, 29% short, 44% adequate, 3% surplus. December's weather pattern delivered mountain snow to areas, and some rainfall to lower elevations; however, total rainfall accumulations were below average for many locations which led to soil moisture depletion. Notes from some counties suggested that snowpack levels were excellent. Statewide, temperatures were generally warmer than normal during the month. Cattle were grazing corn and sorghum stalks, as well as wheat pastures, with wheat showing signs of drought stress. During December, row crop producers had virtually completed the corn and cotton harvests. The United States Drought Monitor released on January 2 noted that the State remained free of exceptional and extreme drought (D3 and D4). Severe drought (D2) covered 15.3 percent of the State, compared with 17.6 percent from the Drought Monitor for November 26. The area classified in moderate drought (D1) – currently 13.1 percent – showed a drastic decrease from the end of November. Overall, conditions rated abnormally dry or worse were evident across 47.1 percent of the State, a 25.8 percent improvement when compared with the end of November. Drought free conditions were present across 52.9 percent of the State.

NEW YORK: During the month of December, many farms struggled in areas with unharvested corn and soybean acreage as a result of poor field conditions and snow while other areas of the state had mild, wet conditions. Areas reported a good amount of ice on some fields and pastures with warmer than usual temperatures during the day and nighttime freezing temperatures. The grapes are holding up and should winter well.

NORTH CAROLINA: For the week ending December 29, 2019; Topsoil moisture 3% short, 72% adequate, 25% surplus. Subsoil moisture 2% short, 77% adequate, 21% surplus. Barley condition 2% poor, 51% fair, 44% good, 3% excellent. Hay and roughage supplies 5% very short, 29% short, 65% adequate, 1% surplus. Oats condition 1% poor, 13% fair, 85% good, 1% excellent. Pasture and range condition 1% very poor, 20% poor, 42% fair, 35% good, 2% excellent. Winter wheat condition 2% poor, 27% fair, 66% good, 5% excellent. Throughout December weather has been highly variable, with cool to near normal temperatures early in the month, ending in unseasonably warm temperatures. Precipitation for the month was near to slightly below normal. Late season rainfall and high humidity delayed harvest of remaining soybean fields and limited field work. Wheat condition mostly good to fair with no issues reported. Main farm activities include tending livestock, equipment maintenance, and planning for 2020.

Current hay supplies are considered adequate but could become short if farmers face a harsh winter.

NORTH DAKOTA: For the month of December 2019, topsoil moisture supplies rated 0% very short, 0% short, 48% adequate, 52% surplus. Subsoil moisture supplies rated 0% very short, 0% short, 53% adequate, 47% surplus. Winter wheat condition rated 0% very poor, 7% poor, 18% fair, 64% good, 11% excellent. Corn harvested 48%. Sunflowers harvested 66%. Cattle and calf conditions, 0% very poor, 1% poor, 17% fair, 78% good, 4% excellent. Cattle and calf death loss, 3% heavy, 71% average, 26% light. Sheep and lamb conditions, 1% very poor, 1% poor, 23% fair, 71% good, 4% excellent. Sheep and lamb death loss, 0% heavy, 66% average, 34% light. Hay and roughage supplies, 5% very short, 27% short, 60% adequate, 8% surplus. Stock water supplies, 0% very short, 1% short, 77% adequate, 22% surplus.

OHIO: Topsoil moisture for the month was 3% short, 50% adequate, and 47% surplus. Subsoil moisture for the month was 2% very short, 9% short, 66% adequate, and 23% surplus. Winter wheat condition was rated 2% very poor, 8% poor, 36% fair, 42% good, and 12% excellent. The statewide average temperature was 35.9 degrees, 4.2 degrees above normal. Precipitation averaged 2.92 inches statewide, 0.68 inches above normal for December, much of which fell during the middle of the month. The warmer than normal temperatures and above normal rainfall left many fields saturated which limited fieldwork activities in some areas. A small amount of corn and soybeans remained unharvested. Other activities during the month included cleaning and repairing harvest equipment, ordering supplies for spring, and working on tax returns.

OKLAHOMA: Oklahoma experienced warm and dry conditions during the month of December. Rainfall totals averaged 1.13 inches throughout the state for the full month, with the East Central district recording the highest precipitation at 1.45 inches and the Southwest district recording the lowest at 0.78 of an inch. According to the December 31 US Drought Monitor Report, 10 percent of the state was in the moderate to exceptional drought categories, up 10 points from the previous year. Additionally, 4 percent of the state was in the severe to exceptional drought categories, up 4 points from the previous year. Statewide temperatures averaged in the low 40's, with the lowest recording of 8 degree at Kenton on Tuesday, December 17th and the highest recording of 77 degrees at Boise City on Monday, December 23rd. Topsoil and subsoil moisture conditions were rated mostly adequate to short.

OREGON: The statewide temperatures in Oregon for the month of December were normal to above average throughout the state. Some major storm activity reported in late December arrived with high winds and heavy rainfall. Several flood watches and warnings were reported along the northern and central coasts of Oregon. Despite the heavy rainfall, much of the western half of Oregon was below average for cumulative precipitation in December. Most of the moisture received in December fell as rain. This weather combination resulted in some initial concerns over the level of snowpack in the Oregon Mountains at this point in the season. The mild weather was great for calving. Hay was readily available for livestock producers throughout Oregon. No major concerns were reported for crop producers at this point. Most operations had sufficient work windows to complete winter preparations and fieldwork in early December. Many operations focused on machinery repair and some final orchard and vineyard maintenance.

PENNSYLVANIA: Traces of snow in December but no real accumulation for long periods. Mostly cold wet weather with hard rains and wind at times. Still some corn and soybeans standing in a few areas to be harvested but ground hasn't frozen enough to get crops off. Overall producers are readying their equipment for next year and attending farm meetings for education credits.

SOUTH CAROLINA: Temperatures averaged 42.8 to 56.4 degrees Fahrenheit throughout the state last month. Total precipitation ranged from no rain in some places to 13.75 inches in Charleston County. There was frequent rainfall throughout the month. Wet weather kept producers out of the field at times. Field crops were mostly harvested with a small amount of cotton remaining in the fields. Winter greens were being harvested and in good condition due to adequate rainfall and mild temperatures. Wheat and winter grazing forages were in good condition and progressing well due to adequate rainfall.

SOUTH DAKOTA: For the month of December 2019, topsoil moisture supplies rated 0% very short, 0% short, 66% adequate, 34% surplus. Subsoil moisture supplies rated 0% very short, 1% short, 68% adequate, 31 surplus. Corn harvested 90%. Winter wheat condition rated 0% very poor, 1% poor, 26% fair, 59% good, and 14% excellent. Sunflowers harvested 87%.

TENNESSEE: For week ending December 29, 2019; Days suitable 2.8 days. Topsoil moisture 3% short, 55% adequate, 42% surplus. Subsoil moisture 2% short, 63% adequate, 35% surplus. Winter wheat condition 2% poor, 30% fair, 58% good, 10% excellent. Pasture and Range condition 7% very poor, 32% poor, 41% fair, 18% good, 2% excellent. Cattle condition 1% very poor, 5% poor, 27% fair, 57% good, 10% excellent. Hay and roughage supplies 3% very short, 25% short, 64% adequate, 8% surplus. Tennessee experienced above normal temperatures and rainfall. The warmer temperatures resulted in improved wheat and pasture conditions and promoted some fescue growth. Cattle condition is currently reported as good, while hay and roughage supplies are considered adequate for the coming winter months.

TEXAS: Weather was mostly dry across Texas during December. Precipitation ranged between trace amounts and 2 inches, with isolated areas in East Texas receiving upwards of 5 inches of rain. Cotton harvest was nearing completion throughout the state. Small grains seeding and development were below average due to lack of moisture. Livestock condition continued fair to good thanks to the use of supplemental feed.

UTAH: This report for Utah is for the entire month of December, 2019. Topsoil moisture 10% very short, 18% short, 65% adequate, 7% surplus. Subsoil moisture 19% very short, 14% short, 67% adequate. Pasture and range condition 8% poor, 45% fair, 47% good. Winter wheat condition 66% fair, 34% good. Hay and roughage supplies 10% short, 81% adequate, 9% surplus. Stock water supplies 8% short, 86% adequate, 6% surplus. Cattle and calves condition 2% poor, 11% fair, 72% good, 15% excellent. Sheep and lambs condition 1% poor, 11% fair, 70% good, 18% excellent. Livestock receiving supplemental feed for cattle 88%. Livestock receiving supplemental feed for sheep 77%. Cows calved 1%. Some much needed moisture was received in the form of snow in some parts of the state.

VIRGINIA: For week ending December 29; 2019, Days suitable 5.5. Topsoil moisture 1% very short, 2% short, 91% adequate, 6% surplus. Subsoil moisture 1% very short, 4% short, 89% adequate, 6% surplus. Winter wheat condition 1% poor, 26% fair, 69% good, 4% excellent. Barley condition 1% poor, 34% fair, 62% good, 3% excellent. Livestock condition 1% very poor, 5% poor, 21% fair, 55% good, 18% excellent. Pasture and Range condition 15% very poor, 33% poor, 31% fair, 21% good. Hay supplies 34% very short, 25% short, 41% adequate. Percent of feed obtained from pastures 9%. Virginia experienced average precipitation and above normal temperatures in December. Persistent dry conditions early on this winter have resulted in damage to some pastures and feeding areas. Hay and roughage supplies are mostly very short to short. Farming activities for the end of the month included finishing grain crop harvest, tending livestock, equipment maintenance, and preparations for 2020 season.

WASHINGTON: The recent wet weather patterns around the Puget Sound helped soil moisture, penetrating the dry layers from autumn. These rains refreshed the soils and reduced fire danger. The last few days of December brought wind. Most livestock were moved to higher ground or heavy-use areas. Orchards and berry plantings were pruned. CSA operations have continued production for winter hardy vegetables. Snohomish County had flooding over Christmas week. The ground was completely saturated and there were reports of washout and erosion from the extensive rain. Yakima County received 1.2 inches of precipitation during December. No snow accumulated. The coldest nighttime temperature was 16 degrees Fahrenheit. All fruit trees were sufficiently cold tolerant and little damage occurred. Winter pruning of grape vineyards and fruit trees continued at a steady pace. Stevens County was very mild. Daytime temperatures averaged 36 degrees Fahrenheit while nighttime temperatures dipped to 27 degrees Fahrenheit. Total snow accumulation was 5.5 inches for the month of December. Ferry and Okanogan Counties had colder temperatures at the beginning of the month, then trended towards above-average temperatures at the end of the month. The Palouse had a mild December. Whitman County had saturated soils. Winter wheat, winter legumes, and rangeland were in good condition.

WEST VIRGINIA: For the week ending December 29, Topsoil moisture 3% very short, 13% short, and 84% adequate. Subsoil moisture 7% very short, 26% short, 64% adequate, and 3% surplus. Hay and roughage supplies 7% very short, 24% short, 63% adequate, and 6% surplus. Feed grain supplies 10% short, 84% adequate, and 6% surplus. Winter wheat condition 9% poor, 69% fair, 21% good, and 1% excellent. Cattle and calves condition 1% very poor, 6% poor, 34% fair, 50% good, and 9% excellent. Sheep and lambs condition 2% poor, 35% fair, 53% good, and 10% excellent. Weather conditions for the month have been a mix of warmer and cooler temperatures with periods of rain and some snow. Farming activities for the month included calving and feeding hay and grain to livestock.

WISCONSIN: December temperatures at the five major weather stations were all above normal. They ranged from 2.9 degrees above normal in Eau Claire to 7.0 degrees above normal in both Madison and Milwaukee. Average highs ranged from 30.2 degrees in Eau Claire to 41.3 degrees in Milwaukee, while average lows ranged from 13.2 degrees in Eau Claire to 26.6 degrees in Milwaukee. Precipitation ranged from 1.43 inches in La Crosse to 2.49 inches in Green Bay. A weather front on December 29th and 30th brought record highs to most areas of the state. These same days brought record precipitation in Green Bay and Milwaukee, and record snowfall in Eau Claire. The warm weather resulted in muddy fields, slowing down harvest. Corn and soybean harvest, as well as manure spreading, continued through December. A fair amount of corn is still standing, but most soybean fields have been harvested.

WYOMING: This report for Wyoming is for the entire month of December 2019. Topsoil moisture 5% very short, 25% short, 66% adequate, 4% surplus. Subsoil moisture 8% very short, 33% short, 55% adequate, 4% surplus. Winter wheat condition 4% very poor, 13% poor, 25% fair, 53% good, 5% excellent. Hay and roughage supplies 3% very short, 6% short, 88% adequate, 3% surplus. Livestock condition 2% poor, 6% fair, 89% good, 3% excellent. Stock water supplies 1% very short, 3% short, 95% adequate, 1% surplus. Pasture and range condition 3% very poor, 14% poor, 32% fair, 50% good, 1% excellent. Winter wheat condition is mostly good to fair and pasture and range is rated mostly good to fair. Temperatures were slightly above normal for most of the state and topsoil moisture levels have improved from last month.

International Weather and Crop Summary

December 29, 2019 - January 4, 2020

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

EUROPE: Dry, mild weather settled over much of the continent, though rain and snow were observed in northern and eastern growing areas.

MIDDLE EAST: Additional moderate to heavy rain alleviated drought concerns in central Turkey.

NORTHWESTERN AFRICA: Sunny skies benefited vegetative winter grains following a wet autumn.

SOUTHEAST ASIA: Showers across Java, Indonesia, improved moisture conditions for rice.

AUSTRALIA: Unfavorably hot, dry weather persisted in most summer crop producing areas.

SOUTH AFRICA: Warm, showery weather overspread the corn belt, maintaining mostly favorable conditions for vegetative summer crops.

ARGENTINA: Locally heavy showers returned to central and western farming areas, increasing moisture for summer crops nearing reproduction.

BRAZIL: Scattered showers maintained overall favorable summer crop prospects in northern farming areas, though pockets of dryness persisted in key southern production areas.

December 2019

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	20	9	24	4	15	2.8	28	-62
	BATNA	15	3	21	-3	9	2.5	20	-11
ARGENT	IGUAZU	31	19	37	14	25	-0.2	183	-2
	FORMOSA	35	20	41	12	27	0.8	48	-109
	CERES	31	18	38	13	25	0.4	129	-22
	CORDOBA	31	17	38	9	24	0.6	236	73
	RIO CUARTO	30	17	39	9	24	1.3	144	-12
	ROSARIO	30	17	36	8	23	0	134	26
	BUENOS AIRES	29	16	37	7	23	0.4	104	18
	SANTA ROSA	32	16	41	9	24	1.7	37	-65
	TRES ARROYOS	26	14	37	5	20	0.3	117	25
AUSTRA	DARWIN	34	27	35	24	30	1.5	53	-223
	BRISBANE	29	21	34	17	25	0.7	119	1
	PERTH	34	18	42	12	26	3.7	2	-5
	CEDUNA	31	17	48	6	24	2.9	0	-18
	ADELAIDE	28	17	43	10	23	2.5	3	-22
	MELBOURNE	26	13	45	8	19	1.6	6	-40
	WAGGA	34	16	43	5	25	3.3	8	-42
	CANBERRA	32	13	41	5	22	3.6	1	-45
AUSTRI	VIENNA	6	1	14	-5	3	2.6	38	-3
	INNSBRUCK	7	-1	15	-7	3	3	63	9
BAHAMA	NASSAU	28	21	31	15	24	1.8	112	54
BARBAD	BRIDGETOWN	30	25	32	23	28	1.6	23	-81
BELARU	MINSK	3	1	8	-5	2	5.2	66	14
BERMUD	ST GEORGES	21	17	24	13	19	-0.3	121	12
BOLIVI	LA PAZ	16	4	19	2	10	0.9	81	-69
BRAZIL	FORTALEZA	31	27	33	25	29	0.5	39	3
	RECIFE	30	26	31	24	28	-0.7	10	-31
	CAMPO GRANDE	31	22	34	18	26	0.4	215	5
	FRANCA	27	20	31	18	23	1	171	-74
	RIO DE JANEIRO	30	23	36	19	26	0.2	95	-42
	LONDRINA	30	20	35	17	25	1.7	297	50
	SANTA MARIA	32	18	38	12	25	0.6	73	-44
	TORRES	28	19	35	12	23	-1.3	50	-41
BULGAR	SOFIA	6	-1	17	-8	3	1.8	15	-25
BURKIN	OUAGADOUGOU	36	18	41	15	27	1.6	0	-1
CANADA	LETHBRIDGE	2	-7	11	-18	-3	*****	3	******
	REGINA	-5	-16	3	-30	-11	*****	2	******
	WINNIPEG	-7	-15	5	-25	-11	*****	6	******
	TORONTO	3	-4	11	-17	-1	1.9	71	11
	MONTREAL	-1	-8	10	-20	-4	1.8	72	-6
	PRINCE ALBERT	-9	-21	3	-37	-15	0.8	3	-15
	CALGARY	0	-10	10	-17	-5	2.4	16	4
	VANCOUVER	7	3	10	-5	5	1.8	164	-10
CANARY	LAS PALMAS	22	17	28	15	19	0.6	16	-13
CHILE	SANTIAGO	32	14	37	9	23	3.1	0	-3
CHINA	HARBIN	-11	-20	1	-31	-16	-1.7	15	9
	HAMI	0	-14	3	-18	-7	0.4	0	-1
	BEIJING	4	-5	10	-14	-1	0	6	3
	TIENTSIN	4	-5	11	-13	0	0.4	8	3
	LHASA	9	-6	15	-10	2	2	0	******
	KUNMING	16	2	20	-3	9	0.2	10	-4
	CHENGCHOW	10	1	18	-5	5	3.5	9	-2
	YEHCHANG	12	5	20	2	9	1.1	3	-15
	HANKOW	13	3	19	-3	8	0.8	27	2
	CHUNGKING	13	9	17	7	11	1.8	27	4
	CHIHKIANG	13	6	20	0	9	1.7	26	-3
	WU HU	12	4	23	-2	8	2.1	60	24
	SHANGHAI	13	6	22	-1	9	1.3	74	36
	NANCHANG	14	7	24	3	10	2.2	62	21
	TAIPEI	22	17	29	12	20	1.6	97	26
	CANTON	23	12	30	7	17	1.7	6	-26
	NANNING	21	12	27	7	17	1	4	-21
COLOMB	BOGOTA	21	9	27	5	15	1.9	80	33
COTE D	ABIDJAN	32	26	33	23	29	1.5	82	6
CUBA	CAMAGUEY	29	19	31	15	24	0.9	6	-9
CYPRUS	LARNACA	20	11	24	8	15	1.9	204	132
CZECHR	PRAGUE	5	0	12	-5	3	2.4	13	-13
DENMAR	COPENHAGEN	7	4	9	-4	5	3.1	46	0
EGYPT	CAIRO	21	13	24	9	17	1.2	3	-2

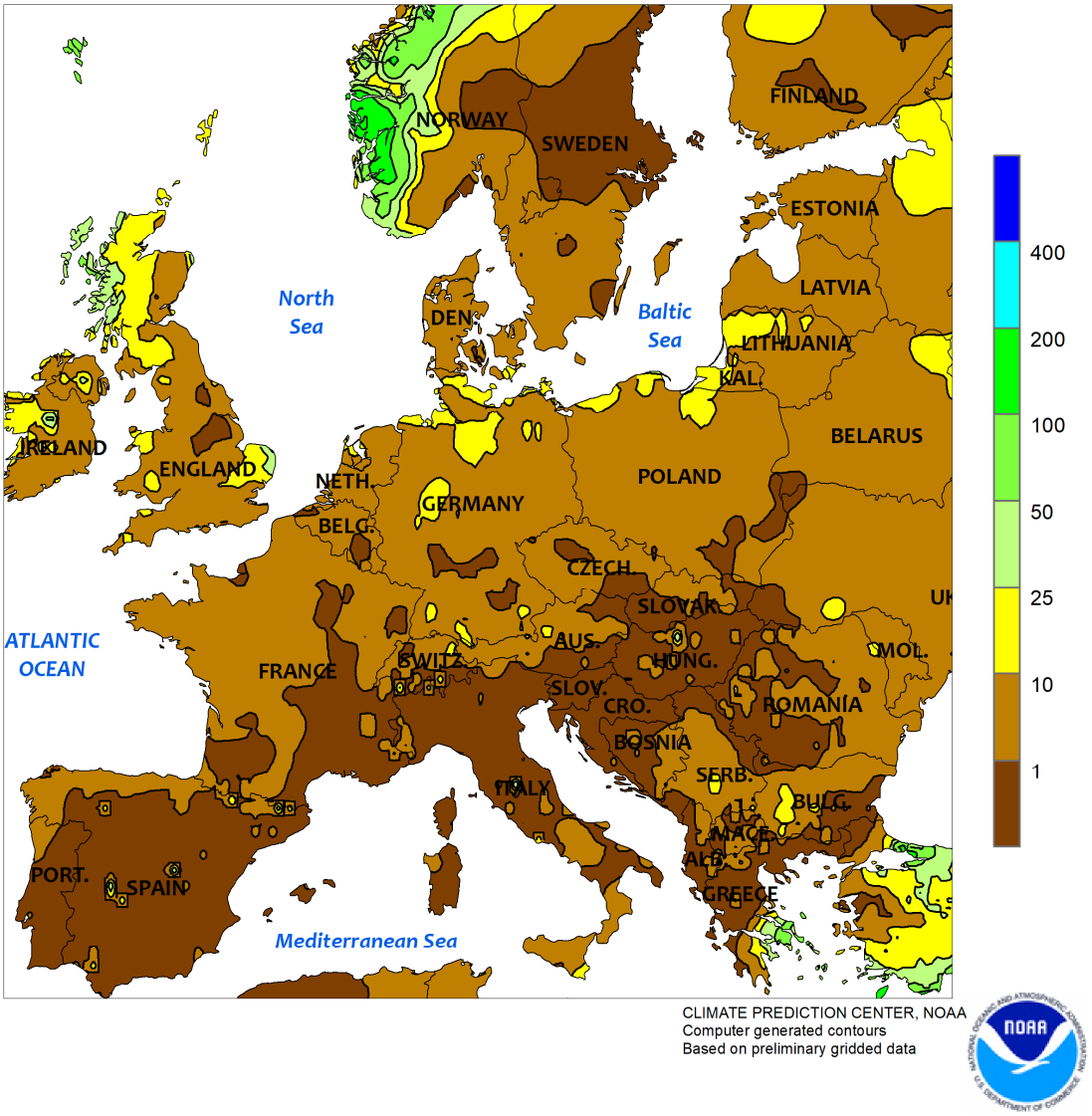
Based on Preliminary Reports

December 2019

COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	PRECIP. (MM) TOT	DEP NRM
ESTONI	TALLINN	4	1	8	-7	3	4.4	73	12
ETHIOP	ADDIS ABABA	23	10	25	3	16	1.1	3	-15
F GUIA	CAYENNE	30	24	32	22	27	1.2	565	230
FIJI	NAUSORI	30	23	32	20	27	1.3	271	10
FINLAN	HELSINKI	3	-1	7	-10	1	4.3	100	43
FRANCE	PARIS/ORLY	9	5	16	-3	7	1.9	87	29
	STRASBOURG	8	2	14	-4	5	2.2	55	9
	BOURGES	10	5	17	-3	7	2.8	89	25
	BORDEAUX	13	7	16	-1	10	2.9	132	26
	TOULOUSE	13	6	19	0	10	3.1	80	30
	MARSEILLE	15	7	20	0	11	3.0	115	64
GABON	LIBREVILLE	31	28	39	26	29	3.0	16	-320
GERMAN	HAMBURG	7	3	13	-5	5	2.4	47	-31
	BERLIN	7	3	12	-4	5	2.7	28	-27
	DUSSELDORF	8	4	15	-3	6	1.8	67	-9
	LEIPZIG	7	2	15	-5	4	2.7	24	-16
	DRESDEN	7	2	12	-2	5	2.8	25	-18
	STUTTGART	7	0	14	-7	4	1.9	42	-12
	NURNBERG	7	0	13	-7	3	2.1	44	-8
	AUGSBURG	6	-1	15	-7	3	1.7	37	-16
GREECE	THESSALONIKA	12	7	19	2	10	2.9	67	19
	LARISSA	11	5	18	0	8	1.9	135	88
	ATHENS	16	10	20	3	13	1.1	132	74
GUADEL	RAIZET	30	23	31	21	26	1.3	97	-41
HONGKO	HONG KONG INT	23	17	28	13	20	1.7	10	-15
HUNGAR	BUDAPEST	6	1	17	-8	4	2.9	81	43
ICELAN	REYKJAVIK	2	-1	10	-9	1	0.7	59	-23
INDIA	AMRITSAR	16	6	24	1	11	-1.9	42	30
	NEW DELHI	19	8	25	2	13	-2.6	34	26
	AHMEDABAD	28	15	30	10	21	0.1	0	-2
	INDORE	25	13	29	7	19	0.2	0	-5
	CALCUTTA	25	15	31	11	20	-0.1	7	-5
	VERAVAL	30	19	34	13	24	0.8	10	******
	BOMBAY	33	22	35	16	27	1.6	1	******
	POONA	29	17	32	14	23	3.0	1	-6
	BEGAMPET	28	19	30	15	23	1.9	5	1
	VISHAKHAPATNAM	29	22	31	20	26	1.4	0	-7
	MADRAS	30	23	31	21	26	1.4	153	-29
	MANGALORE	33	23	35	22	28	1.0	18	3
INDONE	SERANG	33	24	35	24	29	1.6	155	-41
IRELAN	DUBLIN	9	4	14	-3	6	0.1	58	-18
ITALY	MILAN	10	3	16	-2	6	3.1	101	48
	VERONA	10	1	15	-4	6	2.7	84	32
	VENICE	10	3	15	-1	7	2.7	78	29
	GENOA	14	9	18	4	11	1.3	241	157
	ROME	16	7	18	0	11	1.7	86	3
	NAPLES	16	7	20	2	11	1.3	140	31
JAMAIC	KINGSTON	32	24	33	22	28	1.2	24	-12
JAPAN	SAPPORO	2	-3	10	-8	-1	0.3	64	-41
	NAGOYA	13	6	18	1	9	2.5	71	34
	TOKYO	13	6	19	2	9	0.6	78	38
	YOKOHAMA	13	7	20	4	10	1.3	137	89
	KYOTO	12	5	16	2	9	1.3	50	3
	OSAKA	13	7	17	4	10	1.5	59	21
KAZAKH	KUSTANAY	-7	-13	0	-21	-10	2.2	27	2
	TSELINOGRAD	-6	-10	3	-21	-8	4.2	39	17
	KARAGANDA	-4	-10	5	-21	-7	4.0	60	37
KENYA	NAIROBI	24	17	27	12	21	1.2	232	159
LIBYA	BENGHAZI	19	12	25	6	16	1.3	94	22
LITHUA	KAUNAS	4	1	10	-5	2	4.0	45	-3
LUXEMB	LUXEMBOURG	6	2	15	-3	4	2.6	86	0
MALAYS	KUALA LUMPUR	33	25	35	23	29	2.2	352	106
MALI	BAMAKO	35	16	37	10	25	-0.2	0	-1
MARSHA	MAJURO	30	27	31	25	29	1.3	332	50
MARTIN	LAMENTIN	30	24	32	21	27	1.9	157	-13
MAURIT	NOUAKCHOTT	31	15	35	12	23	1.1	0	-3
MEXICO	GUADALAJARA	23	9	28	6	16	0.6	7	-9
	TLAXCALA	22	7	26	1	15	1.4	3	-2
	ORIZABA	23	14	30	9	18	2.2	40	-3
MOROCC	CASABLANCA	19	12	23	7	15	1.7	76	-2
	MARRAKECH	22	8	27	5	15	2.2	35	13
MOZAMB	MAPUTO	30	22	44	17	26	0.4	83	-9
N KORE	PYONGYANG	3	-4	8	-13	-1	1.5	35	17
NEW CA	NOUMEA	29	22	33	20	26	0.9	18	-61
NIGER	NIAMEY	34	18	37	13	26	1.6	0	0
NORWAY	OSLO	***	***	5	-13	***	*****	*****	******
NZEALA	AUCKLAND	23	16	26	11	19	*****	52	******
	WELLINGTON	20	14	23	9	17	*****	107	******
P RICO	SAN JUAN	31	25	34	23	28	2.1	150	34
PAKIST	KARACHI	27	14	31	10	20	0.4	1	-3
PERU	LIMA	25	19	27	19	22	0.9	0	0
PHILIP	MANILA	31	25	34	22	28	1.2	121	57
PNEWGU	PORT MORESBY	31	25	34	22	28	1.0	0	-122
POLAND	WARSAW	5	1	13	-6	3	3.5	39	4
	LODZ	6	1	13	-8	3	3.5	27	-17
	KATOWICE	6	0	16	-8	3	3.1	43	-5
PORTUG	LISBON	16	11	19	7	14	1.8	74	-25
ROMANI	BUCHAREST	9	0	17	-7	4	3.8	26	-13
RUSSIA	ST.PETERSBURG	3	1	8	-5	2	5.6	95	48
	KAZAN	-3	-6	3	-16	-4	3.8	39	2
	MOSCOW	2	0	7	-5	1	6.3	35	-14
	YEKATERINBURG	-5	-9	3	-23	-7	3.6	46	21
	OMSK	-8	-13	0	-27	-10	3.1	38	7
	BARNAUL	-6	-11	4	-30	-9	4.0	59	31
	KHABAROVSK	-14	-21	-5	-29	-18	-0.2	10	-7
	VLADIVOSTOK	-5	-11	4	-20	-8	0.8	12	-1
	VOLGOGRAD	1	-3	8	-10	-1	3.7	25	-13
	ASTRAKHAN	4	-2	10	-10	1	3.0	6	-8
	ORENBURG	-4	-9	1	-20	-7	2.5	35	1
S AFRI	JOHANNESBURG	24	15	31	9	20	0.7	136	21
	BETHAL	***	***	27	10	***	*****	*****	******
	DURBAN	26	19	31	14	22	-0.9	223	109
	CAPE TOWN	25	15	33	10	20	0.1	19	-1
S KORE	SEOUL	5	-1	13	-11	2	1.1	23	-1
SAMOA	PAGO PAGO	30	26	32	24	28	0.4	439	99
SENEGA	DAKAR	28	21	33	20	25	1.7	0	-5
SPAIN	VALLADOLID	10	4	16	-1	7	2.0	73	20
	MADRID	13	5	18	-2	9	2.1	63	16
	SEVILLE	18	10	22	4	14	2.1	83	-17
SWITZE	ZURICH	6	2	13	-3	4	2.5	64	-15
	GENEVA	8	2	14	-4	5	2.5	144	58
SYRIA	DAMASCUS	15	3	22	-3	9	2.0	22	-22
TAHITI	PAPEETE	30	24	31	22	27	0.5	249	-89
TANZAN	DAR ES SALAAM	32	25	36	22	28	1.0	349	246
THAILA	PHITSANULOK	32	18	36	11	25	0.4	0	-6
	BANGKOK	33	23	35	18	28	2.1	0	-5
TOGO	TABLIGBO	35	23	37	18	29	2.0	18	-3
TRINID	PORT OF SPAIN	31	24	33	22	27	1.3	142	7
TUNISI	TUNIS	19	12	22	7	15	2.5	62	-1
TURKEY	ISTANBUL	13	8	19	3	10	2.0	38	-53
	ANKARA	6	-1	12	-7	3	1.4	52	6
TURKME	ASHKHABAD	13	4	24	0	9	3.8	8	-15
UKINGD	ABERDEEN	7	2	12	-4	5	0.5	53	-24
	LONDON	10	4	14	-1	7	0.9	91	36
UKRAIN	KIEV	5	1	15	-5	3	4.5	35	-6
	LVOV	5	0	16	-10	3	4.0	53	3
	KIROVOGRAD	5	1	13	-7	3	5.2	34	1
	ODESSA	8	3	13	-4	6	4.3	33	-5
	KHARKOV	3	0	10	-6	2	4.7	21	-17
UZBEKI	TASHKENT	11	3	20	-4	7	3.3	37	-16
VENEZU	CARACAS	***	***	31	23	***	*****	*****	******
YUGOSL	BELGRADE	9	4	17	-4	6	3.6	57	5
ZAMBIA	LUSAKA	28	21	33	17	25	1.9	68	-82
ZIMBAB	KADOMA	***	***	34	16	***	*****	*****	******

Based on Preliminary Reports

EUROPE
Total Precipitation (mm)
December 29, 2019 - January 4, 2020

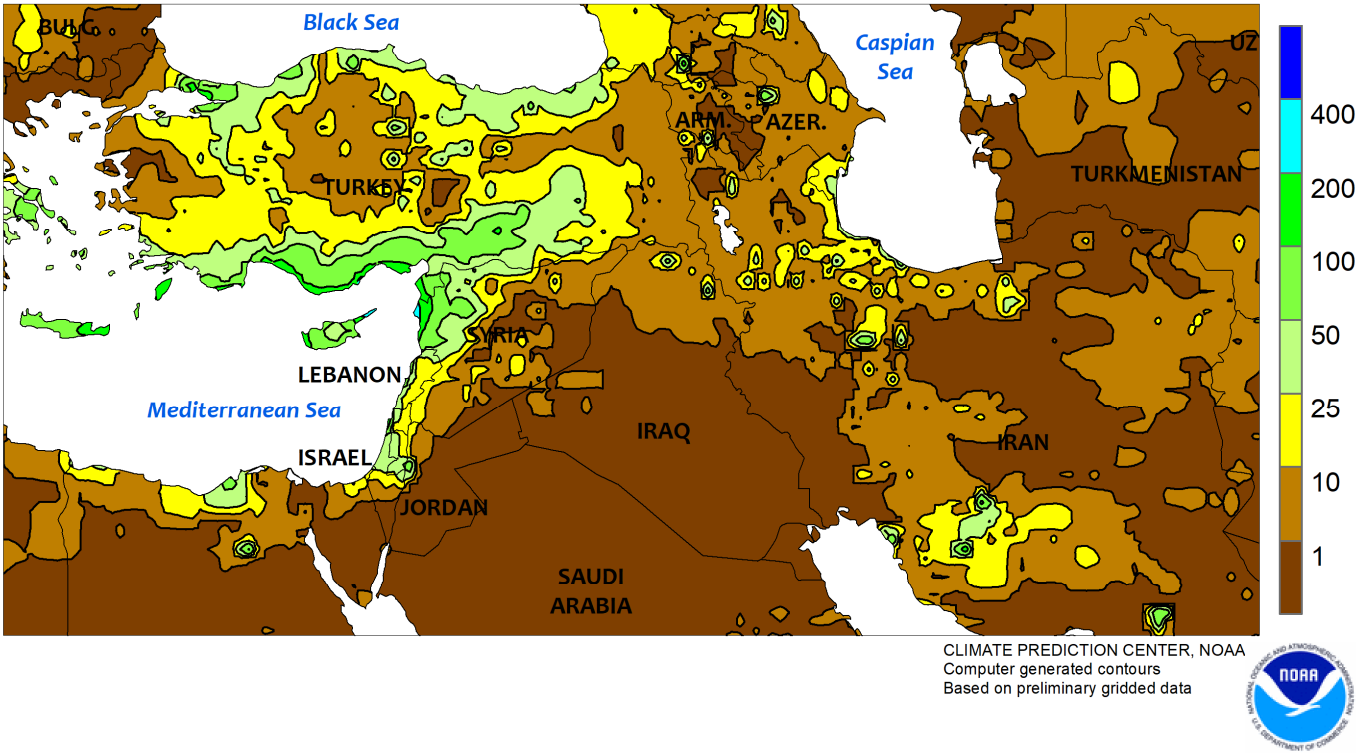


EUROPE

A broad area of high pressure brought dry weather to most of the continent, though rain and snow fell in northern- and eastern-most growing areas. Following a recent stretch of very wet weather across much of Europe – save for localized dryness in some northeastern growing areas – sunny skies and near- to above-normal temperatures favored dormant to semi-dormant winter wheat and rapeseed. Moisture supplies remained overall favorable, though localized dryness over the past 60 days (less than 50 percent of normal) in parts of eastern Germany as well as central and northwestern Poland kept soil moisture reserves in short supply. In contrast, emerging to vegetative winter grains were developing favorably in Spain and Italy due to recent moderate to heavy rain (locally more than 200 percent-of-normal rainfall over the past 60 days). While dry weather was reported during the past week over much of the continent, a series of fast-moving disturbances brought rain and snow (2-10 mm liquid equivalent, locally more) to northern- and eastern-most crop areas. Somewhat cooler weather (1-3°C below normal) settled across southern Germany and the western Balkans, while temperatures remained near to above normal elsewhere. Europe's major winter crop areas remained devoid of a protective snow cover following a very warm December.

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

MIDDLE EAST
Total Precipitation (mm)
December 29, 2019 - January 4, 2020



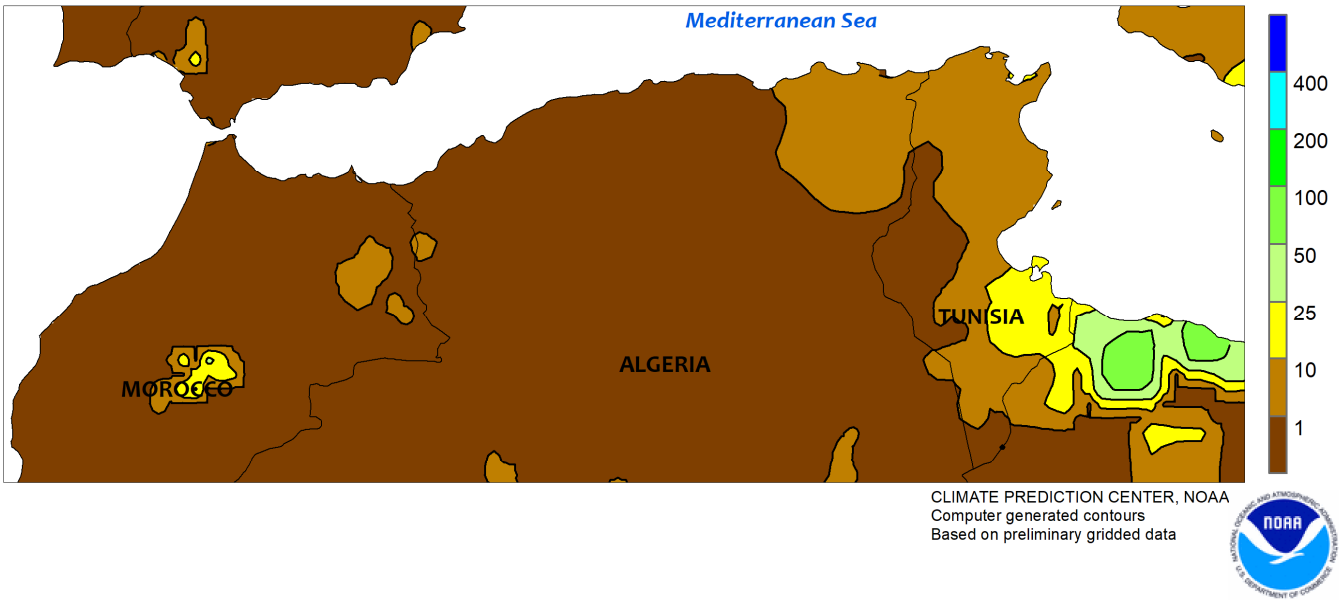
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MIDDLE EAST

Rain continued across western and central growing areas, while sunny skies prevailed in the east. Another in a series of slow-moving Mediterranean storms produced widespread showers (3-30 mm) on the previously dry Anatolian Plateau of central Turkey, further improving moisture supplies for dormant winter grains following autumn drought. Moderate to heavy rain (20-100 mm, locally up to 130 mm) was reported along the eastern Mediterranean Coast, maintaining abundant moisture supplies for vegetative winter grains but likely causing additional lowland flooding. Lighter showers (less than 10 mm) fell in northern Iraq and northwestern Iran, while unusually heavy rain (10-30 mm) persisted in southwestern Iran near the Persian Gulf. Overall, moisture remained in good supply for dormant (north) to vegetative (central and south) wheat and barley across the Middle East. Temperatures averaged 1 to 4°C above normal from central Turkey eastward, further reducing cold hardiness of dormant winter grains in the climatologically colder northern growing areas and keeping crop areas devoid of a protective snow cover.

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

NORTHWESTERN AFRICA
Total Precipitation (mm)
December 29, 2019 - January 4, 2020

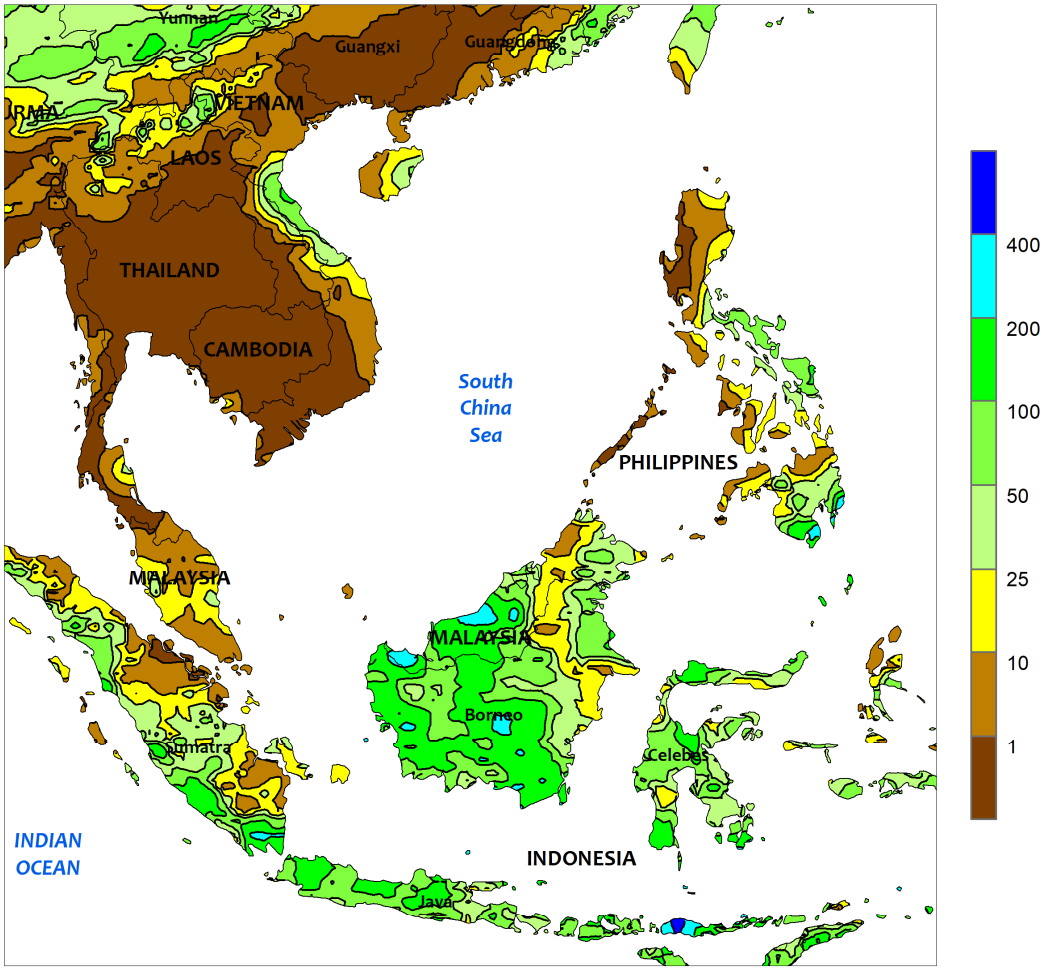


NORTHWESTERN AFRICA

After good autumn rainfall, sunny skies were favorable for the development of vegetative winter grains across the region. Showers (2-12 mm) were confined to eastern-most growing areas as another Mediterranean storm tracked east of the region. Otherwise, dry weather and near-normal temperatures favored wheat and barley establishment. Despite the wet start to the cool rainy season, localized drought in southwestern Morocco limited winter crop emergence and establishment. However, Morocco's primary croplands (western and northern portions of the country) have fared better.

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

SOUTHEAST ASIA
Total Precipitation (mm)
December 29, 2019 - January 4, 2020



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

SOUTHEAST ASIA

Widespread showers (25-100 mm or more) in Java, Indonesia, further improved moisture supplies for wet-season rice. In fact, the wet season was underway in eastern Java after a delay of over a month. The improved rainfall has eased seasonal drought, but more rain is needed to fully eliminate long-term moisture deficits. Meanwhile, wet weather (50-150 mm) in eastern Malaysia and Indonesia benefited oil palm, with drier-than-normal weather in western areas. Elsewhere, variable showers (10-100 mm) in Luzon and the eastern Visayas maintained good moisture conditions for corn and rice, while unfavorable seasonal dryness continued in Mindanao.

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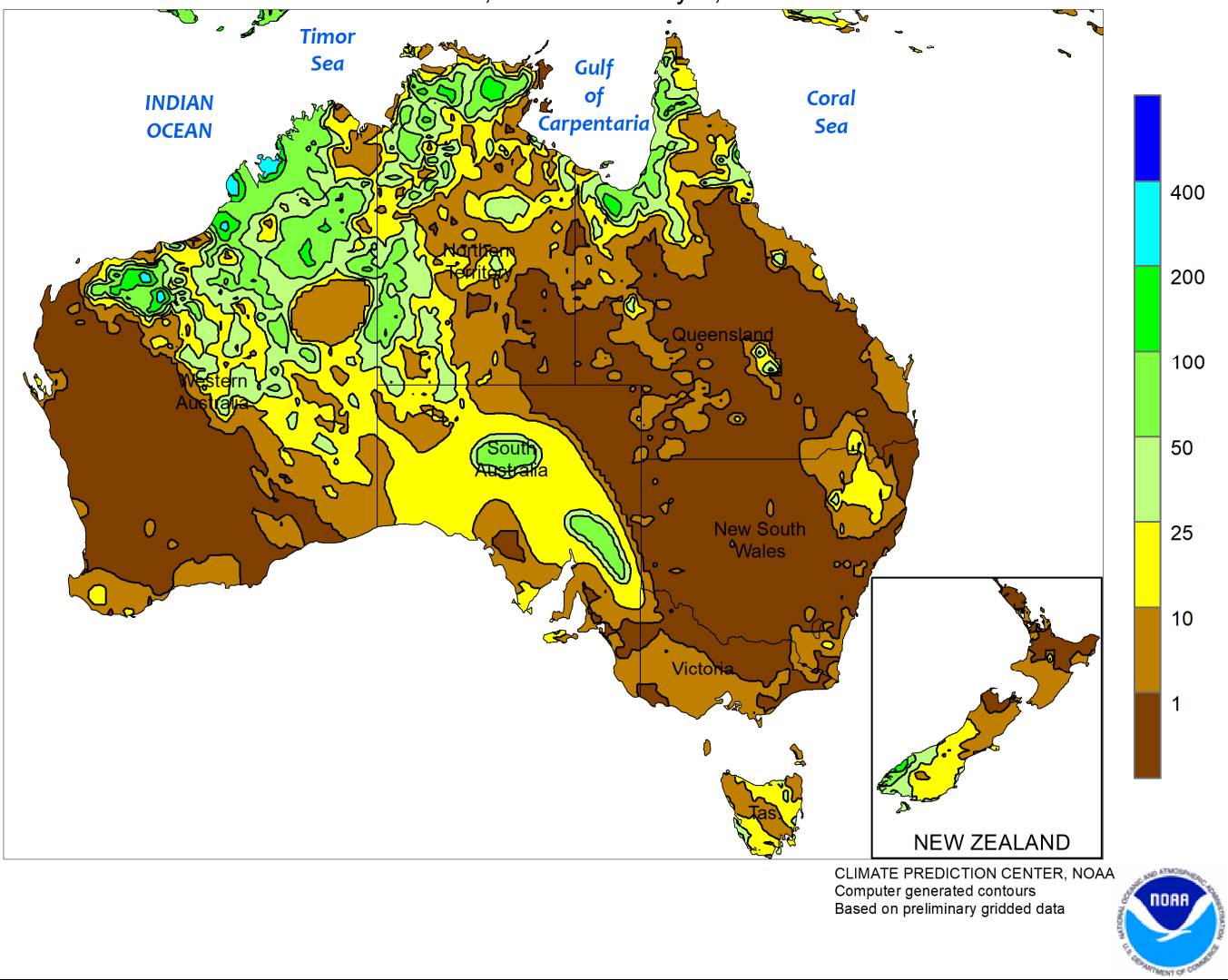

AUSTRALIA

In southern Queensland and New South Wales, isolated showers (generally 1-10 mm, locally more) provided a local boost in topsoil moisture but did little to improve summer crop prospects overall. Hot, sometimes windy weather exacerbated the effects of severe, long-term drought, maintaining poor cotton and sorghum conditions while further fanning historically devastating wildfires burning across portions of rural eastern Australia. Temperatures averaged 2 to 5°C above normal, with maximum temperatures ranging from the upper 30s to middle 40s degrees C. Winter crop harvesting has mostly concluded in Australia, with any lingering fieldwork confined primarily to far southern and far southwestern Australia.

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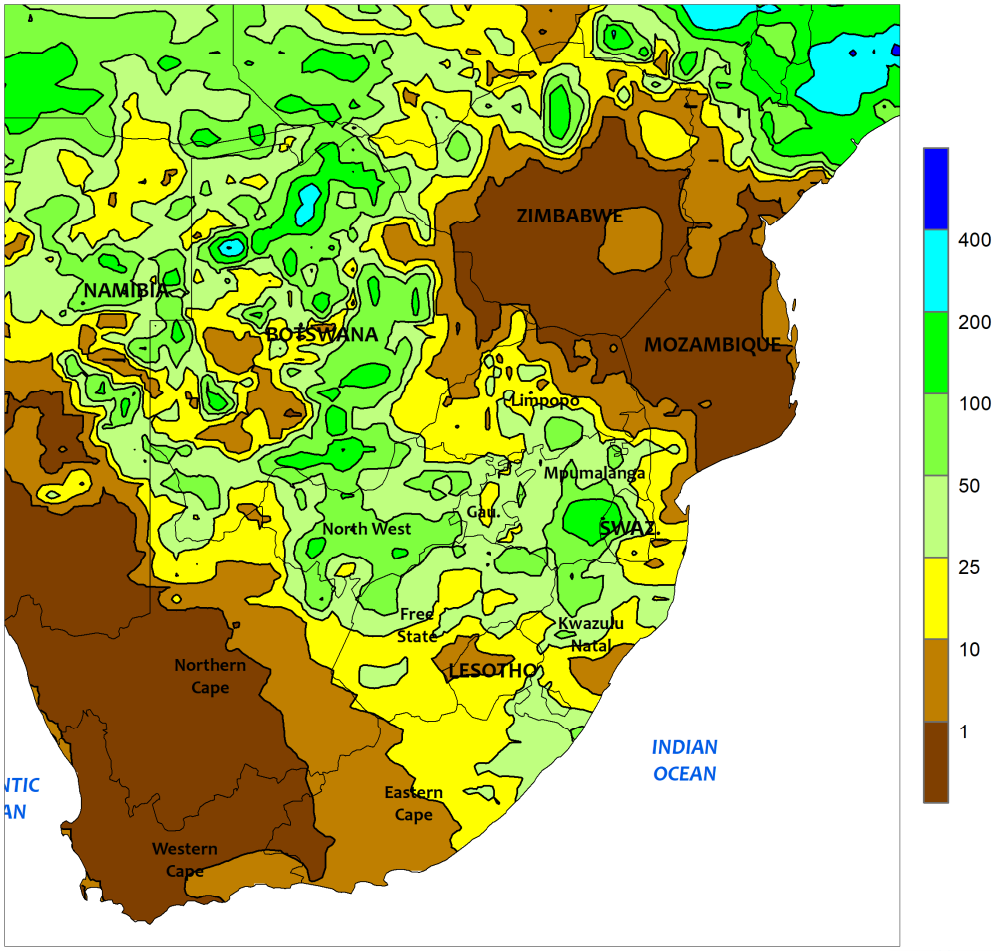
SOUTH AFRICA
Total Precipitation (mm)
December 29, 2019 - January 4, 2020



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

SOUTH AFRICA

Warm, showery weather maintained overall favorable conditions for summer grains in key production areas within the corn belt. Rainfall totaled 10 to 50 mm from North West and Free State eastward through Mpumalanga and northern KwaZulu-Natal; for a second week, some of the heaviest rainfall (greater than 50 mm) was recorded in commercial white corn areas toward the western edge of the growing area. Weekly temperatures averaging 1 to 3°C above normal (daytime highs ranging from the upper 20s to lower 30s degrees C) fostered rapid rates of development in the aforementioned areas. However, drier, warmer conditions (rainfall totaling 5 mm or less, with highs reaching the upper 30s) prevailed in minor production areas in Limpopo. Elsewhere, warm, sunny weather (highs reaching the middle and upper 30s but with little rainfall) spurred rapid development of irrigated sugarcane in eastern Mpumalanga and northern KwaZulu-Natal, with sporadic showers (generally less than 25 mm) in rainfed production areas in southern KwaZulu-Natal. Farther west, locally heavy showers (10-25 mm or more) stretched from eastern sections of Eastern Cape northwestward into Northern Cape, boosting irrigation reserves for corn and cotton in the Orange River Valley. Ample sunshine and seasonable warmth fostered development of tree and vine crops in Western Cape, as well as irrigated summer crops in middle and lower sections of the Orange River Valley in central sections of Northern Cape.

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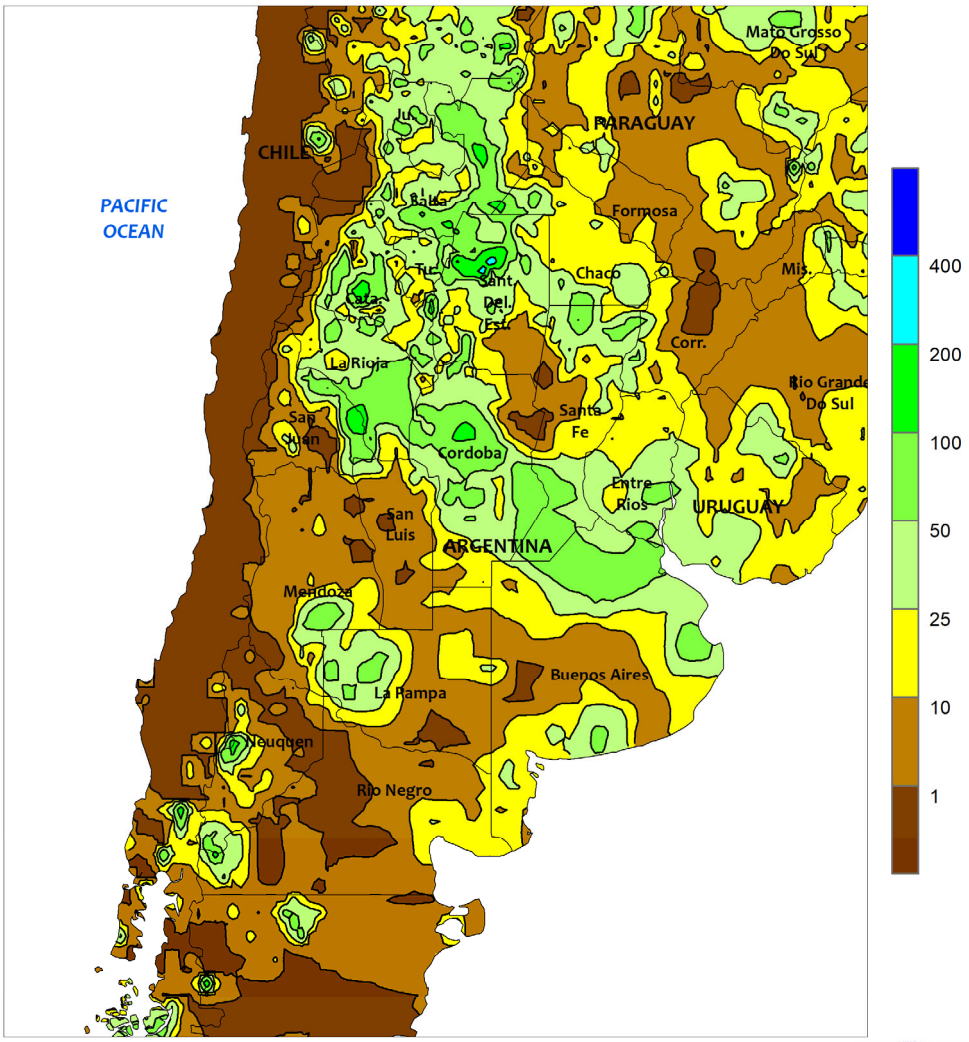
ARGENTINA
Total Precipitation (mm)
December 29, 2019 - January 4, 2020



ARGENTINA

Locally heavy showers returned to central and western farming areas, providing a timely boost in moisture for recently sown summer grains and oilseeds. Rainfall totaled 25 to 50 mm (locally exceeding 100 mm) from Salta southward through Cordoba, extending eastward through the lower Parana River Valley into Uruguay. Rainfall was generally lighter elsewhere in Argentina, though most major farming areas recorded at least 10 mm; this included previously dry southern wheat areas of La Pampa and Buenos Aires, where the showers provided a boost in moisture for germination of second-crop soybeans. Weekly temperatures averaged near to slightly above normal throughout central and northern Argentina, with daytime highs reaching the lower 30s (degrees C) on several days in central Argentina and approaching 40°C in climatologically warmer northern areas. According to the government of Argentina, corn and soybeans were 82 and 86 percent planted, respectively, as of January 2 and cotton was 97 percent planted. Meanwhile, wheat was 88 percent harvested, slightly ahead of last year's pace (86 percent).

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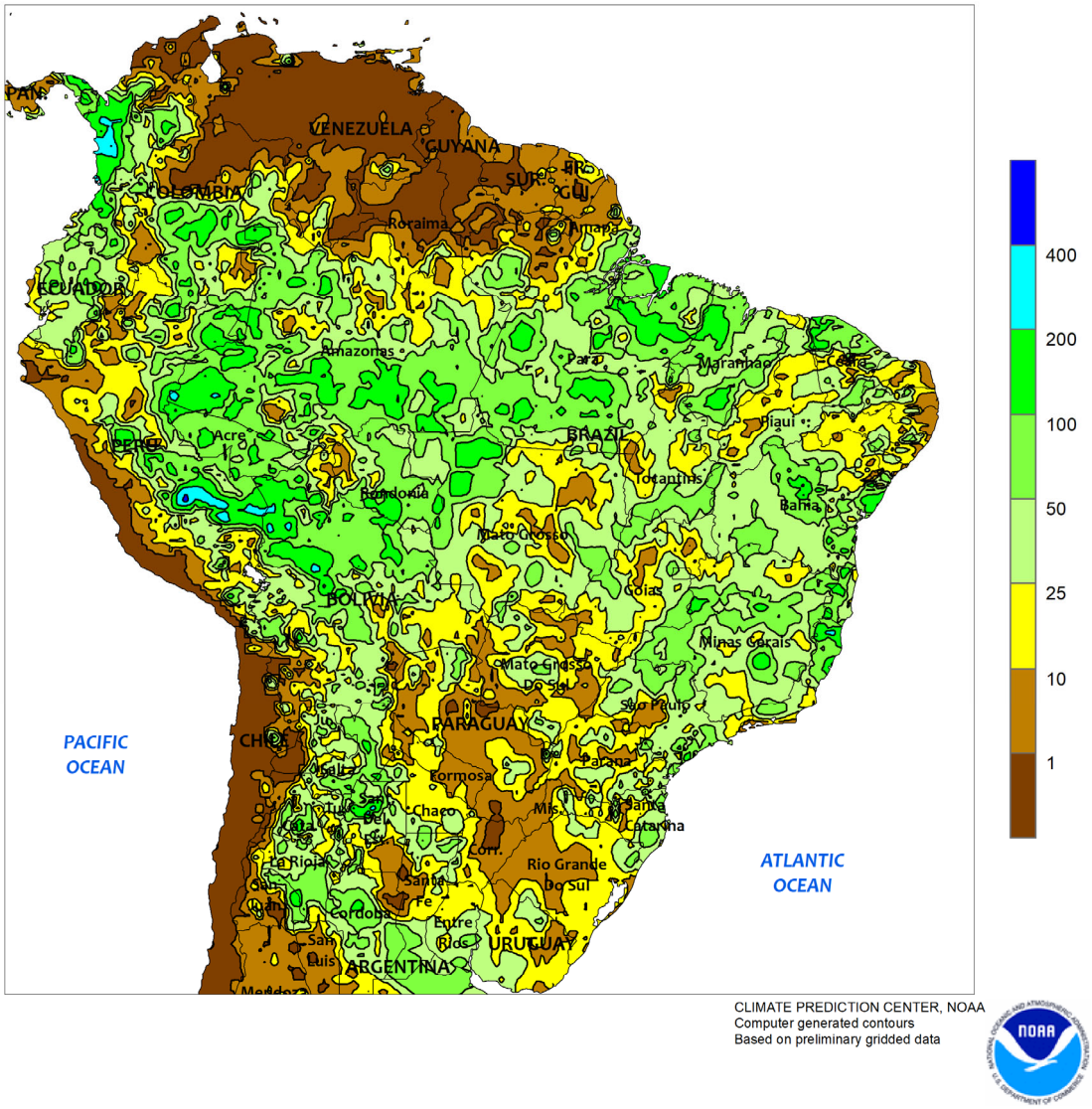
BRAZIL
Total Precipitation (mm)
December 29, 2019 - January 4, 2020



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

BRAZIL

Scattered showers and summer warmth favored soybeans and other summer crops in the country's more northerly farmlands, but dryness persisted in key southern production areas. Rainfall was highly variable in most regions, with pockets of dryness interspersed with beneficial showers (rainfall totaling more than 25 mm, with many locations recording more than 50 mm). In the Center-West region (Mato Grosso, Goias, and Mato Grosso do Sul), conditions were generally favorable for earlier-planted soybeans in filling stages of development. In the northeast (Maranhao southward through western Bahia), a general pattern of moderate to heavy rain (10-50 mm) prevailed, providing a much-needed boost in moisture for later-planted crops that have been subject to a more erratic pattern of rainfall for much of the season. In contrast, a second week of unseasonable warmth and dryness was untimely for reproductive to filling summer crops in some southern production areas. The dryness was of particular concern in Rio Grande do Sul, which has reportedly experienced stress on a portion of their crops; according to government reports, corn and soybeans were 95 and 99 percent planted, respectively, as of January 2, with 70 percent of emerged corn having reached the reproductive to filling stages of development and soybeans 15 percent flowering to filling.

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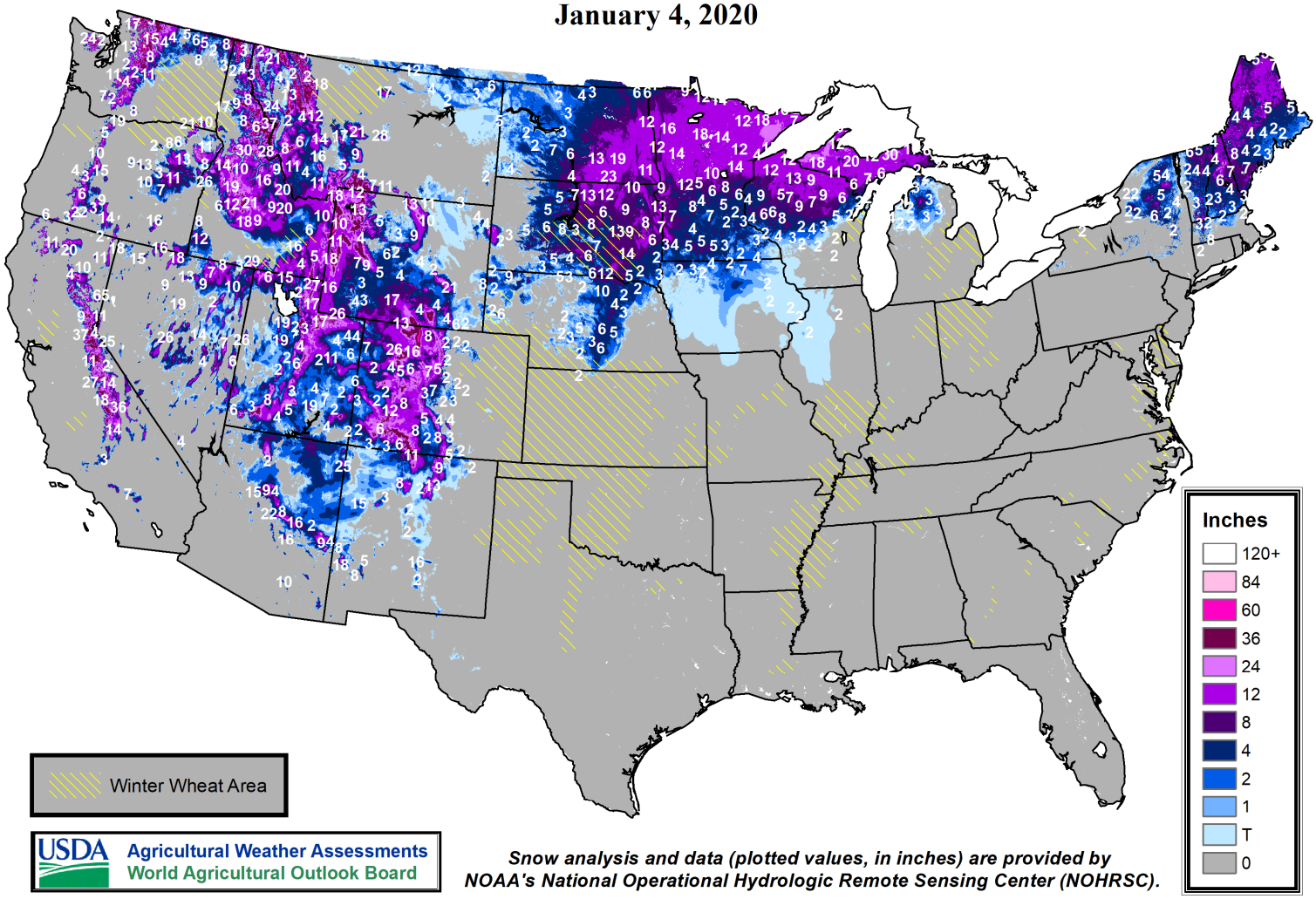
Snow Depth

January 4, 2020



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