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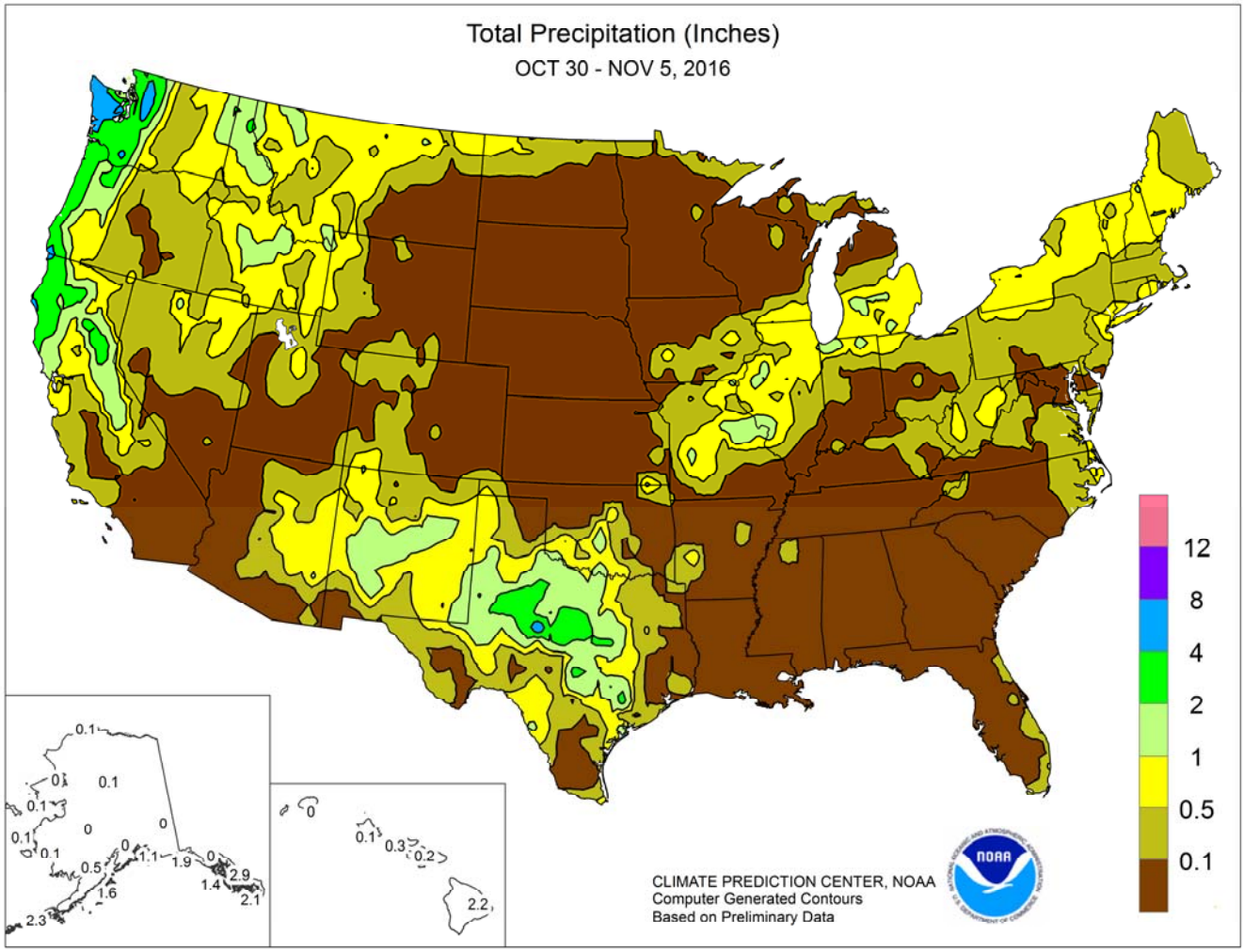
WEEKLY WEATHER AND CROP BULLETIN

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

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



HIGHLIGHTS

October 30 – November 5, 2016

Highlights provided by USDA/WAOB

Mild, dry weather again dominated the country. The stunning, late-season warmth maintained a rapid fieldwork pace—except in areas such as the drought-stricken **interior Southeast**, where some producers continued to await rain before planting winter grains and cover crops. Weekly temperatures averaged at least 10°F above normal across the **nation's mid-section**, including the **Plains**, **Midwest**, and **mid-South**, while near- to slightly below-normal temperatures were largely limited to **southern Florida**, **northern and central California**, and **New**

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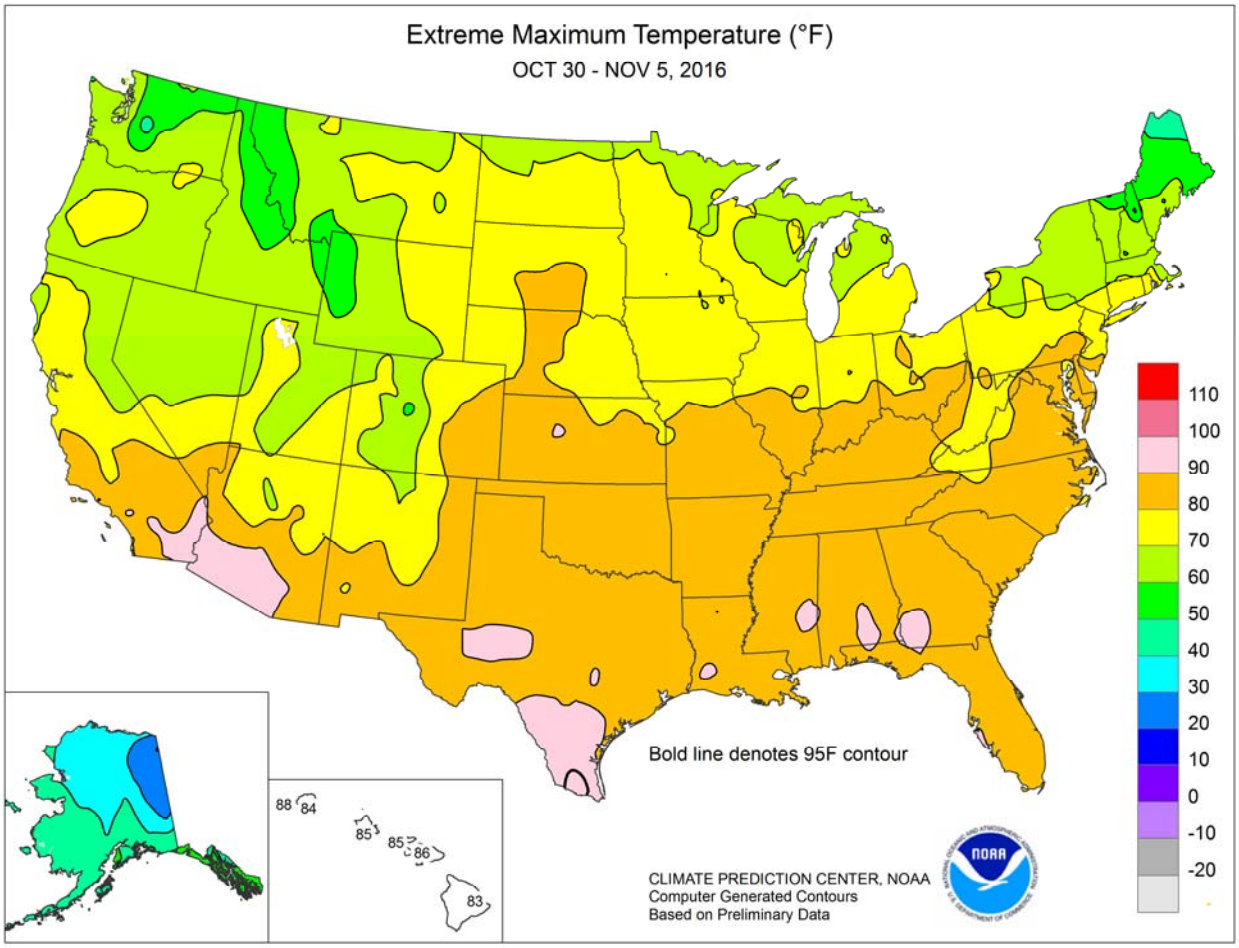
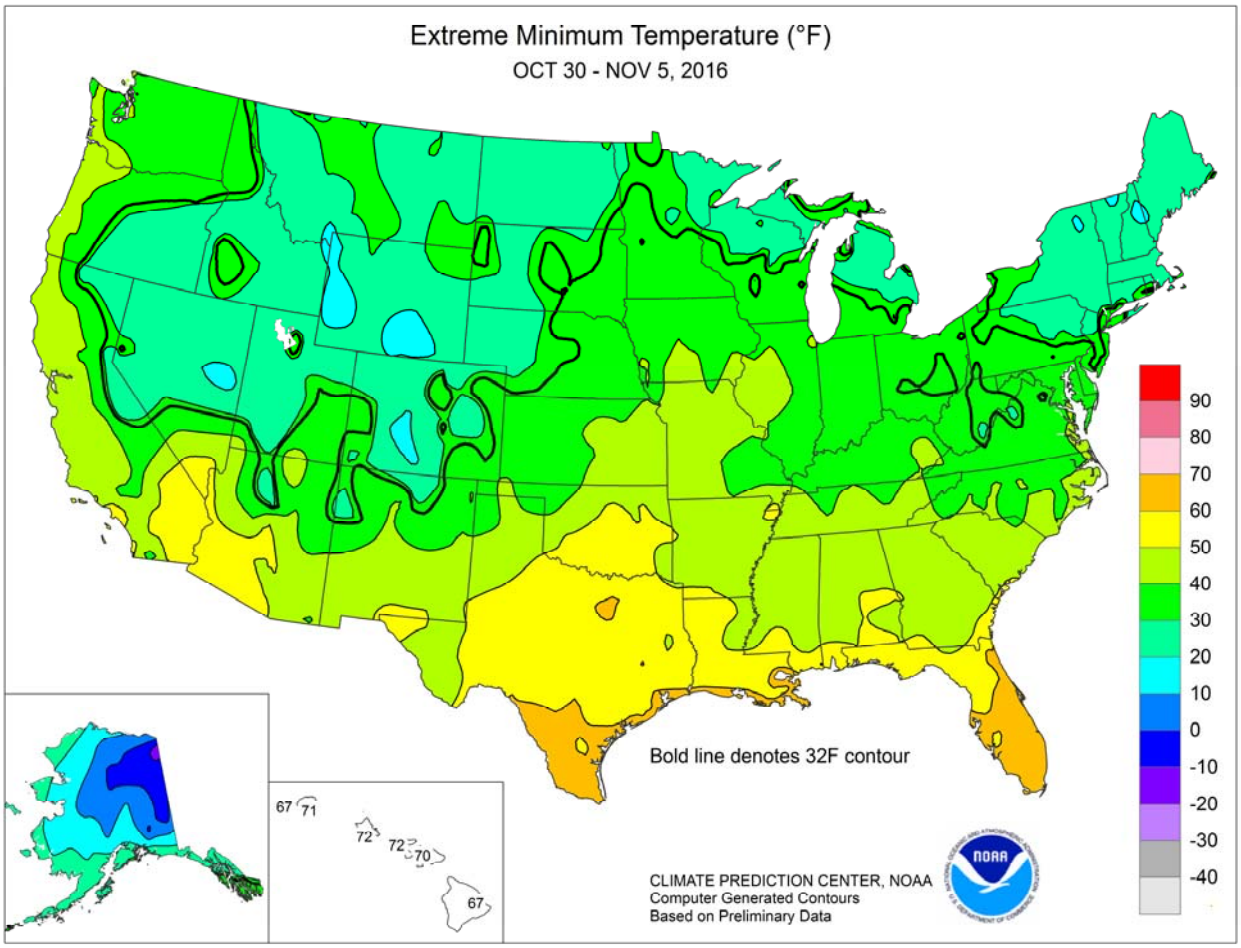
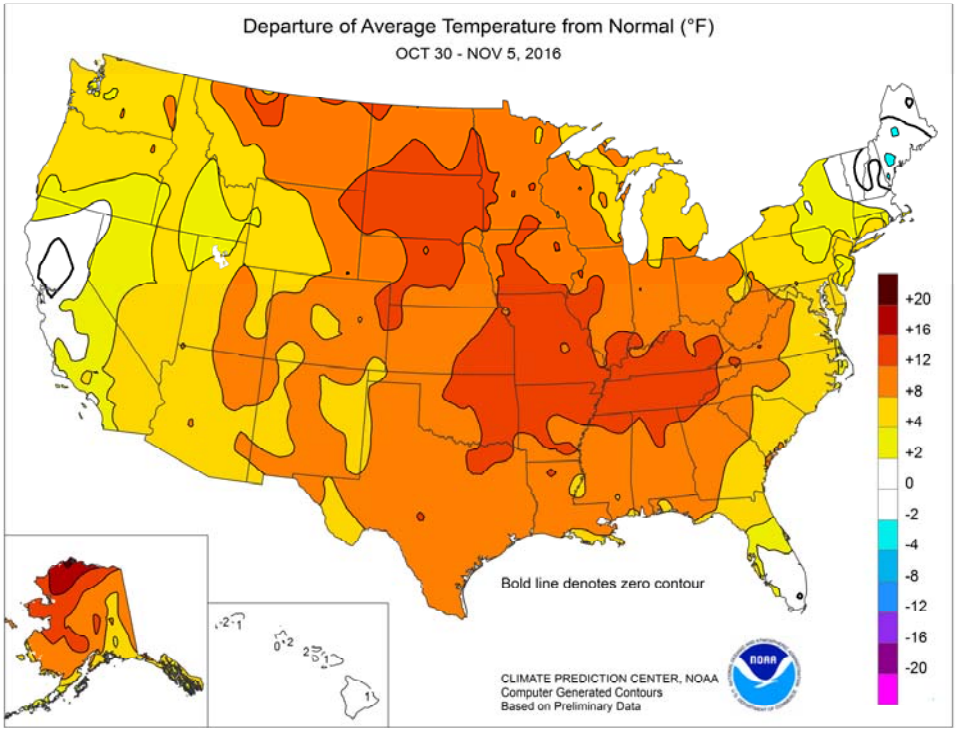

Extreme Maximum Temperature (°F)
OCT 30 - NOV 5, 2016
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95F contour
88
84
85
85
86
83
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
OCT 30 - NOV 5, 2016
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32F contour
67
71
72
72
70
67
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

(Continued from front cover)

England. Meanwhile, wet conditions lingered across **northern California** and the **Northwest**, following near-record to record-setting October precipitation. **Northwestern** showers benefited rangeland, pastures, and winter grains, but slowed final winter wheat planting efforts. Elsewhere, late-week rain in the **south-central U.S.** slowed fieldwork but promoted winter wheat establishment and revived rangeland and pastures. Some of the rain extended into **New Mexico** and parts of **Arizona**. Despite the increase in showers, pockets of unfavorable dryness persisted on the **central and southern High Plains**.



Late-season warmth continued into November. **Rockford, IL**, completed October without its first autumn freeze for the first time since 1973 and only the fourth time on record, along with 1947 and 1971. **La Crosse, WI**, set an all-time record for its latest first autumn freeze, which had been November 7, 1900. In **Texas**, **Dalhart** set an October record with 6 days of 90-degree heat (previously, 4 days in 2007). And, with a high of 90°F on October 31, **Tallahassee, FL**, set a record for its latest observance of a 90-degree reading (previously, 90°F on October 26, 1931). Across the **South** and **Midwest**, November 1 featured monthly record highs in locations such as **Austin, TX** (91°F); **Montgomery, AL** (91°F); **Meridian, MS** (89°F); **Evansville, IN** (86°F); **Paducah, KY** (85°F); **Cape Girardeau, MO** (84°F); **Cincinnati, OH** (82°F); and **Milwaukee, WI** (77°F). **Montgomery** had never before attained the 90-degree mark in November; the monthly record had been 88°F on November 6, 2015. **Louisville, KY**, reached 85°F on November 1 and 2; the previous monthly record in that location had been 84°F on November 17, 1958. Other monthly record highs set on November 2 included 84°F in **Jackson, KY**, and 83°F in **Roanoke, VA**. During the second half of the week, slightly cooler air arrived across the **South** and **East**, while warmth shifted to the **north-central U.S.** From November 4-6, a trio of daily-record highs occurred in **Duluth, MN** (69, 70, and 70°F). Other record-setting highs for November 5 included 80°F in **Pierre, SD**; 76°F in **Bismarck, ND**; and 73°F in **Minneapolis-St. Paul, MN**.

In late October, another round of heavy rain and high winds arrived across the **Northwest**. Daily-record totals for October 30 reached 0.91 inch in **Spokane, WA**; 0.80 inch in **Stanley, ID**; and 0.52 inch in **Helena, MT**. **Spokane** capped its wettest month on record, with 6.23 inches (528 percent of normal), toppling the November 1897 standard of 5.85 inches. Elsewhere on the 30th, wind gusts were clocked to 66 mph in **Lander, WY**, and 59 mph in **Winnemucca, NV**. In contrast, cool, calm conditions settled across the **Northeast**. The first day of November featured daily-record lows in **Binghamton, NY** (27°F), and **Bridgeport, CT** (32°F). During the mid- to late-week period, additional precipitation grazed the **Pacific Northwest**. In **western Washington**, **Quillayute** collected a daily-record total of 2.39 inches on November 2. Three days later, record-setting **Washington** totals for November 5 included 2.05 inches in **Bellingham** and 1.31 inches in **Seattle**. At week's end, showers also developed across the **south-central and southwestern U.S.** Daily-record amounts for November 5 included 0.69 inch in **Roswell, NM**, and 0.35 inch in **Phoenix, AZ**. The following day in **Texas**, record-setting totals for November 6 reached 1.29 inches in **College Station** and 1.13 inches in **Dalhart**.

Mild weather also covered **Alaska**, accompanied by mostly dry weather on the mainland but widespread precipitation across the **state's southern tier**. Weekly temperatures averaged 10 to 20°F above normal across **northern, western, and interior Alaska**. Daily-record highs were established in several **Alaskan** locations, including **Nome** (43°F on October 31). On October 31 – November 1, consecutive daily-record highs were set in **Kotzebue** (39 and 38°F, respectively). Meanwhile, November 1-5 rainfall totaled 2.94 inches on **Annette Island** and 1.66 inches in **Juneau**, following the driest October on record in both locations. Farther south, the new month began quietly in **Hawaii**, following late-October showers. On the **Big Island**, 1.86 inches of Hilo's 2.14-inch weekly total occurred on October 30-31. Meanwhile, autumn dryness has been especially persistent in parts of **western Hawaii**, including **Lihue, Kauai**, where rainfall from September 1 – November 5 totaled just 1.09 inches (16 percent of normal).

National Weather Data for Selected Cities

Weather Data for the Week Ending November 5, 2016

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 SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	84	57	88	49	70	13	0.00	-0.87	0.00	0.68	9	35.85	79	85	32	0	0	0	0
	HUNTSVILLE	84	56	88	46	70	14	0.01	-0.93	0.01	1.25	15	33.75	71	82	37	0	0	1	0
	MOBILE	86	58	88	53	72	9	0.00	-0.95	0.00	5.24	53	52.22	92	91	43	0	0	0	0
	MONTGOMERY	87	55	91	51	71	11	0.00	-0.69	0.00	2.36	32	35.54	78	81	28	2	0	0	0
AK	ANCHORAGE	39	28	45	23	34	7	0.19	-0.12	0.16	2.95	57	14.74	104	91	82	0	6	2	0
	BARROW	29	25	36	20	27	21	0.07	0.03	0.03	1.01	91	4.68	120	84	73	0	7	4	0
	FAIRBANKS	28	13	38	7	21	10	0.12	-0.05	0.12	2.22	103	13.91	154	92	85	0	7	1	0
	JUNEAU	46	33	50	26	40	3	1.66	0.14	0.64	16.02	95	52.34	108	94	83	0	3	4	2
	KODIAK	46	30	48	24	38	2	1.56	-0.07	1.46	16.66	96	68.65	110	98	90	0	6	2	1
	NOME	39	31	44	21	35	13	0.10	-0.20	0.10	4.09	95	14.36	99	84	69	0	4	1	0
AZ	FLAGSTAFF	58	36	66	29	47	6	0.13	-0.28	0.13	2.34	54	19.53	100	91	42	0	2	1	0
	PHOENIX	84	64	93	60	74	7	0.35	0.19	0.35	0.87	53	4.92	73	50	33	1	0	1	0
	PRESCOTT	69	43	76	40	56	7	0.08	-0.17	0.08	3.11	88	13.88	82	84	31	0	0	1	0
	TUCSON	84	58	93	50	71	7	0.41	0.23	0.40	2.11	76	10.71	101	61	35	2	0	2	0
AR	FORT SMITH	82	59	89	52	71	15	0.00	-1.03	0.00	2.19	26	28.85	79	84	36	0	0	0	0
	LITTLE ROCK	79	56	85	48	68	11	0.00	-1.17	0.00	3.22	37	49.17	119	98	47	0	0	0	0
CA	BAKERSFIELD	73	52	78	48	62	1	0.04	-0.06	0.04	0.24	45	4.34	83	77	58	0	0	1	0
	FRESNO	72	51	78	47	62	4	0.04	-0.17	0.04	0.67	63	9.75	109	88	69	0	0	1	0
	LOS ANGELES	74	58	87	54	66	2	0.05	-0.11	0.05	0.37	50	6.37	62	79	61	0	0	1	0
	REDDING	67	46	76	41	57	1	1.22	0.41	0.74	7.92	244	38.55	152	94	74	0	0	4	1
	SACRAMENTO	68	47	73	44	58	-1	0.81	0.43	0.59	4.85	317	17.60	130	100	58	0	0	3	1
	SAN DIEGO	74	60	79	58	67	2	0.03	-0.16	0.03	0.39	49	5.40	63	72	51	0	0	1	0
	SAN FRANCISCO	68	54	72	51	61	3	0.57	0.12	0.52	2.80	178	15.24	101	81	70	0	0	3	1
	STOCKTON	71	48	74	45	60	1	0.27	-0.06	0.26	2.40	173	14.52	138	97	72	0	0	2	0
CO	ALAMOSA	63	25	69	18	44	9	0.18	0.07	0.17	0.48	29	7.83	120	81	39	0	5	2	0
	CO SPRINGS	68	40	80	33	54	12	0.00	-0.19	0.00	0.16	7	14.82	89	64	23	0	0	0	0
	DENVER INTL	71	39	79	35	55	12	0.00	-0.17	0.00	0.54	27	11.27	88	64	20	0	0	0	0
	GRAND JUNCTION	67	44	75	35	56	11	0.02	-0.17	0.02	1.06	52	7.31	93	71	42	0	0	1	0
	PUEBLO	72	37	84	30	54	9	0.00	-0.17	0.00	0.05	3	10.37	90	65	36	0	1	0	0
CT	BRIDGEPORT	65	48	74	36	56	6	0.77	-0.07	0.77	6.98	90	31.74	84	72	57	0	0	1	1
	HARTFORD	63	38	72	28	51	4	0.30	-0.63	0.30	4.59	53	26.93	69	84	47	0	3	1	0
DC	WASHINGTON	70	51	83	44	61	8	0.00	-0.67	0.00	3.40	45	28.34	84	84	47	0	0	0	0
DE	WILMINGTON	70	43	81	34	56	6	0.17	-0.48	0.17	7.02	93	36.47	99	90	48	0	0	1	0
FL	DAYTONA BEACH	82	65	85	60	73	3	0.01	-0.79	0.01	16.22	139	43.85	99	95	54	0	0	1	0
	JACKSONVILLE	82	59	86	55	71	6	0.00	-0.53	0.00	13.87	114	36.21	76	99	53	0	0	0	0
	KEY WEST	83	75	84	72	79	1	0.00	-0.79	0.00	10.15	98	35.49	102	92	70	0	0	0	0
	MIAMI	82	72	85	69	77	0	1.42	0.33	0.79	16.30	106	63.30	118	85	64	0	0	4	1
	ORLANDO	85	63	87	61	74	2	0.00	-0.46	0.00	10.03	114	51.71	117	95	48	0	0	0	0
	PENSACOLA	82	67	88	64	75	11	0.00	-0.98	0.00	3.36	32	54.14	96	83	46	0	0	0	0
	TALLAHASSEE	86	59	90	54	73	9	0.00	-0.81	0.00	7.82	88	55.12	99	88	41	1	0	0	0
	TAMPA	87	68	88	66	77	5	0.00	-0.25	0.00	5.69	63	52.12	127	85	42	0	0	0	0
	WEST PALM BEACH	83	72	85	66	77	1	0.96	-0.32	0.72	13.37	92	47.55	89	77	56	0	0	2	1
GA	ATHENS	82	53	88	45	68	11	0.00	-0.83	0.00	1.25	16	32.21	79	92	41	0	0	0	0
	ATLANTA	81	59	86	52	70	12	0.00	-0.78	0.00	3.59	46	32.71	76	82	41	0	0	0	0
	AUGUSTA	82	51	90	43	67	9	0.01	-0.68	0.01	6.67	92	33.24	85	93	48	1	0	1	0
	COLUMBUS	84	57	88	52	71	10	0.00	-0.68	0.00	1.67	28	29.59	73	86	31	0	0	0	0
	MACON	84	52	90	44	68	9	0.00	-0.60	0.00	2.38	39	26.59	69	93	33	1	0	0	0
	SAVANNAH	82	59	87	47	70	8	0.00	-0.62	0.00	16.58	192	50.95	114	91	44	0	0	0	0
HI	HILO	82	69	83	67	75	0	2.23	-0.94	1.09	30.26	143	98.39	96	88	75	0	0	6	2
	HONOLULU	84	73	85	72	79	0	0.05	-0.47	0.03	3.06	93	11.59	86	69	62	0	0	3	0
	KAHULUI	85	72	86	70	78	1	0.16	-0.23	0.09	1.96	114	11.77	85	80	67	0	0	4	0
	LIHUE	83	73	84	71	78	1	0.03	-1.03	0.02	1.12	15	11.85	38	75	65	0	0	2	0
ID	BOISE	60	41	65	38	50	4	0.33	0.10	0.31	1.50	89	6.47	67	79	56	0	0	3	0
	LEWISTON	62	45	66	39	53	8	0.60	0.35	0.37	3.21	165	12.84	121	79	62	0	0	2	0
	POCATELLO	58	31	65	26	44	3	0.41	0.18	0.39	5.34	263	12.59	120	92	66	0	5	2	0
IL	CHICAGO/O'HARE	65	46	75	38	56	10	0.68	0.00	0.50	5.71	88	32.68	104	89	65	0	0	2	1
	MOLINE	69	48	78	39	58	12	0.94	0.28	0.79	4.68	73	34.10	102	89	63	0	0	2	1
	PEORIA	68	50	77	44	59	12	1.10	0.48	1.10	9.59	152	34.60	111	97	62	0	0	1	1
	ROCKFORD	66	46	77	38	56	12	0.69	0.11	0.64	5.33	83	31.75	98	92	68	0	0	2	1
	SPRINGFIELD	72	51	82	42	62	13	0.53	-0.09	0.53	4.40	75	40.25	132	91	55	0	0	1	1
IN	EVANSVILLE	77	52	86	38	64	13	0.00	-0.80	0.00	4.50	71	42.96	116	89	48	0	0	0	0
	FORT WAYNE	67	45	79	36	56	10	0.37	-0.27	0.30	9.16	155	32.97	105	90	52	0	0	2	0
	INDIANAPOLIS	69	49	79	38	59	10	0.02	-0.72	0.02	6.65	108	41.66	120	90	55	0	0	1	0
	SOUTH BEND	64	44	77	35	54	8	1.07	0.33	0.64	7.86	104	42.27	125	96	64	0	0	2	1
IA	BURLINGTON	68	50	76	44	59	11	1.33	0.72	1.33	6.95	100	31.19	93	97	61	0	0	1	1
	CEDAR RAPIDS	67	44	74	39	56	12	1.12	0.62	1.02	10.81	185	41.20	137	99	58	0	0	2	1
	DES MOINES	70	48	75	43	59	14	0.09	-0.47	0.09	6.50	105	31.83	100	86	56	0	0	1	0
	DUBUQUE	64	43	73	38	54	11	0.55	-0.03	0.55	8.23	127	37.39	118	93	66	0	0	1	1
	SIOUX CITY	69	40	77	33	54	11	0.00	-0.39	0.00	4.38	93	28.73	119	92	59	0	0	0	0
	WATERLOO	67	39	74	32	53	10	0.01	-0.54	0.01	9.81	168	38.44	127	93	59	0	1	1	0
KS	CONCORDIA	71	46	75	39	59	11	0.01	-0.35	0.01	3.01	65	29.22	111	87	56	0	0	1	0
	DODGE CITY	74	46	90	39	60	11	0.05	-0.23	0.05	0.45	13	22.46	108	85	38	1	0	1	0
	GOODLAND	73	40	89	35	57	13	0.00	-0.23	0.00	2.53	109	16.57	89	74	39	0	0	0	0
	TOPEKA	74	51	80	42	63	14	0.04	-0.56	0.04	9.14	128	42.03	130	87	59	0	0	1	0

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

Weather Data for the Week Ending November 5, 2016

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 SEP 1	PCT. NORMAL SINCE SEP 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	77	53	83	46	65	14	0.00	-0.47	0.00	13.34	232	49.68	180	88	56	0	0	0	0
KY	JACKSON	76	55	84	43	65	13	0.03	-0.76	0.03	2.86	38	43.86	106	83	43	0	0	1	0
	LEXINGTON	74	51	83	33	63	12	0.06	-0.58	0.06	2.56	41	37.57	97	85	52	0	0	1	0
	LOUISVILLE	76	55	85	41	65	12	0.09	-0.63	0.09	3.02	47	36.69	98	82	44	0	0	1	0
	PADUCAH	77	53	85	37	65	13	0.00	-0.85	0.00	1.17	15	44.83	110	86	43	0	0	0	0
LA	BATON ROUGE	87	59	89	55	73	10	0.00	-0.95	0.00	3.09	33	77.31	144	96	39	0	0	0	0
	LAKE CHARLES	86	62	88	58	74	10	0.00	-0.91	0.00	3.71	35	60.63	125	92	45	0	0	0	0
	NEW ORLEANS	87	67	90	65	77	12	0.01	-0.86	0.01	4.69	51	60.10	110	84	49	1	0	1	0
	SHREVEPORT	85	60	87	54	72	11	0.01	-1.06	0.01	1.15	14	51.52	120	92	47	0	0	1	0
ME	CARIBOU	43	33	50	24	38	1	0.36	-0.34	0.26	5.38	80	36.48	115	89	74	0	4	5	0
	PORTLAND	54	33	61	25	43	0	0.85	-0.24	0.80	10.01	117	33.54	89	93	57	0	4	2	1
MD	BALTIMORE	69	43	83	34	56	6	0.00	-0.66	0.00	5.14	68	36.23	101	86	49	0	0	0	0
MA	BOSTON	59	41	70	34	50	1	0.20	-0.72	0.13	6.91	87	27.18	77	88	58	0	0	2	0
	WORCESTER	56	37	67	30	46	2	0.14	-0.93	0.08	9.92	102	33.31	80	89	54	0	2	2	0
MI	ALPENA	59	35	71	29	47	7	0.02	-0.48	0.01	5.39	98	26.08	105	93	56	0	1	2	0
	GRAND RAPIDS	61	43	73	34	52	8	1.39	0.74	1.34	9.90	131	41.65	132	90	63	0	0	3	1
	HOUGHTON LAKE	57	32	67	25	44	4	0.05	-0.45	0.03	5.86	102	29.46	118	95	70	0	3	2	0
	LANSING	62	41	77	30	51	7	1.65	1.11	1.44	8.10	131	31.57	117	88	67	0	1	3	1
	MUSKEGON	60	44	68	34	52	8	0.32	-0.38	0.27	10.01	147	35.16	128	93	71	0	0	3	0
	TRAVERSE CITY	59	40	72	35	50	7	0.00	-0.63	0.00	7.39	106	26.86	94	93	54	0	0	0	0
MN	DULUTH	58	35	70	32	47	11	0.09	-0.42	0.08	5.08	73	29.01	102	91	68	0	1	2	0
	INT'L FALLS	53	31	68	27	42	9	0.21	-0.15	0.10	4.98	94	25.52	115	94	63	0	6	4	0
	MINNEAPOLIS	62	42	73	40	52	11	0.00	-0.52	0.00	8.88	172	35.19	131	84	57	0	0	0	0
	ROCHESTER	62	41	71	36	51	12	0.00	-0.50	0.00	11.84	209	40.11	140	93	67	0	0	0	0
	ST. CLOUD	60	35	72	32	48	11	0.02	-0.46	0.02	5.76	105	30.59	121	98	57	0	2	1	0
MS	JACKSON	85	55	89	49	70	11	0.00	-0.97	0.00	0.82	11	54.01	117	89	33	0	0	0	0
	MERIDIAN	87	51	91	46	69	10	0.00	-0.89	0.00	0.57	8	37.91	77	87	38	2	0	0	0
	TUPELO	84	54	89	46	69	13	0.25	-0.63	0.25	1.12	15	36.96	81	84	36	0	0	1	0
MO	COLUMBIA	73	53	83	46	63	14	1.54	0.78	1.49	10.45	146	38.80	111	91	59	0	0	2	1
	KANSAS CITY	73	54	78	47	64	14	0.29	-0.25	0.29	7.81	93	47.24	137	81	52	0	0	1	0
	SAINT LOUIS	74	55	85	45	65	13	2.82	2.08	2.11	10.91	174	39.38	120	80	57	0	0	2	2
	SPRINGFIELD	75	55	82	42	65	13	1.65	0.80	1.65	9.34	105	34.96	92	87	61	0	0	1	1
MT	BILLINGS	63	38	67	32	50	9	0.02	-0.18	0.02	5.09	186	12.84	95	75	34	0	1	1	0
	BUTTE	55	27	63	22	41	7	0.57	0.43	0.57	3.63	183	9.69	82	88	33	0	6	1	1
	CUT BANK	59	39	71	31	49	13	0.62	0.54	0.62	2.33	136	10.59	90	75	36	0	1	1	1
	GLASGOW	61	34	67	32	48	12	0.72	0.61	0.72	4.78	270	20.51	194	90	64	0	2	1	1
	GREAT FALLS	62	41	69	31	52	13	0.32	0.15	0.28	3.98	175	13.28	97	68	28	0	1	2	0
	HAVRE	61	36	68	30	48	12	0.69	0.61	0.69	5.32	311	18.81	178	87	60	0	3	1	1
	MISSOULA	54	32	56	25	43	5	0.70	0.51	0.44	3.96	193	12.19	103	94	81	0	4	2	0
NE	GRAND ISLAND	72	40	79	36	56	12	0.00	-0.33	0.00	2.65	63	22.05	92	81	49	0	0	0	0
	LINCOLN	71	42	77	35	57	11	0.00	-0.39	0.00	5.24	102	27.63	105	87	53	0	0	0	0
	NORFOLK	70	39	76	34	55	12	0.00	-0.36	0.00	4.37	103	29.24	118	86	44	0	0	0	0
	NORTH PLATTE	72	35	81	30	54	13	0.00	-0.23	0.00	2.48	91	21.64	116	87	32	0	4	0	0
	OMAHA	70	45	76	39	58	12	0.00	-0.44	0.00	6.08	107	32.41	117	81	58	0	0	0	0
	SCOTTSBLUFF	70	33	76	25	52	12	0.01	-0.18	0.01	1.71	72	15.02	99	78	34	0	3	1	0
	VALENTINE	72	34	82	29	53	13	0.00	-0.19	0.00	4.42	149	26.95	145	84	39	0	3	0	0
NV	ELY	61	26	67	15	44	5	0.01	-0.18	0.01	0.81	39	9.67	108	77	45	0	5	1	0
	LAS VEGAS	78	60	84	56	69	8	0.00	-0.06	0.00	0.23	39	3.94	103	39	28	0	0	0	0
	RENO	63	36	70	33	50	4	0.10	-0.03	0.10	2.43	253	7.68	130	76	52	0	0	1	0
	WINNEMUCCA	60	30	67	25	45	2	0.35	0.18	0.25	2.28	174	6.86	100	95	64	0	5	2	0
NH	CONCORD	54	31	65	24	43	0	0.40	-0.44	0.32	9.55	132	27.76	88	91	55	0	4	3	0
NJ	NEWARK	67	46	78	37	57	6	0.92	0.14	0.92	5.17	67	29.78	76	78	48	0	0	1	1
NM	ALBUQUERQUE	69	49	77	42	59	9	0.66	0.47	0.40	2.44	111	5.80	68	69	37	0	0	4	0
NY	ALBANY	57	37	64	25	47	3	0.22	-0.55	0.11	5.19	73	28.63	88	88	56	0	4	2	0
	BINGHAMTON	54	36	66	27	45	2	0.40	-0.29	0.21	7.05	99	31.00	95	93	76	0	2	2	0
	BUFFALO	58	42	72	32	50	5	1.20	0.40	0.75	9.10	120	27.62	83	88	63	0	1	3	1
	ROCHESTER	59	41	69	31	50	5	1.01	0.42	0.60	8.47	131	26.11	91	91	67	0	2	3	1
	SYRACUSE	55	38	61	28	46	1	0.97	0.22	0.65	12.25	155	35.66	106	96	67	0	2	4	1
NC	ASHEVILLE	76	47	81	34	61	11	0.00	-0.83	0.00	1.10	15	29.55	73	86	35	0	0	0	0
	CHARLOTTE	76	50	83	40	63	7	0.00	-0.80	0.00	8.22	102	29.76	79	88	43	0	0	0	0
	GREENSBORO	75	52	84	40	63	10	0.00	-0.63	0.00	6.13	77	36.92	98	91	48	0	0	0	0
	HATTERAS	71	22	78	-75	46	-15	0.00	-1.24	0.00	13.89	117	66.15	135	84	60	0	2	0	0
	RALEIGH	74	50	84	38	62	7	0.08	-0.57	0.05	11.79	149	48.52	129	95	54	0	0	2	0
	WILMINGTON	76	52	83	40	64	4	0.19	-0.38	0.19	22.83	219	64.61	128	100	50	0	0	1	0
ND	BISMARCK	65	34	76	25	50	14	0.00	-0.21	0.00	1.46	48	20.00	126	90	54	0	4	0	0
	DICKINSON	63	34	72	29	48	11	0.01	-0.19	0.01	5.05	163	16.99	109	87	35	0	3	1	0
	FARGO	61	38	72	31	49	13	0.00	-0.36	0.00	4.99	113	20.44	103	87	58	0	1	0	0
	GRAND FORKS	58	36	73	29	47	12	0.02	-0.29	0.02	5.26	136	24.28	133	91	56	0	1	1	0
	JAMESTOWN	60	34	71	26	47	11	0.00	-0.23	0.00	5.26	159	24.09	138	95	52	0	1	0	0
	WILLISTON	61	32	70	25	46	12	0.57	0.43	0.57	4.59	198	16.34	125	90	65	0	5	1	1
OH	AKRON-CANTON	66	43	77	34	55	9	0.29	-0.29	0.25	10.34	162	33.94	103	83	59	0	0	2	0
	CINCINNATI	69	48	82	35	59	9	0.04	-0.72	0.04	5.45	86	38.53	106	89	66	0	0	1	0
	CLEVELAND	67	47	80	39	57	10	0.41	-0.24	0.19	8.60	123	31.96	98	82	54	0	0	3	0
	COLUMBUS	68	46	80	35	57	8	0.04	-0.57	0.03	6.43	113	34.69	106	92	68	0	0	2	0
	DAYTON	68	47	79	36	58	10	0.00	-0.70	0.00	5.18	88	32.70	97	87	52	0	0	0	0
	MANSFIELD	67	45	79	35	56	10	0.54	-0.21	0.50	7.22	108	30.84	84	92	52	0	0	3	1

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

Weather Data for the Week Ending November 5, 2016

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	65	44	79	34	55	9	0.79	0.22	0.61	7.35	131	30.66	109	98	66	0	0	2	1
	YOUNGSTOWN	64	42	75	31	53	8	0.38	-0.17	0.21	10.51	156	39.01	120	87	63	0	1	2	0
OK	OKLAHOMA CITY	76	59	85	52	67	12	0.35	-0.24	0.35	5.42	67	25.33	79	91	57	0	0	1	0
	TULSA	78	59	85	52	69	13	0.00	-0.80	0.00	5.17	55	25.86	70	94	62	0	0	0	0
OR	ASTORIA	62	50	67	42	56	7	3.17	1.19	1.20	20.34	210	61.19	128	89	77	0	0	6	3
	BURNS	57	26	66	22	42	4	0.07	-0.13	0.03	1.25	91	5.64	68	92	69	0	7	3	0
	EUGENE	63	46	71	39	55	7	1.45	-0.01	0.81	11.78	197	32.74	93	90	74	0	0	4	1
	MEDFORD	63	42	69	37	53	4	0.30	-0.20	0.14	5.65	230	15.65	121	99	63	0	0	4	0
	PENDLETON	61	41	71	37	51	5	0.24	-0.07	0.23	3.00	162	10.39	105	84	63	0	0	2	0
	PORTLAND	62	49	69	45	56	7	1.37	0.35	1.02	11.07	210	32.98	124	89	75	0	0	5	1
	SALEM	63	47	70	41	55	7	1.53	0.40	0.94	13.79	261	35.94	128	88	77	0	0	5	1
PA	ALLENTOWN	65	37	80	28	51	4	0.22	-0.55	0.13	4.78	58	32.09	83	83	52	0	3	2	0
	ERIE	62	46	76	37	54	6	2.00	1.15	1.38	12.82	138	40.88	115	86	65	0	0	3	2
	MIDDLETOWN	65	41	81	34	53	4	0.55	-0.15	0.53	5.70	82	36.47	107	96	52	0	0	2	1
	PHILADELPHIA	66	46	79	39	56	4	0.23	-0.38	0.22	5.59	79	31.04	86	78	51	0	0	2	0
	PITTSBURGH	67	44	80	36	55	8	0.40	-0.16	0.26	7.16	122	30.29	94	91	49	0	0	2	0
	WILKES-BARRE	60	38	71	29	49	3	0.34	-0.32	0.34	5.60	76	27.27	84	88	59	0	2	1	0
	WILLIAMSPORT	62	37	70	30	50	4	0.49	-0.25	0.46	6.93	90	30.95	87	87	55	0	2	2	0
RI	PROVIDENCE	63	39	71	31	51	3	0.49	-0.47	0.49	7.57	94	33.41	87	85	49	0	2	1	0
SC	BEAUFORT	80	59	85	49	69	6	0.00	-0.63	0.00	20.84	238	48.10	108	96	50	0	0	0	0
	CHARLESTON	80	58	86	48	69	8	0.00	-0.58	0.00	22.75	240	54.75	119	89	44	0	0	0	0
	COLUMBIA	79	51	87	41	65	6	0.00	-0.66	0.00	11.25	154	34.19	80	88	46	0	0	0	0
	GREENVILLE	80	53	86	44	66	11	0.00	-0.87	0.00	1.43	17	29.64	69	84	36	0	0	0	0
SD	ABERDEEN	66	35	76	30	51	13	0.00	-0.28	0.00	3.04	84	17.10	89	87	58	0	2	0	0
	HURON	68	38	79	32	53	14	0.00	-0.28	0.00	2.33	65	18.28	92	88	40	0	1	0	0
	RAPID CITY	72	35	77	28	53	13	0.00	-0.24	0.00	1.30	49	12.27	78	71	25	0	2	0	0
	SIOUX FALLS	66	37	74	33	51	12	0.01	-0.38	0.01	10.64	222	28.49	123	95	59	0	0	1	0
TN	BRISTOL	76	45	82	33	61	11	0.06	-0.49	0.05	3.37	58	28.32	80	96	38	0	0	2	0
	CHATTANOOGA	82	54	86	48	68	13	0.00	-0.88	0.00	1.71	21	25.05	55	82	37	0	0	0	0
	KNOXVILLE	80	54	85	47	67	14	0.00	-0.70	0.00	1.60	26	32.43	81	79	34	0	0	0	0
	MEMPHIS	82	60	87	49	71	13	0.00	-0.99	0.00	1.89	26	51.69	118	83	42	0	0	0	0
	NASHVILLE	82	56	88	42	69	15	0.00	-0.78	0.00	2.30	33	33.90	85	80	33	0	0	0	0
TX	ABILENE	79	61	88	60	70	10	0.37	-0.09	0.37	6.36	104	33.48	156	92	69	0	0	1	0
	AMARILLO	74	48	87	41	61	10	0.31	0.05	0.30	1.26	35	16.14	87	82	36	0	0	2	0
	AUSTIN	84	65	91	55	74	9	1.50	0.72	1.19	4.94	66	49.82	171	93	72	1	0	4	1
	BEAUMONT	85	64	87	58	74	9	0.03	-0.97	0.03	4.44	39	61.96	122	95	49	0	0	1	0
	BROWNSVILLE	90	71	91	67	80	9	0.81	0.27	0.79	3.87	41	17.53	70	94	61	4	0	3	1
	CORPUS CHRISTI	88	71	91	66	80	11	0.09	-0.47	0.06	4.07	43	29.36	101	92	64	2	0	3	0
	DEL RIO	82	66	88	61	74	9	0.89	0.59	0.58	6.92	162	28.77	172	94	74	0	0	3	1
	EL PASO	79	60	86	53	69	11	0.37	0.30	0.37	2.48	100	8.15	98	56	33	0	0	1	0
	FORT WORTH	81	66	88	61	74	13	0.53	-0.25	0.53	3.52	50	32.19	107	81	55	0	0	1	1
	GALVESTON	83	73	85	70	78	8	0.00	-0.72	0.00	3.48	36	44.17	119	90	67	0	0	0	0
	HOUSTON	86	65	88	57	76	11	0.05	-0.97	0.05	1.89	20	55.46	136	92	57	0	0	1	0
	LUBBOCK	75	52	88	48	64	10	0.37	0.15	0.28	2.88	65	12.80	73	83	60	0	0	3	0
	MIDLAND	79	59	90	57	69	11	1.34	1.13	0.83	3.75	89	14.10	103	80	55	2	0	3	2
	SAN ANGELO	80	61	91	55	70	11	0.32	-0.05	0.24	7.05	122	32.57	170	91	67	1	0	2	0
	SAN ANTONIO	83	68	87	60	75	10	0.08	-0.70	0.08	6.54	88	35.99	124	90	57	0	0	1	0
	VICTORIA	87	64	90	55	76	9	0.05	-0.66	0.04	2.65	27	32.23	91	99	61	2	0	2	0
	WACO	81	65	90	59	73	11	1.91	1.25	1.23	2.85	41	34.84	123	94	69	1	0	4	2
	WICHITA FALLS	78	59	86	56	68	10	0.98	0.47	0.98	13.12	197	35.50	138	91	66	0	0	1	1
UT	SALT LAKE CITY	62	42	72	36	52	6	0.31	-0.02	0.31	2.78	89	11.10	79	83	45	0	0	1	0
VT	BURLINGTON	51	37	65	28	44	2	0.58	-0.13	0.47	4.61	62	23.82	76	91	66	0	4	4	0
VA	LYNCHBURG	72	49	83	35	60	9	0.16	-0.54	0.15	5.27	68	38.98	104	89	48	0	0	2	0
	NORFOLK	71	51	83	44	61	5	0.58	-0.14	0.33	23.55	293	65.92	164	90	54	0	0	2	0
	RICHMOND	71	47	83	39	59	6	0.41	-0.33	0.37	15.83	195	49.25	129	90	51	0	0	2	0
	ROANOKE	73	52	83	37	62	11	0.02	-0.68	0.02	9.19	123	42.96	116	82	58	0	0	1	0
	WASH/DULLES	70	44	84	34	57	8	0.05	-0.70	0.05	3.20	41	31.19	87	87	47	0	0	1	0
WA	OLYMPIA	58	44	65	36	51	6	3.34	1.82	1.18	15.97	218	43.61	122	100	95	0	0	7	2
	QUILLAYUTE	57	46	63	38	51	4	7.06	4.00	2.65	31.54	195	89.73	120	91	82	0	0	7	4
	SEATTLE-TACOMA	58	48	65	42	53	5	2.91	1.78	1.31	13.17	233	36.90	140	92	79	0	0	6	2
	SPOKANE	57	42	64	39	50	9	1.31	0.93	0.74	6.47	308	15.27	123	90	62	0	0	3	2
	YAKIMA	62	40	65	37	51	9	0.16	-0.01	0.12	2.72	262	8.61	145	84	68	0	0	2	0
WV	BECKLEY	69	48	78	33	58	10	0.57	0.00	0.56	5.84	93	42.89	119	92	53	0	0	2	1
	CHARLESTON	72	48	82	37	60	10	0.66	-0.04	0.65	6.60	100	39.13	104	93	50	0	0	2	1
	ELKINS	68	42	78	30	55	10	0.56	-0.11	0.31	8.11	113	39.09	98	92	45	0	2	2	0
	HUNTINGTON	73	50	83	37	61	11	0.37	-0.32	0.32	4.44	74	40.61	112	89	50	0	0	2	0
WI	EAU CLAIRE	62	37	72	30	50	10	0.00	-0.47	0.00	10.92	173	37.98	129	98	52	0	1	0	0
	GREEN BAY	61	29	70	1	45	4	0.00	-0.52	0.00	6.95	123	28.57	110	96	65	0	2	0	0
	LA CROSSE	66	42	73	39	54	11	0.00	-0.48	0.00	12.69	215	43.53	148	95	49	0	0	0	0
	MADISON	63	40	73	36	51	9	0.26	-0.26	0.24	13.66	243	46.04	157	96	68	0	0	2	0
	MILWAUKEE	64	46	77	38	55	10	0.53	-0.06	0.52	8.38	135	29.02	96	88	67	0	0	2	1
WY	CASPER	65	29	74	21	47	8	0.01	-0.19	0.01	1.71	76	15.10	129	60	29	0	6	1	0
	CHEYENNE	66	36	71	26	51	12	0.03	-0.10	0.03	1.11	49	15.77	109	74	32	0	2	1	0
	LANDER	59	30	62	26	45	7	0.02	-0.24	0.02	2.66	99	20.20	168	71	27	0	5	1	0
	SHERIDAN	66	32	74	29	49	11	0.00	-0.23	0.00	5.16	175	16.85	126	77	43	0	5	0	0

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

October Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: During October, stunning, late-season warmth dominated the country. In fact, near- or slightly below-normal temperatures were mostly limited to northern and central California and the Pacific Northwest, while record-setting warmth stretched across the Southwest and portions of the Plains, mid-South, Midwest, and Southeast. The warm weather promoted summer crop maturation and fieldwork, including harvest activities and winter wheat planting.

However, dry weather accompanied the warmth across vast stretches of the southern U.S., encompassing the Southwest, central and southern High Plains and much of the Southeast. In particular, intensifying Southeastern drought resulted in poor pasture conditions and planting delays for winter grains and cover crops, while dryness on the central and southern High Plains hampered winter wheat establishment.

In stark contrast, Hurricane Matthew drenched the southern Mid-Atlantic region in early October, unleashing historic floods, damaging hog and poultry operations, and destroying some unharvested summer crops such as cotton and soybeans. Warm, dry weather later returned to eastern North Carolina and environs, favoring flood-recovery efforts.

Meanwhile, wet weather persisted throughout the month in northern California and the Northwest, setting numerous October precipitation records and easing or eradicating the lingering effects of long-term drought. Precipitation fell nearly every day during October in parts of the Pacific Northwest, limiting fieldwork but generally benefiting rangeland, pastures, and winter grains. Some of the wetness extended across the northern Rockies to the High Plains, where mid-month snow in advance of a brief cold spell helped to insulate emerging winter wheat.

Elsewhere, occasional October showers stretched from the Midwest into the Northeast. Despite the rain, Midwestern corn and soybean harvesting remained mostly on schedule, with no major delays. In the Northeast, October storms provided varying degrees of drought relief, with some of the most significant rain (and wet snow) falling along the northern Atlantic Coast and in western sections of New York and Pennsylvania.

Historical Perspective: According to preliminary information provided by the National Centers for Environmental Information, the contiguous U.S. experienced its third-warmest, 49th-wettest October on record. The October average temperature of 57.7°F was 3.6°F above the 1901-2000 mean. Only October 1963 (59.4°F) and 1947 (58.8°F) were warmer. Interestingly, three of the six highest October average temperatures during the 122-year period of record have occurred in the last 3 years. Meanwhile, October precipitation averaged 2.33 inches, 108 percent of the long-term mean. Contrasting precipitation values (e.g. wet in the Northwest and dry across the South) nearly balanced each other.

Figure 1 Statewide Average Temperature Ranks
October 2016
Period: 1895–2016

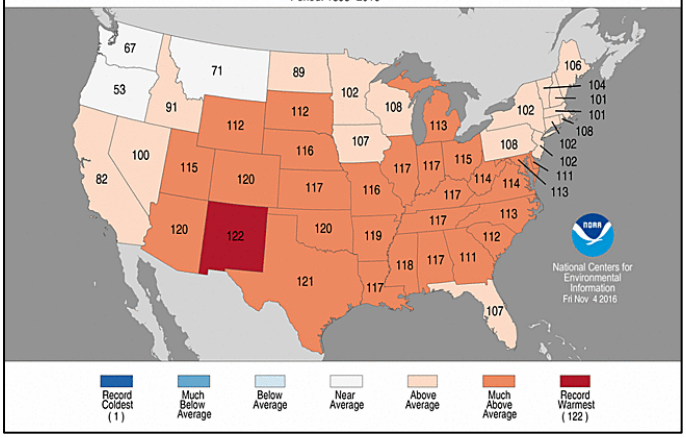
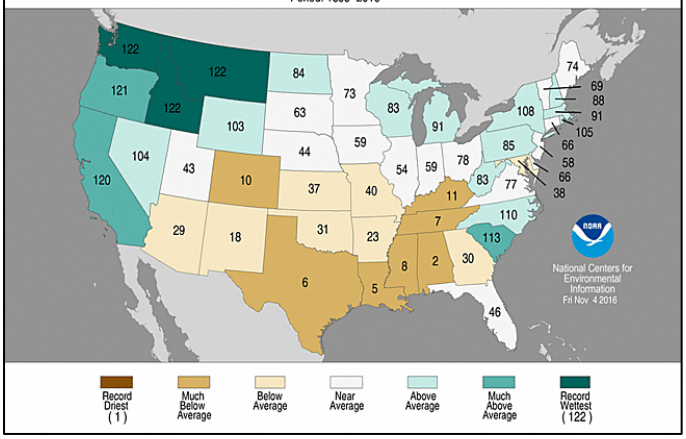


Figure 2 Statewide Precipitation Ranks
October 2016
Period: 1895–2016



State temperature rankings ranged from the 53rd-coolest October in Oregon to the warmest October on record in New Mexico (figure 1). Oregon was the only state in the "cool" half of the historical distribution. In addition to New Mexico, 22 states from the Four Corners region to the middle and southern Atlantic Coast noted one of their ten highest October average temperature values on record. Meanwhile, state precipitation rankings ranged from the second-driest October in Alabama to record-setting wetness in Idaho, Montana, and Washington (figure 2). Additionally, top-ten rankings for October dryness included Colorado, Louisiana, Mississippi, Tennessee, and Texas, while top-ten rankings for wetness occurred in California, Oregon, and South Carolina. Alabama, which averaged 0.12 inch, was drier only in October 1963, while Washington received an average of 9.98 inches, smashing an October 1947 record by 1.50 inches.

Summary: Hurricane Matthew took aim on the southern Atlantic Coast of the U.S. after battering portions of Haiti,

Cuba, and the Bahamas, but passed just east of Florida's east coast. As a result, hurricane-force winds were limited to the immediate southern Atlantic Coast, although Matthew brought battering waves, storm-surge flooding, and beach erosion from Florida to Virginia. The hurricane eventually weakened but made a brief landfall in South Carolina while hugging the coast, unleashing historic flooding across parts of eastern North Carolina and environs.

As a major (Category 3) hurricane, Matthew made its closest approach to the Florida coast at Cape Canaveral on the morning of October 7, with the eye passing about 25 miles to the east. A wind gust to 107 mph was reported on Cape Canaveral. About 24 hours later, Matthew made landfall as a minimal (Category 1) hurricane in South Carolina near the Cape Romain National Wildlife Refuge with sustained winds near 75 mph—a shadow of the 120 mph winds a day earlier near Florida's east coast and the 145 mph winds that hammered the western tip of Haiti on October 4. Peak gusts in Florida for October 7 included 74 mph in Vero Beach and 70 mph in Melbourne. Farther north, the interaction between a cold front and Matthew brought heavy rain to parts of the Mid-Atlantic States by October 7, when Roanoke, VA, measured a daily-record sum of 3.05 inches. Farther south, more direct hurricane impacts resulted in record-setting amounts for the 7th in Savannah, GA (8.94 inches); Jacksonville, FL (6.28 inches); and Charleston, SC (4.70 inches). On October 8, staggering amounts of rain deluged eastern North Carolina and environs, with daily-record totals climbing to 14.00 inches in Fayetteville; 8.22 inches in Elizabeth City; and 6.45 inches in Raleigh-Durham. Charleston, SC, received 5.77 inches on the 8th, boosting its 2-day total to 10.47 inches. Torrential rain and wind gusts to 60 mph or higher occurred as far north as southeastern Virginia, where Norfolk netted 9.24 inches of rain (and reported a peak gust to 60 mph) on October 8-9. Significant flooding of creeks and tributaries began on October 8 and later spread to larger rivers. By October 10, a crest record from September 1996 (Hurricane Fran) was broken on the Neuse River near Smithfield, NC, while a high-water mark from September 1999 (Hurricane Floyd) was eclipsed on the Black River near Tomahawk, NC. The worst flooding since September 1945 occurred along portions of the Cape Fear River. Elsewhere in North Carolina, record flooding also struck the Lumber River, while the most severe flooding since 1999 occurred in the Tar River basin. In the hardest-hit areas, flooding submerged hog and poultry operations, as well as un-harvested summer crops such as cotton, peanuts, and soybeans.

Matthew's final direct impacts occurred in coastal New England, where a wind gust to 58 mph was reported in Nantucket, MA, on October 9. Elsewhere in Massachusetts on the 9th, Boston's rainfall of 1.84 inches marked its greatest daily total since September 30, 2015, when 2.46 inches fell. Farther south, however, historic flooding persisted for many days. In North Carolina, one of the four highest crests on record occurred along the Tar River between October 10 and 14 from Rocky Mount to Greenville. Along much of the Cape Fear River, including Fayetteville, NC, crests that occurred from October 9-13 were among the five highest on record—and the highest in more than 70 years. Near Conway, SC, the Waccamaw River crested nearly 7 feet above flood stage on October 18, edging a September 1928 high-water mark. Similarly, records from September 1928 were eclipsed in locations such as the Lumber River in Lumberton, NC, and the Little Pee Dee River near Galivants Ferry, SC. And, along the Neuse River, all-time crest records were set between October 10 and 14 in North Carolina locations such as Smithfield, Goldsboro, and Kinston. Kinston's crest on October 14 was 14.31 feet above flood stage, topping the September 1999 record by 0.6 foot.

Elsewhere, the month began with cool air overspreading the West, preceded and accompanied by windy weather. On October 2, Klamath Falls, OR, notched a daily-record low of 23°F. Later, record-setting lows for October 4 dipped to 26°F in Grantsville, UT, and 31°F in Grand Junction, CO. On October 3, wind gusts were clocked to 61 mph in Casper, WY, and 55 mph in Valentine, NE. Farther east, Dickinson, ND, reported a wind gust to 57 mph on October 5. Although no records were set, Aberdeen, SD, experienced its first four freezes of the season (30, 28, 27, and 25°F) from October 6-9. In contrast, warmth lingered across the South. In southern Texas, McAllen reported highs of 99°F on greater from October 4-7, including a daily-record high of 100°F on the 5th. Later, on October 7, Southeastern daily-record highs climbed to 92°F in Jackson, TN, and Tuscaloosa, AL. Tallahassee, FL, collected a daily-record high of 94°F on October 8. Eventually, Montana and environs contended with the first significant cold outbreak of the season. On October 12-13, Dunkirk, MT, posted consecutive daily-record lows of 3 and 4°F, respectively. Cut Bank, MT, reported a low of 5°F on October 12—not a daily record—along with a 5-inch snow cover. Similarly, Havre, MT, registered an October 12 low of 8°F with a 4-inch snow cover. In contrast, a burst of warmth across the southern Plains preceded a more expansive late-season heat wave. In northern Texas, record-setting highs for October 11 reached 95°F in Borger and 93°F in Amarillo. Later, October 14-15 featured consecutive daily-record highs in Pueblo, CO (90 and 89°F). Other daily-record highs for October 15 soared to 96°F in Borger and 95°F in Amarillo.

After Matthew's departure, the focus for heavy precipitation shifted to the Northwest. On October 9, daily-record totals included 1.69 inches in Troutdale, OR, and 0.57 inch in Yakima, WA. On the 10th, daily records for both precipitation and snowfall were broken in Montana locations such as Choteau (0.62 inch and 6.0 inches) and Havre (0.72 inch and 5.0 inches). More widespread precipitation later arrived in the Northwest, starting on October 13. Record-setting rainfall totals for the 13th climbed to 5.19 inches in Crescent City, CA; 3.52 inches in North Bend, OR; and 2.50 inches in Hoquiam, WA. Troutdale collected another daily record, with 1.83 inches falling on October 13. Olympia, WA, noted consecutive daily record totals (1.61 and 2.01 inches, respectively) on October 13-14. Precipitation also spread southward into northern California, where Mt. Shasta City reported a daily-record sum (1.85 inches on October 15). High winds accompanied and trailed some of the Northwestern storminess, with Cut Bank, MT, clocking a daily-record wind gust to 65 mph on October 14.

Heavy precipitation lingered for several more days across northern California and the Northwest. During a 5-day period ending on October 17, maximum totals reached 6 to 10 inches in the central Sierra Nevada and 12 to 18 inches in the coastal ranges of northwestern California. Daily-record rainfall amounts for October 16 included 1.17 inches in Sacramento, CA, and 1.03 inches in Reno, NV. Meanwhile, showers swept across the upper Great Lakes region, where Rhinelander, WI (4.64 inches on October 17), endured its wettest October day on record. It was also Rhinelander's second-wettest day (tied with June 13, 1981), behind only 8.27 inches on July 8, 2000. Following several days of tranquil weather, rain developed from the lower Midwest into the Northeast. Daily-record amounts for October 20 reached 1.87 inches in Syracuse, NY, and 1.44 inches in Fort Wayne, IN. On October 21, drought-easing Northeastern rainfall set daily-record totals in Concord, NH (3.01 inches); Binghamton, NY (2.74 inches); and Augusta, ME (2.18 inches). In stark contrast, locations such as Garden City, KS; Vicksburg and Meridian, MS; and Anniston, Birmingham, and Tuscaloosa, AL, continued to await their first measurable rainfall of the month.

The second half of the month began on October 16 with monthly record highs in locations such as Borger, TX (101°F), and Dodge City, KS (99°F). Previous records had been 100°F in Borger on October 3, 2000, and 98°F in Dodge City on October 3, 2006. Dodge City set another monthly record on October 17, when the high soared to 101°F. Previously, Dodge City's latest observance of a triple-digit reading had been September 23, 1984, when the high reached 100°F. Similarly, Garden City, KS, recorded 100°F on October 17—the latest triple-digit reading in that location by nearly a month (previously, 101°F on September 19, 1980). With a high of 102°F on October 17, Gage, OK, also set a monthly temperature record (previously, 99°F on October 4, 1954; October 8, 1956; and October 8, 1979). Farther south, McAllen, TX, posted four consecutive highs of 100°F from October 17-20, with three of the four readings setting daily records. Meanwhile, record-setting warmth spread across the South, East, and Midwest, and developed in southern California. On October 17, daily-record highs attained the 90-degree mark in St. Louis, MO (91°F), and Quincy, IL (90°F). In Tennessee, Chattanooga reported a trio of daily-record highs (89, 90, and 89°F) from October 18-20. On the same dates, Birmingham, AL, also posted three consecutive daily-record highs (89, 91, and 90°F)—and registered its latest 90-degree reading on record, previously set with a high of 91°F on October 17, 1897. With a high of 91°F on October 19, Nashville, TN, likewise experienced its latest 90-degree heat (previously, 90°F on October 10, 1980). In the East, daily-record highs for October 19 rose to 89°F in Charlotte, NC; 87°F in Baltimore, MD; and 85°F in New York's Central Park. Farther west, record-setting highs in southern California for October 20 reached 99°F in Long Beach and 98°F in Camarillo. Southern California also experienced locally high winds, which on October 18 gusted to 73 mph on Whitaker Peak, in Los Angeles County. Elsewhere in the Southwest, Tucson, AZ, tallied consecutive daily-record highs of 96°F on October 21-22.

In some areas, warmth further amplified as the month progressed. Phoenix, AZ, noted its latest triple-digit heat on record on October 27, when the high reached 100°F. Previously, the latest observance of 100-degree heat in Phoenix had occurred on October 23, 2003. Salt Lake City, UT, posted consecutive daily-record highs (78 and 79°F, respectively) on October 27-28. On the same dates, Denver, CO, also collected consecutive daily-record highs (83 and 82°F, respectively). From October 27-29, Dalhart, TX, notched a trio of daily-record highs (85, 88, and 91°F). On October 28, daily-record highs topped the 90-degree mark in locations such as Dodge City, KS (92°F), and Guymon, OK (91°F). Starting on October 28, the month ended with four consecutive daily-record highs in Southeastern locations such as Meridian, MS (89, 89, 91, and 91°F), and Montgomery, AL (88, 89, 89, and 90°F). Late-month, record-setting warmth also reached into the Midwest, where highs on October 29 rose to 86°F in St. Louis, MO, and 83°F in Springfield, IL, and Evansville, IN.

Toward the end of October, the season's most significant shower activity overspread the Desert Southwest. In Barstow-Daggett, CA, the fourth-longest spell on record without measurable rain ended at 175 days (May 1 – October 22), as rainfall totaled 0.32 inch on October 23. Meanwhile, several more rounds of precipitation overspread northern California and the Northwest, capping the wettest October on record in locations such as Salem, OR (11.25 inches; previously, 11.17 inches in 1947); Spokane, WA (6.23 inches; previously, 5.41 inches in 1947); and Havre, MT (3.52 inches; previously, 2.82 inches in 1914). Salem also set an October record with 27 days of measurable rain, breaking the record of 23 days set in 1947 and 1975. Spokane experienced its wettest month on record, surpassing 5.85 inches in November 1897. Farther east, heavy showers developed across the upper Midwest. On October 25-26, Rochester, MN received consecutive daily-record totals (0.92 and 0.96 inch, respectively). Other record-setting amounts for October 26 included 2.34 inches in Madison, WI; 1.71 inches in Waterloo, IA; 1.60 inches in Chicago, IL; and 1.28 inches in Muskegon, MI. By October 27, showers again swept across California, leading to daily-record totals in Eureka (1.97 inches); Paso Robles (0.56 inch); and Santa Maria (0.53 inch). Elsewhere on the 27th, an early-season snowfall blanketed parts of the Northeast, where Albany, NY, received 1.7 inches and reported a high temperature of 36°F. In the western U.S., late-month precipitation was enhanced by remnant moisture from former Hurricane Seymour. Record-setting rainfall amounts for October 28 reached 1.15 inches in Winnemucca, NV, and 0.86 inch in Burley, ID. In stark contrast, October ended without measurable rain in Southeastern locations such as Vicksburg, MS, and Tuscaloosa, AL. Measurable rain last fell on September 16 in Vicksburg and September 17 in Tuscaloosa.

Given the persistent nature of October weather patterns, most of the records—Northwestern wetness, Southeastern dryness, and warmth—were to be expected. Tuscaloosa, AL, tied an October 1963 record with only a trace of rain. Many stations across the northern High Plains and the Pacific Northwest set October precipitation records. In the latter region, numerous records for October days with measurable rain were broken. And, records for October warmth were set in several communities, including Tucson, AZ, and Batesville, AR.

Persistent October warmth across northern and western Alaska contrasted with cool, dry conditions farther south and

east. In southeastern Alaska, October records for days without measurable precipitation were broken in Juneau (October 1-14; previously, 12 days from October 19-30, 2012) and Yakutat (October 1-15; previously; 11 days from October 13-23, 1951, and October 19-29, 2012). However, Juneau's dry spell eased on October 15-16, with 1.39 inches of precipitation and 5.7 inches of snow. An exception to the dry pattern was Kodiak, where monthly precipitation totaled 11.58 inches (140 percent of normal)—aided by a daily-record total of 2.76 inches on October 11. Meanwhile, Barrow's high of 44°F on October 10 eclipsed a monthly record of 43°F that had been set on October 3, 1954, but Juneau posted a daily-record low of 24°F on October 13. Later, the season's first measurable snow fell on October 20-21 in Fairbanks (0.8 inch) and Anchorage (2.6 inches). Late-month Alaskan warmth pushed highs to daily-record levels on October 28 in locations such as Cold Bay (55°F) and King Salmon (54°F). Barrow collected a daily-record high of 41°F on October 29. Meanwhile, October precipitation totaled just 0.02 inch (2 percent of normal) in Fairbanks, while monthly amounts were slightly less than one-third of normal in locations such as Juneau (2.59 inches), Anchorage (0.59 inch), and McGrath (0.38 inch). With a monthly precipitation total of 3.00 inches, 14 percent of normal, Yakutat experienced its driest October on record (previously, 6.68 inches in 1950). A record for dryness was also set in Juneau, where October precipitation totaled 2.59 inches (30 percent of normal).

Parts of Hawaii—especially the Big Island—received heavy rain early in the month. On the Big Island, Hilo netted consecutive daily-record totals (3.13 and 2.83 inches, respectively) on October 4-5. On the same dates, a few windward locations on the Big Island received at least 5 to 10 inches of rain in a 24-hour period. However, most leeward sections of Hawaii experienced mostly dry October weather. In fact, monthly precipitation totaled just 0.12 inch (7 percent of normal) in Honolulu, Oahu, and 0.45 inch (12 percent) in Lihue, Kauai. In Hilo, however, October rainfall totaled 19.13 inches (196 percent of normal), with 3.30 inches falling during the last 4 days of the month.

Fieldwork

Fieldwork summary provided by USDA/NASS

During October, warm weather facilitated the harvest of row crops across the nation. Above-average temperatures dominated the U.S., including most of the Mississippi River Valley which recorded monthly average temperatures more than 4°F above normal. The only exception to the warm trend occurred in parts of the Northwest, where temperatures were near to slightly below normal. Large portions of both coastal regions experienced higher-than-normal precipitation, including the southern Atlantic States and the Pacific Northwest. Monthly rainfall totals exceeded 10 inches in parts of North Carolina, South Carolina, northern California, Oregon, and Washington. In early October, heavy rains from Hurricane Matthew impacted crop conditions from Florida to Virginia. In contrast, portions of the Great Plains and lower Mississippi Valley recorded below-average precipitation for the month, allowing more days suitable for fieldwork.

By October 2, eighty-six percent of the corn was mature, 4 percentage points ahead of last year and 7 points ahead of the 5-year average. Nationwide, producers had harvested 24 percent of the corn by October 2, equal to last year but 3 percentage points behind the average. Ninety-seven percent of the nation's corn was mature by October 16, equal to last year but 3 percentage points ahead of the 5-year average. By mid-month, maturity advanced to more than 90 percent complete in all estimating states except Colorado and Michigan. By October 16, forty-six percent of this year's corn was harvested, 8 percentage points behind last year and 3 points behind the 5-year average. Overall, 74 percent of the corn was reported in good to excellent condition, up slightly from the beginning of the month and 6 points above the same time last year. Nationally, three-quarters of this year's corn was harvested by October 30, seven percentage points behind last year but equal to the average. Although harvest progress advanced by 20 percentage points in Minnesota and 19 points in Iowa and Nebraska during the last week of October, all three states remained behind their respective 5-year averages.

Dry conditions west of the Mississippi River allowed for the soybean harvest to advance rapidly as October began. Eighty-three percent of this year's soybean crop was at or beyond the leaf-dropping stage by October 2, slightly ahead of last year and 4 percentage points ahead of the 5-year average. Nationally, 26 percent of the soybeans were harvested by October 2, ten percentage points behind last year and slightly behind the 5-year average. By October 9, leaf drop in this year's soybean crop was 91 percent complete, slightly ahead of last year and 3 percentage points ahead of the 5-year average. Nationwide, producers had harvested 44 percent of the soybeans by October 9, twelve percentage points behind last year and 3 points behind the 5-year average. During that week, harvest progress advanced by 20 percentage points or more in five estimating states, including 23 percentage points in Illinois. By October 16, ninety-six percent of the soybeans were dropping leaves, slightly ahead of last year and 2 percentage points ahead of the 5-year average. Soybean producers had harvested 62 percent of the nation's crop by October 16, eleven percentage points behind last year and slightly behind the 5-year average. Overall, 74 percent of the soybean crop was reported in good to excellent condition on October 16, ten percentage points better than at the same time last year. By October 30, eighty-seven percent of the soybean crop was harvested, 4 percentage points behind last year but 2 points ahead of the 5-year average. By the end of October, the soybean harvest was nearly complete in Louisiana, Minnesota, North Dakota, and South Dakota.

Bolls were opening across 71 percent of this year's cotton acreage by October 2, four percentage points behind last year and 3 points behind the 5-year average. Nationally, harvest was 16 percent complete by October 2, slightly ahead of last year and 2 percentage points ahead of the average. By October 16, eighty-nine percent of the cotton was at or beyond the boll-opening stage, 4 percentage points behind last year but slightly ahead of the average. Nationally, producers had harvested 30 percent of the cotton by October 16, two percentage points ahead of last year and 3 points ahead of average. Under warm, dry conditions, producers harvested at least one-quarter of the crop in Alabama and California during the second week of October. Nationwide, 95 percent of the cotton had open bolls by October 30, four

percentage points behind last year and slightly behind the average. By October 30, forty-six percent of the cotton was harvested, 2 percentage points behind both last year and the average. Cotton harvest was at least 15 percentage points ahead of the 5-year average pace in Alabama, Arkansas, Georgia, Missouri, and Tennessee by the end of October. Overall, 49 percent of the cotton was rated in good to excellent condition on October 30, equal to the beginning of October but 2 percentage points better than at the same time last year. In North Carolina, cotton condition dropped by 18 percentage points in the good to excellent categories during the month due to wet conditions from Hurricane Matthew.

By October 2, sorghum coloring had advanced to 96 percent complete, 2 percentage points behind last year but 4 points ahead of the 5-year average. Nationwide, 71 percent of the sorghum was mature by October 2, three percentage points behind last year but 10 points ahead of the average. By October 2, forty-one percent of the nation's sorghum was harvested, equal to last year but 5 percentage points ahead of average. Maturity of the nation's sorghum had advanced to 82 percent by October 9, slightly behind last year but 11 percentage points ahead of average. Producers had harvested 48 percent of the nation's crop by October 9, slightly behind last year but 6 percentage points ahead of average. Overall, 65 percent of the sorghum was reported in good to excellent condition on October 9, slightly below ratings from both the previous week and the same time last year. By October 30, ninety-six percent of the sorghum was mature, 3 percentage points behind last year but slightly ahead of average. Producers had harvested 76 percent of the nation's sorghum by October 30, slightly behind last year but 8 percentage points ahead of the 5-year average. During the final week of the month, Colorado, Illinois, Kansas, Nebraska, and South Dakota producers recorded double-digit harvest progress.

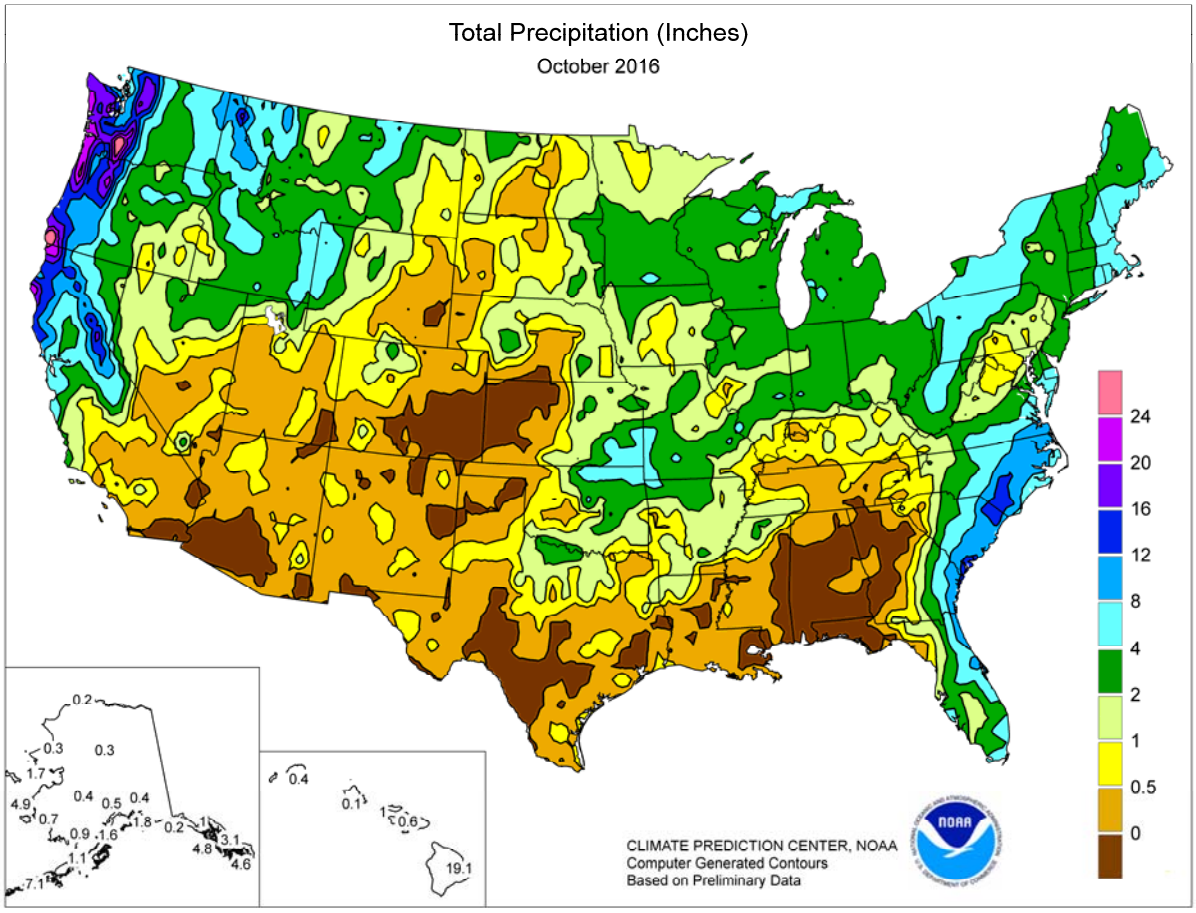
Producers had sown 43 percent of the nation's 2017 winter wheat by October 2, slightly behind last year and 2 percentage points behind the 5-year average. Planting progress was at or behind the 5-year average in 11 of the 18 estimating states at the beginning of the month. Nationwide, 20 percent of the winter wheat was emerged by October 2, four percentage points ahead of last year and 3 points ahead of the 5-year average. Emergence advanced 32 percentage points during that week in Montana and 20 points in Colorado. Producers had sown 72 percent of the winter wheat by October 16, slightly behind both last year and the 5-year average. During that week, dry conditions in the eastern Corn Belt helped planting progress advance more 20 percentage points in Illinois, Indiana, and Ohio. Nationwide, emergence had advanced to 47 percent by October 16, three percentage points ahead of last year and 2 points ahead of the 5-year average. Producers had seeded 86 percent of the winter wheat by October 30, slightly behind last year and 2 percentage points behind the 5-year average. Thirteen of the 18 estimating states were behind the 5-year average planting pace by the end of October. Nationally, 70 percent of the crop had emerged by October 30, slightly ahead of both last year and the 5-year average. Nationally, 57 percent of the winter wheat was reported in good to excellent condition on October 30, nine percentage points above the same time last year. Winter wheat was rated 57 percent in the good to excellent categories in Kansas on October 30, twelve percentage points above the same time last year.

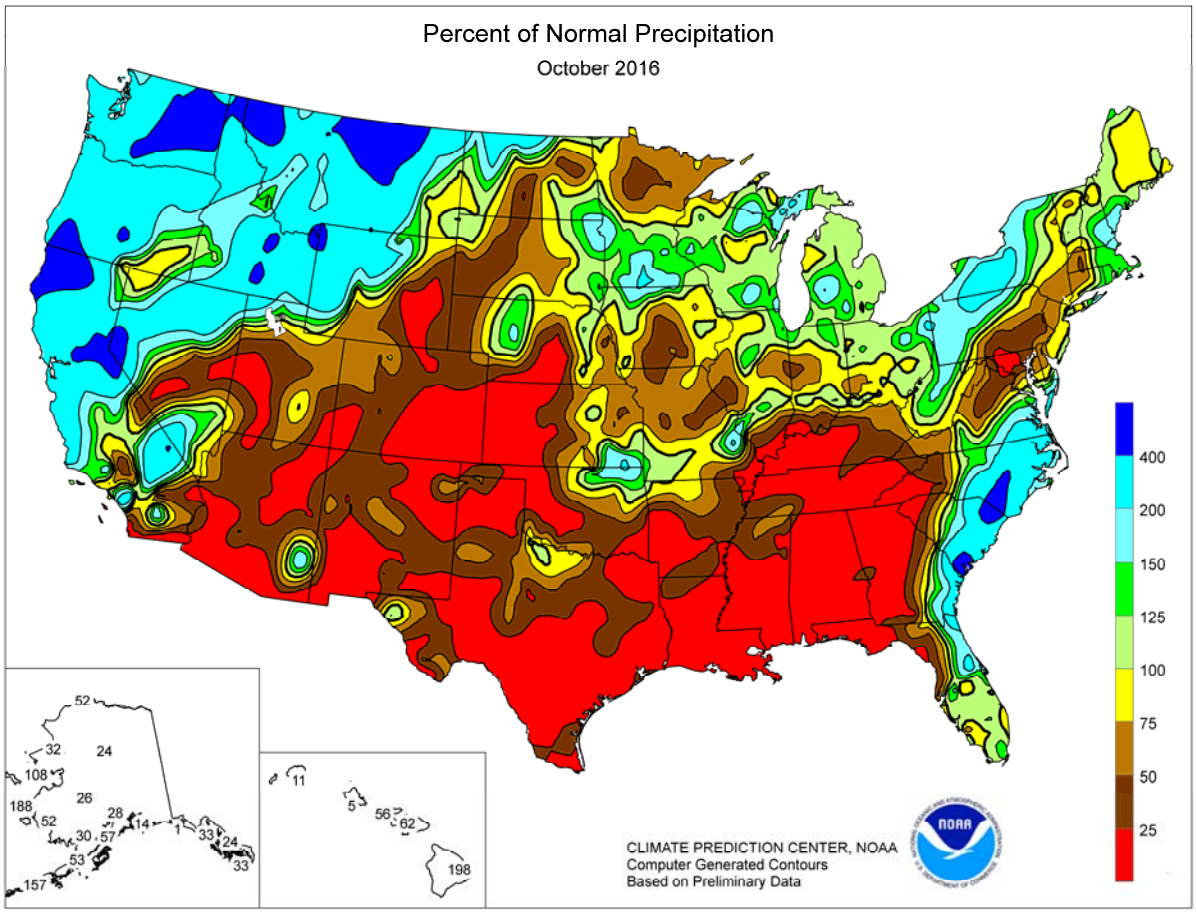
Rice producers had harvested 82 percent of this year's crop by October 2, seven percentage points ahead of last year and 13 points ahead of the 5-year average. Producers achieved double-digit advances in harvest progress in California, Mississippi, and Missouri during the week ending October 2. By October 16, ninety-three percent of the rice was harvested, equal to last year but 7 percentage points ahead of the 5-year average. At mid-month, harvest progress was at or ahead of the 5-year average in all estimating states. Ninety-seven percent of the nation's rice crop was harvested by October 23, equal to last year but 5 percentage points ahead of the 5-year average. By October 23, harvest progress was complete or nearly complete in all estimating states except California.

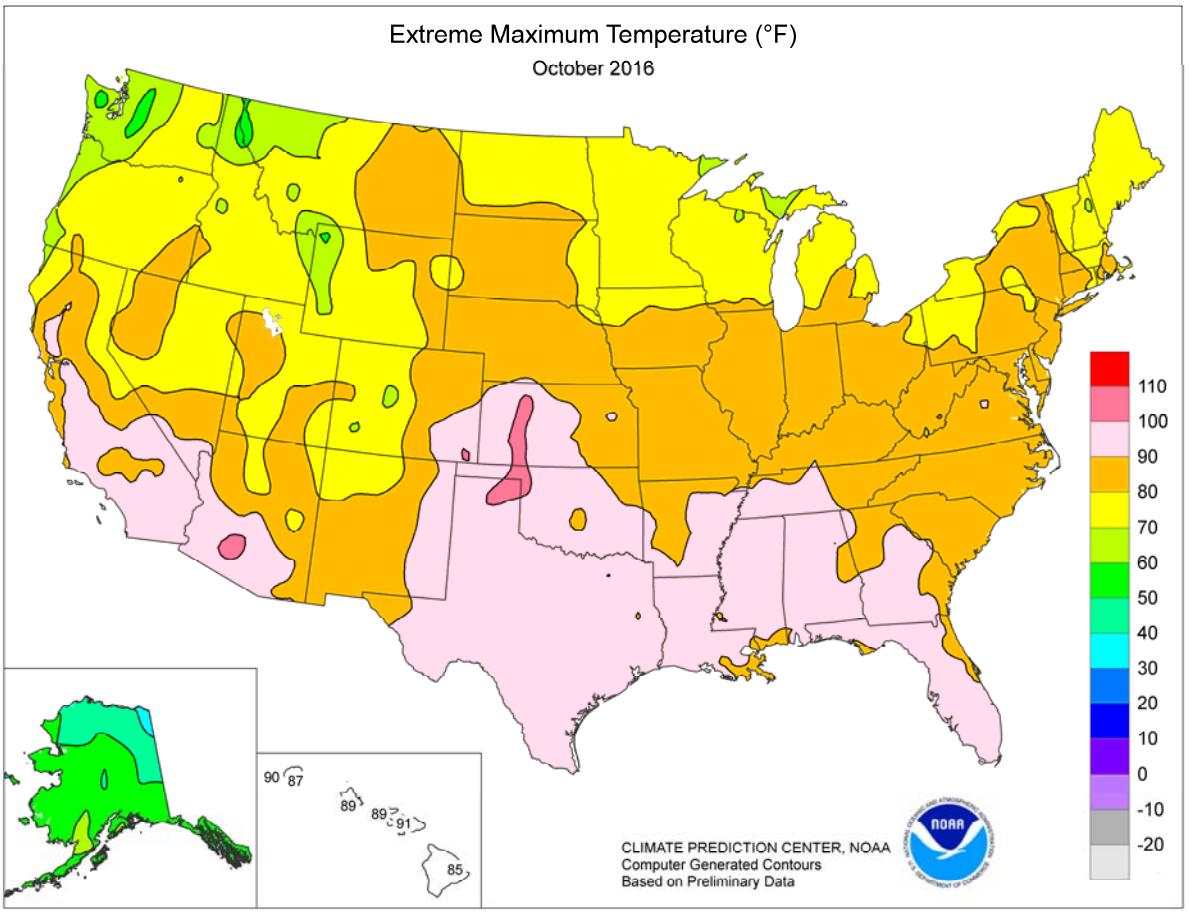
Peanut harvest progress was aided by dry conditions in the Southeast as October began. Twenty-eight percent of the nation's peanut crop was harvested by October 2, six percentage points ahead of last year and 8 points ahead of the 5-year average. Producers had harvested 42 percent of the nation's peanut crop by October 9, thirteen percentage points ahead of last year and 10 points ahead of the average. During the week ending October 9, rain from Hurricane Matthew had a negative impact on peanut condition ratings along the East Coast. By October 16, fifty-four percent of the nation's peanuts had been dug and combined, 13 percentage points ahead of last year and 7 points ahead of the 5-year average. Overall, 56 percent of the peanut crop was reported in good to excellent condition on October 16, five percentage points lower than at the same time last year. By October 30, producers had harvested 77 percent of this year's peanut crop, 9 percentage points ahead of last year and 3 points ahead of the 5-year average. During the final week of the month, twenty-four percent of the peanut crop was harvested in North Carolina.

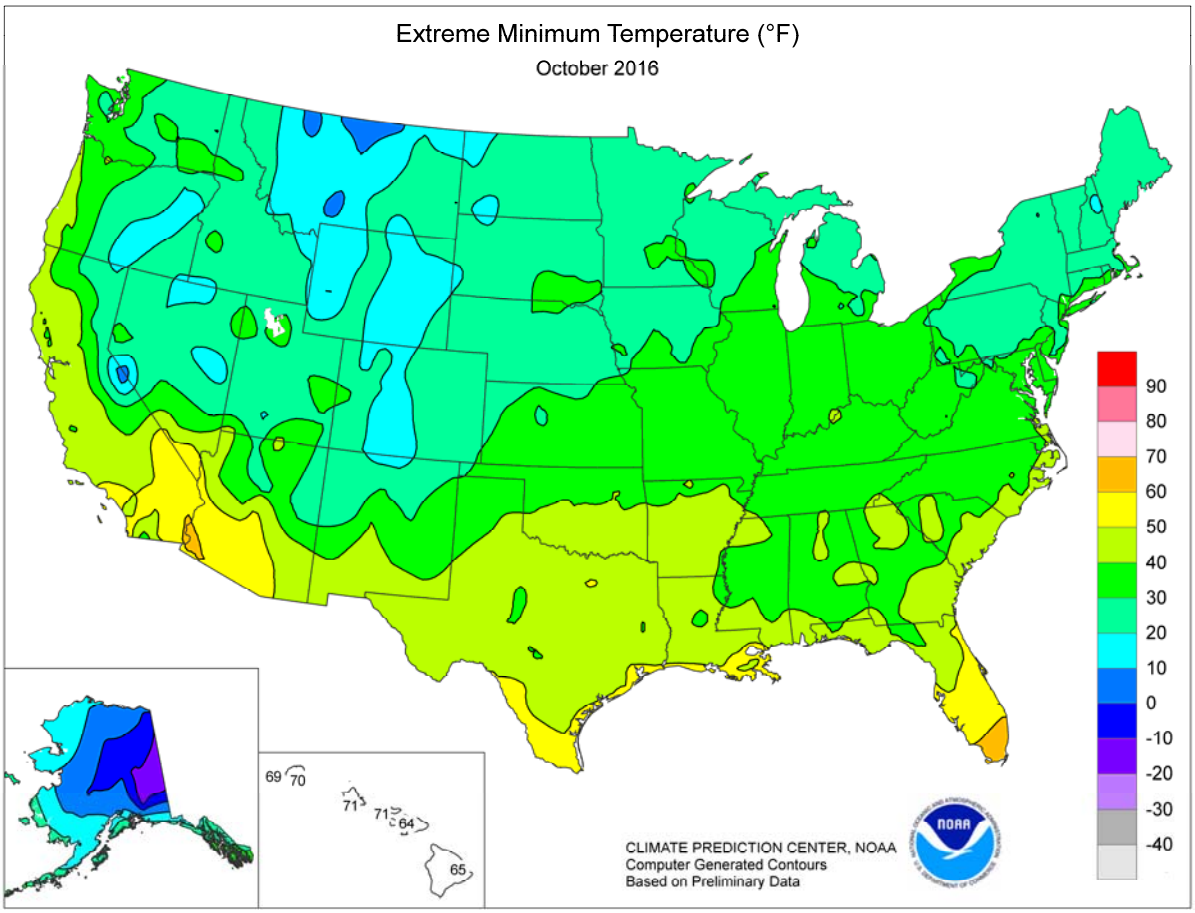
Sugarbeet producers had harvested 19 percent of this year's crop by October 2, seventeen percentage points behind last year and 5 points behind the 5-year average. In North Dakota, the sugarbeet harvest was 15 percent complete at this time, 13 percentage points behind the average. Producers had harvested 63 percent of the sugarbeet crop by October 16, thirteen percentage points behind last year but equal to the 5-year average. The sugarbeet harvest progressed well during that week, with all estimating states except Michigan advancing at least 20 percentage points. For the week ending October 23, seventy-eight percent of the sugarbeet crop was harvested, 6 percentage points behind last year but equal to the 5-year average. By October 30, sugarbeet producers had harvested 86 percent of this year's crop, 4 percentage points behind last year and slightly behind the 5-year average. In Minnesota and North Dakota, the sugarbeet harvest was virtually complete by the end of the month.

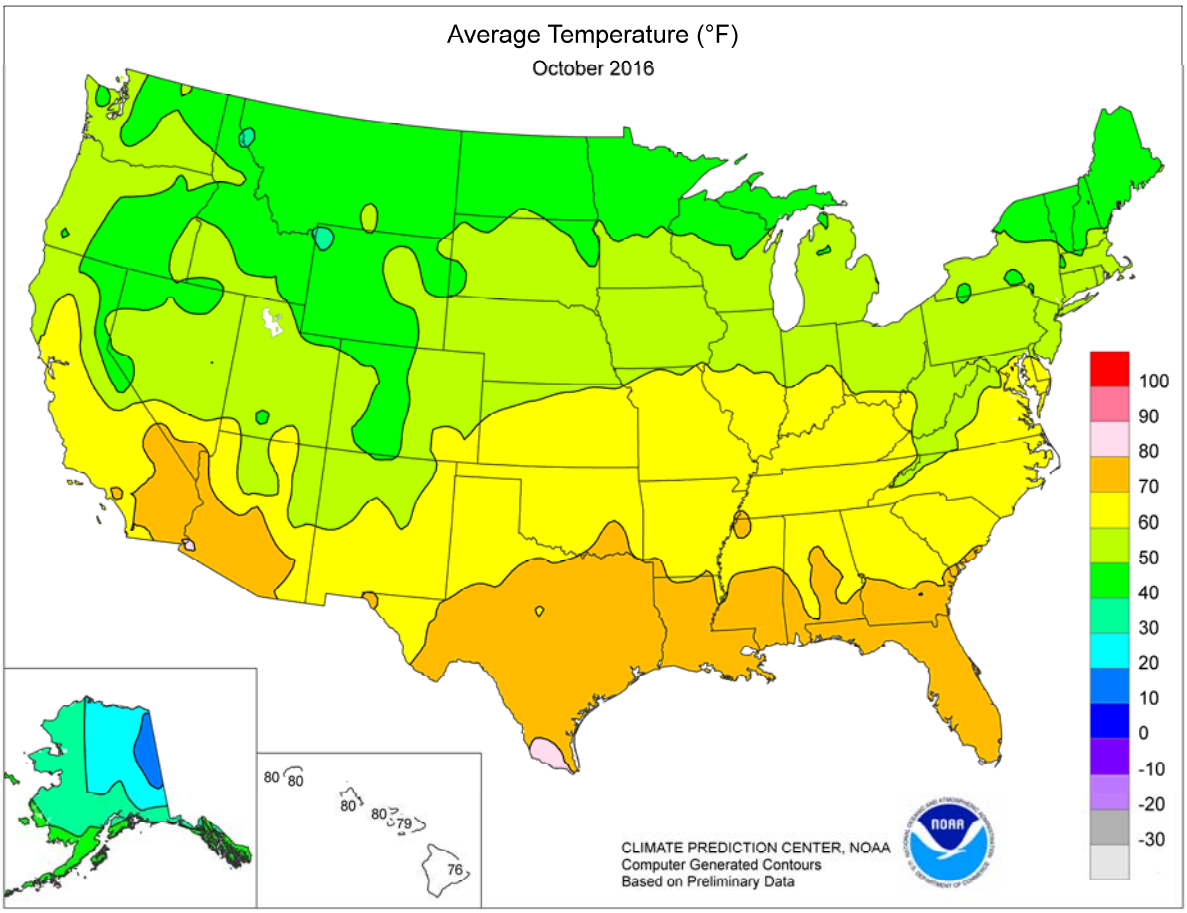
By October 9, thirteen percent of this year's sunflower crop was harvested, 5 percentage points ahead of last year and slightly ahead of the 5-year average. Sunflower producers had harvested 46 percent of the nation's crop by October 23, two percentage points behind last year but 6 points ahead of the average. By October 30, sixty-two percent of the sunflower crop was harvested, 3 percentage points behind last year but 5 points ahead of average. Seventy-three percent of the crop was harvested in South Dakota by October 30, ten percentage points ahead of average.

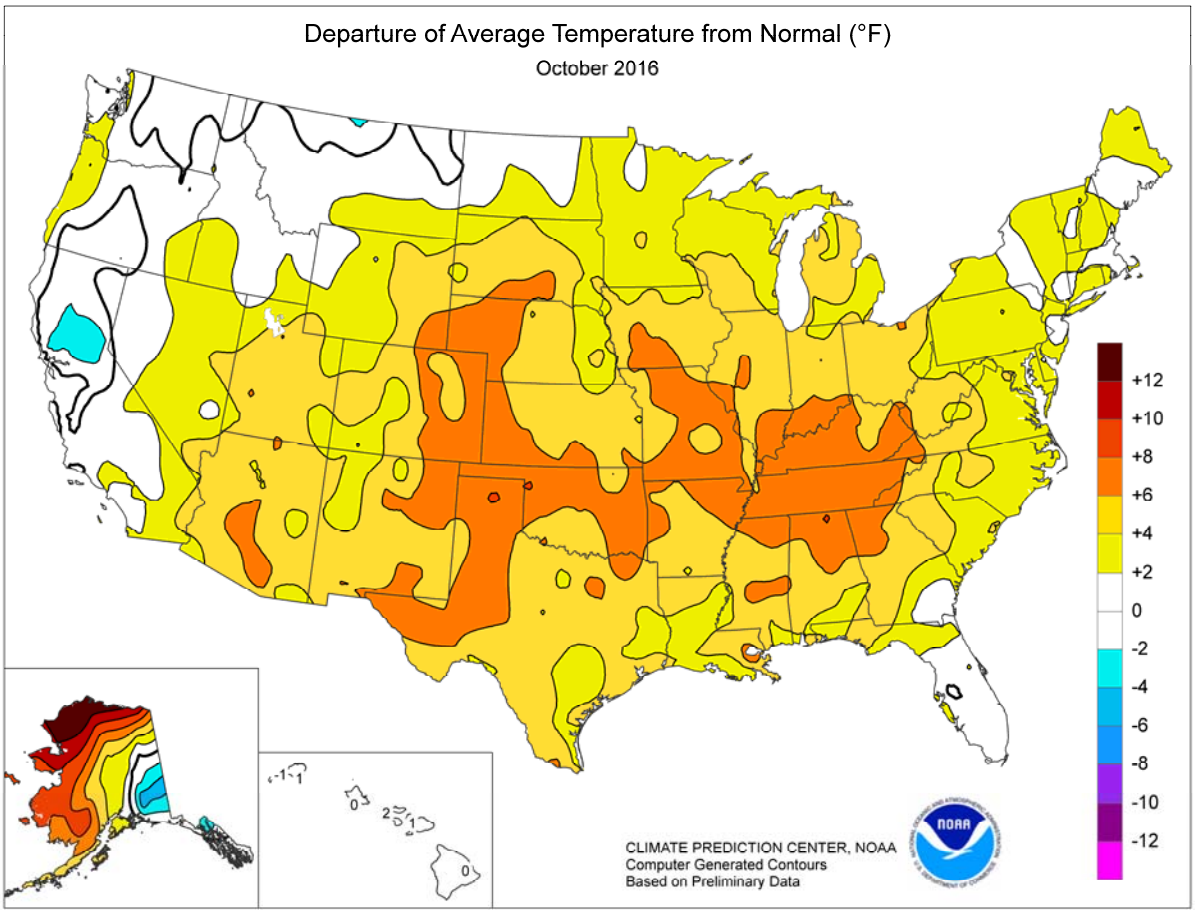

Total Precipitation (Inches)
October 2016
24
20
16
12
8
4
2
1
0.5
0
0.2
0.3
0.3
1.7
4.9
0.4
0.5
0.4
0.7
0.9
1.6
1.8
0.2
1
3.1
4.8
4.6
1.1
7.1
0.4
0.1
1
0.6
19.1
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data
NOAA


Percent of Normal Precipitation
October 2016
400
200
150
125
100
75
50
25
52
32
24
108
188
26
52
28
14
1
33
24
30
57
53
33
157
11
5
56
62
198
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data
NOAA


Extreme Maximum Temperature (°F)
October 2016
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
90
87
89
89
91
85
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
October 2016
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
69
70
71
71
64
65
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Average Temperature (°F)
October 2016
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
80
80
80
80
79
76
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Departure of Average Temperature from Normal (°F)
October 2016
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
-1
1
0
2
1
0
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

National Weather Data for Selected Cities

October 2016

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	71	8	0.00	-3.23	LEXINGTON	64	7	0.83	-1.87	COLUMBUS	59	4	1.73	-0.58
HUNTSVILLE	70	9	0.77	-2.77	LONDON-CORBIN	62	6	0.90	-1.90	DAYTON	59	6	1.90	-0.82
MOBILE	72	4	0.00	-3.25	LOUISVILLE	66	8	0.65	-2.14	MANSFIELD	57	6	3.47	0.79
MONTGOMERY	72	7	0.12	-2.46	PADUCAH	66	8	0.34	-3.11	TOLEDO	56	4	2.77	0.42
AK ANCHORAGE	36	2	0.58	-1.50	LA BATON ROUGE	73	5	0.61	-3.20	YOUNGSTOWN	55	4	6.11	3.65
BARROW	30	15	0.20	-0.19	LAKE CHARLES	73	4	0.27	-3.67	OK OKLAHOMA CITY	68	6	0.82	-2.82
COLD BAY	45	5	7.11	2.57	NEW ORLEANS	78	8	0.05	-3.00	TULSA	69	6	2.86	-1.19
FAIRBANKS	27	3	0.02	-0.90	SHREVEPORT	72	5	0.98	-3.47	OR ASTORIA	56	3	16.32	10.71
JUNEAU	40	-2	2.72	-5.58	ME BANGOR	49	1	3.20	-0.28	BURNS	45	1	1.10	0.38
KING SALMON	41	8	1.12	-0.97	CARIBOU	46	3	2.54	-0.45	EUGENE	56	3	10.18	6.83
KODIAK	44	4	11.58	3.22	PORTLAND	50	2	8.35	3.95	MEDFORD	56	1	5.49	4.18
NOME	38	9	1.70	0.12	MD BALTIMORE	60	5	0.78	-2.38	PENDLETON	53	1	2.32	1.33
AZ FLAGSTAFF	51	4	0.67	-1.26	MA BOSTON	55	1	5.46	1.67	PORTLAND	56	2	8.31	5.43
PHOENIX	81	6	0.20	-0.59	WORCESTER	51	1	6.57	1.90	SALEM	56	3	11.25	8.22
TUCSON	78	7	0.10	-1.11	MI ALPENA	51	5	2.54	0.21	PA ALLENTOWN	56	4	1.23	-2.10
AR FORT SMITH	70	7	0.40	-3.54	DETROIT	56	4	2.98	0.75	ERIE	58	5	6.24	2.32
LITTLE ROCK	68	5	1.91	-2.34	FLINT	53	4	3.18	0.84	MIDDLETOWN	58	3	1.26	-1.67
CA BAKERSFIELD	68	1	0.24	-0.06	GRAND RAPIDS	55	5	6.15	3.35	PHILADELPHIA	60	3	2.06	-0.69
EUREKA	56	1	10.92	8.56	HOUGHTON LAKE	50	4	2.91	0.65	PITTSBURGH	56	3	3.94	1.69
FRESNO	67	2	0.67	0.02	LANSING	54	5	3.20	0.91	WILKES-BARRE	54	3	2.60	-0.42
LOS ANGELES	68	1	0.36	0.00	MUSKEGON	55	5	3.78	0.98	WILLIAMSPORT	56	5	3.39	0.20
REDDING	62	-1	7.78	5.60	TRAVERSE CITY	54	5	3.62	0.68	PR SAN JUAN	84	2	6.39	1.33
SACRAMENTO	63	-1	4.71	3.82	MN DULUTH	48	4	1.55	-0.91	RI PROVIDENCE	56	3	4.83	1.14
SAN DIEGO	71	3	0.07	-0.37	INT'L FALLS	45	3	1.48	-0.50	SC CHARLESTON	70	4	10.48	7.39
SAN FRANCISCO	64	3	2.78	1.74	MINNEAPOLIS	53	4	3.41	1.30	COLUMBIA	68	4	4.44	1.55
STOCKTON	64	-1	2.39	1.57	ROCHESTER	52	5	2.74	0.54	FLORENCE	68	4	12.77	9.83
CO ALAMOSA	48	5	0.02	-0.65	ST. CLOUD	49	4	2.68	0.44	GREENVILLE	66	6	0.44	-3.44
CO SPRINGS	58	9	0.00	-0.86	MS JACKSON	71	7	0.49	-2.93	MYRTLE BEACH	69	4	10.40	7.17
DENVER	58	8	0.26	-0.61	MERIDIAN	71	6	0.00	-3.28	SD ABERDEEN	50	3	1.81	0.18
GRAND JUNCTION	58	5	0.36	-0.64	TUPELO	69	7	0.44	-2.94	HURON	52	4	1.04	-0.55
PUEBLO	59	7	0.00	-0.64	MO COLUMBIA	63	7	1.58	-1.60	RAPID CITY	53	5	0.46	-0.91
CT BRIDGEPORT	58	3	4.25	0.71	JOPLIN	65	5	5.25	1.31	SIOUX FALLS	53	5	3.09	1.16
HARTFORD	54	2	2.17	-1.77	KANSAS CITY	62	5	2.58	-0.75	TN BRISTOL	61	6	0.74	-1.56
DC WASHINGTON	63	4	0.90	-2.32	SPRINGFIELD	65	7	3.80	0.33	CHATTANOOGA	68	8	0.08	-3.18
DE WILMINGTON	59	3	2.22	-0.86	ST JOSEPH	61	4	1.66	-1.62	JACKSON	67	7	1.17	-2.60
FL DAYTONA BEACH	75	1	7.97	3.49	ST LOUIS	66	8	3.15	0.39	KNOXVILLE	66	7	0.18	-2.47
FT LAUDERDALE	80	1	3.32	-3.12	MT BILLINGS	51	3	3.51	2.25	MEMPHIS	71	7	1.22	-2.09
FT MYERS	78	0	2.73	0.14	BUTTE	43	2	2.31	1.52	NASHVILLE	68	8	0.43	-2.44
JACKSONVILLE	71	2	9.51	5.65	GLASGOW	45	0	3.11	2.40	TX ABILENE	71	5	0.40	-2.50
KEY WEST	82	2	2.11	-2.23	GREAT FALLS	47	1	1.76	0.83	AMARILLO	66	8	0.13	-1.37
MELBOURNE	78	3	6.32	1.56	HELENA	48	3	1.68	1.02	AUSTIN	73	2	0.27	-3.70
MIAMI	81	2	9.62	3.43	KALISPELL	43	1	4.86	3.90	BEAUMONT	74	4	0.41	-4.26
ORLANDO	77	2	2.77	0.04	MILES CITY	50	2	0.97	-0.16	BROWNSVILLE	80	5	1.08	-2.70
PENSACOLA	74	5	0.00	-4.13	MISSOULA	46	2	2.83	2.00	COLLEGE STATION	75	4	2.15	-2.07
ST PETERSBURG	78	2	1.01	-1.63	NE GRAND ISLAND	57	5	0.12	-1.39	CORPUS CHRISTI	79	5	0.94	-3.00
TALLAHASSEE	73	4	0.16	-3.09	HASTINGS	58	5	0.22	-1.45	DALLAS/FT WORTH	74	7	2.01	-2.10
TAMPA	78	2	1.55	-0.74	LINCOLN	58	5	1.86	-0.08	DEL RIO	75	4	0.11	-1.89
WEST PALM BEACH	80	2	4.37	-1.09	MCCOOK	58	5	0.14	-1.14	EL PASO	71	6	0.00	-0.81
GA ATHENS	68	6	0.03	-3.44	NORFOLK	54	3	2.33	0.61	GALVESTON	78	4	1.52	-1.97
ATLANTA	69	6	0.16	-2.95	NORTH PLATTE	56	6	1.54	0.30	HOUSTON	75	5	0.14	-4.36
AUGUSTA	68	5	2.08	-1.12	OMAHA/EPPLEY	59	6	1.66	-0.55	LUBBOCK	67	6	1.04	-0.66
COLUMBUS	71	5	0.92	-1.41	SCOTTSBLUFF	55	7	0.30	-0.71	MIDLAND	73	9	0.31	-1.46
MACON	69	5	0.20	-2.17	VALENTINE	56	8	1.90	0.68	SAN ANGELO	72	7	1.49	-1.08
SAVANNAH	71	4	11.60	8.48	NV ELKO	51	4	2.30	1.59	SAN ANTONIO	74	3	0.16	-3.70
HI HILO	76	0	19.12	9.48	ELY	50	5	0.11	-0.89	VICTORIA	75	3	0.06	-4.20
HONOLULU	80	0	0.12	-2.06	LAS VEGAS	74	5	0.23	-0.01	WACO	73	4	0.22	-3.45
KAHULUI	79	1	0.65	-0.40	RENO	56	4	2.43	2.01	WICHITA FALLS	69	4	2.32	-0.79
LIHUE	80	2	0.45	-3.80	WINNEMUCCA	50	1	1.94	1.28	UT SALT LAKE CITY	59	6	0.90	-0.67
ID BOISE	56	3	1.28	0.52	NH CONCORD	51	3	6.26	2.80	VT BURLINGTON	52	4	2.66	-0.46
LEWISTON	54	2	2.66	1.70	NJ ATLANTIC CITY	58	3	3.06	0.20	VA LYNCHBURG	61	5	1.73	-1.66
POCATELLO	50	2	3.23	2.26	NEWARK	59	3	3.00	-0.16	NORFOLK	65	4	9.43	5.96
IL CHICAGO/O'HARE	57	5	3.77	1.06	NM ALBUQUERQUE	63	6	0.74	-0.26	RICHMOND	62	4	4.23	0.63
MOLINE	59	6	2.67	-0.13	NY ALBANY	52	3	2.90	-0.31	ROANOKE	62	5	4.42	1.27
PEORIA	60	7	4.42	1.66	BINGHAMTON	49	1	5.83	2.81	WASH/DULLES	60	5	0.65	-2.72
ROCKFORD	57	6	1.72	-0.85	BUFFALO	54	3	4.41	1.22	WA OLYMPIA	53	3	12.43	8.24
SPRINGFIELD	62	6	2.02	-0.60	ROCHESTER	54	4	5.26	2.66	QUILLAYUTE	52	2	21.08	11.27
IN EVANSVILLE	65	8	0.49	-2.29	SYRACUSE	51	1	7.69	4.49	SEATTLE-TACOMA	55	2	10.05	6.86
FORT WAYNE	58	6	3.65	1.02	NC ASHEVILLE	61	6	0.52	-2.65	SPOKANE	49	2	6.23	5.17
INDIANAPOLIS	61	6	1.96	-0.80	CHARLOTTE	64	2	2.78	-0.88	YAKIMA	53	4	2.43	1.90
SOUTH BEND	56	4	3.48	0.21	GREENSBORO	64	6	3.91	0.64	WV BECKLEY	58	5	3.08	0.44
IA BURLINGTON	60	5	2.39	-0.52	HATTERAS	69	3	5.04	-0.27	CHARLESTON	61	6	4.10	1.43
CEDAR RAPIDS	56	4	2.77	0.56	RALEIGH	64	4	7.10	3.92	ELKINS	56	5	2.70	-0.16
DES MOINES	60	7	0.91	-1.71	WILMINGTON	67	2	6.78	3.57	HUNTINGTON	62	6	2.27	-0.46
DUBUQUE	55	5	2.51	0.01	ND BISMARCK	48	3	0.24	-1.04	WI EAU CLAIRE	51	4	2.72	0.48
SIOUX CITY	55	4	1.60	-0.39	DICKINSON	46	1	1.63	0.29	GREEN BAY	51	4	2.66	0.49
WATERLOO	55	5	2.48	-0.01	FARGO	49	4	2.39	0.42	LA CROSSE	56	5	2.23	0.07
KS CONCORDIA	60	4	1.00	-0.84	GRAND FORKS	47	3	1.10	-0.60	MADISON	54	5	4.96	2.78
DODGE CITY	64	7	0.09	-1.36	JAMESTOWN	46	1	1.35	-0.05	MILWAUKEE	56	5	3.56	1.07
GOODLAND	59	7	0.04	-1.01	MINOT	46	1	1.36	0.04	WAUSAU	50	3	2.31	-0.32
HILL CITY	60	5	0.08	-1.37	WILLISTON	46	2	1.05	0.18	WY CASPER	51	5	0.16	-0.98
TOPEKA	62	5	1.32	-1.67	OH AKRON-CANTON	56	4	3.76	1.23	CHEYENNE	53	8	0.27	-0.48
WICHITA	65	6	2.04	-0.41	CINCINNATI	62	6	2.92	-0.04	LANDER	50	4	0.98	-0.39
KY JACKSON	64	6	1.51	-1.67	CLEVELAND	59	7	2.96	0.23	SHERIDAN	49	4	1.45	0.04

Based on 1971-2000 normals

***** Not Available**

National Agricultural Summary

October 31 – November 6, 2016

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Warm conditions blanketed virtually all of the U.S. during the week. Most notably, temperatures averaged more than 9°F above normal across most of the area from the High Plains to the middle and southern Atlantic coastal plain. Precipitation totals for much of the nation were below average, but portions of Montana, New Mexico, and Texas accumulated moisture totaling at least 800 percent of normal.

Corn: Nationally, 86 percent of the corn was harvested by week's end, 5 percentage points behind last year but slightly ahead of the 5-year average. Relatively dry conditions in major corn-producing regions allowed for double-digit harvest progress in 11 of the 18 estimating states. The corn harvest was complete or nearly complete in Kansas, Kentucky, Missouri, North Carolina, Tennessee, and Texas.

Soybeans: Producers had harvested 93 percent of this year's soybean crop by November 6, slightly behind last year but 2 percentage points ahead of the 5-year average. In Michigan, farmers harvested an additional 11 percent of the soybeans during the week, advancing harvest to 77 percent complete; however, harvest lags the 5-year average by 11 percentage points.

Winter Wheat: Ninety-one percent of the 2017 winter wheat crop was sown by November 6, equal to last year but slightly behind the 5-year average. Fourteen of the 18 estimating states were at or behind the 5-year average planting pace as of November 6. Nationally, emergence was 79 percent complete by week's end, slightly ahead of both last year and the 5-year average. Overall, 58 percent of the winter wheat was reported in good to excellent condition, unchanged from last week but 7 percentage points above the same time last year.

Cotton: By week's end, 56 percent of this year's cotton was harvested, equal to last year's pace but 4 percentage points behind the 5-year average. With continued dry weather, 70 percent of the crop was harvested in Georgia by week's end—16 percentage points ahead of the 5-year average. In Texas, cotton harvest was in full swing on the High Plains and picking up on the Low Plains during the week.

Sorghum: By week's end, 84 percent of the sorghum was harvested, slightly ahead of last year and 6 percentage points ahead of the 5-year average. Colorado, Kansas, Nebraska, New Mexico, and Oklahoma recorded double-digit harvest progress during the week.

Other Crops: By November 6, producers had harvested 86 percent of this year's peanut crop, 10 percentage points ahead of last year and 3 points ahead of the 5-year average. Producers harvested one-quarter of the peanut crop in South Carolina during the week.

Nationally, 89 percent of this year's sugarbeet crop had been dug by November 6, six percentage points behind both last year and the 5-year average. With the exception of North Dakota, all estimating states were behind their respective 5-year harvest averages by week's end.

By week's end, 81 percent of the sunflower crop was harvested, 4 percentage points ahead of last year and 10 points ahead of the 5-year average. South Dakota sunflower producers had harvested 89 percent of this year's crop, 14 percentage points ahead of last year and 16 points ahead of the 5-year average.

Crop Progress and Condition

Week Ending November 6, 2016

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

Corn Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
CO	62	68	87	75
IL	99	91	94	92
IN	96	76	87	81
IA	91	71	86	88
KS	96	93	96	94
KY	95	97	99	93
MI	74	40	53	59
MN	95	75	86	91
MO	99	92	95	93
NE	84	69	84	83
NC	98	98	99	98
ND	89	52	71	80
OH	93	65	81	67
PA	76	66	77	67
SD	86	62	81	85
TN	98	99	100	97
TX	86	90	95	94
WI	72	52	68	66
18 Sts	91	75	86	85

These 18 States harvested 95% of last year's corn acreage.

Soybeans Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AR	91	92	98	87
IL	99	89	95	95
IN	97	83	91	90
IA	97	89	95	97
KS	89	75	87	86
KY	81	75	87	73
LA	98	99	100	99
MI	94	66	77	88
MN	100	97	98	99
MS	94	94	98	96
MO	84	73	86	80
NE	98	91	96	99
NC	40	38	50	33
ND	100	97	98	98
OH	98	88	95	85
SD	99	95	97	98
TN	79	86	91	72
WI	96	86	93	93
18 Sts	94	87	93	91

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

Cotton Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AL	67	68	78	62
AZ	47	45	48	44
AR	88	95	99	89
CA	86	48	72	79
GA	46	61	70	54
KS	29	13	21	32
LA	97	99	100	98
MS	88	90	95	91
MO	75	85	94	74
NC	52	38	57	54
OK	45	36	42	45
SC	45	30	50	55
TN	66	74	86	65
TX	49	30	39	51
VA	61	40	60	58
15 Sts	56	46	56	60

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

Sorghum Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AR	100	100	100	100
CO	61	81	91	60
IL	93	74	83	86
KS	82	71	83	74
LA	100	100	100	100
MO	85	85	90	84
NE	80	81	91	84
NM	46	8	31	29
OK	84	69	84	75
SD	82	90	95	87
TX	85	80	83	83
11 Sts	83	76	84	78

These 11 States harvested 98% of last year's sorghum acreage.

Peanuts Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AL	79	91	97	81
FL	93	94	96	94
GA	77	80	87	84
NC	68	60	76	84
OK	81	59	69	73
SC	55	55	80	83
TX	63	57	65	76
VA	84	72	89	87
8 Sts	76	77	86	83

These 8 States harvested 97% of last year's peanut acreage.

Sugarbeets Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
ID	87	77	83	93
MI	80	50	60	78
MN	100	95	96	99
ND	100	99	99	99
4 Sts	95	86	89	95

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

Sunflowers Percent Harvested

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
CO	80	65	82	70
KS	66	50	65	66
ND	79	53	75	70
SD	75	73	89	73
4 Sts	77	62	81	71

These 4 States harvested 84% of last year's sunflower acreage.

Crop Progress and Condition

Week Ending November 6, 2016

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

Winter Wheat Percent Planted

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AR	66	57	74	74
CA	49	33	60	47
CO	99	98	99	100
ID	99	91	96	99
IL	94	85	93	92
IN	96	83	91	93
KS	99	92	96	98
MI	99	88	92	97
MO	83	63	78	79
MT	100	91	93	97
NE	100	100	100	100
NC	35	33	42	43
OH	98	93	95	93
OK	93	88	94	95
OR	92	88	92	96
SD	100	100	100	100
TX	75	75	85	84
WA	99	91	92	100
18 Sts	91	86	91	92

These 18 States planted 90% of last year's winter wheat acreage.

Winter Wheat Percent Emerged

	Prev Year	Prev Week	Nov 6 2016	5-Yr Avg
AR	48	40	51	52
CA	19	12	41	24
CO	94	92	94	94
ID	84	79	82	86
IL	81	63	78	71
IN	85	62	77	76
KS	84	75	84	87
MI	88	67	79	83
MO	61	40	54	56
MT	94	82	85	83
NE	98	95	97	96
NC	22	13	24	21
OH	88	64	79	72
OK	84	76	83	84
OR	57	54	62	63
SD	96	89	93	81
TX	58	56	71	64
WA	78	74	79	83
18 Sts	78	70	79	78

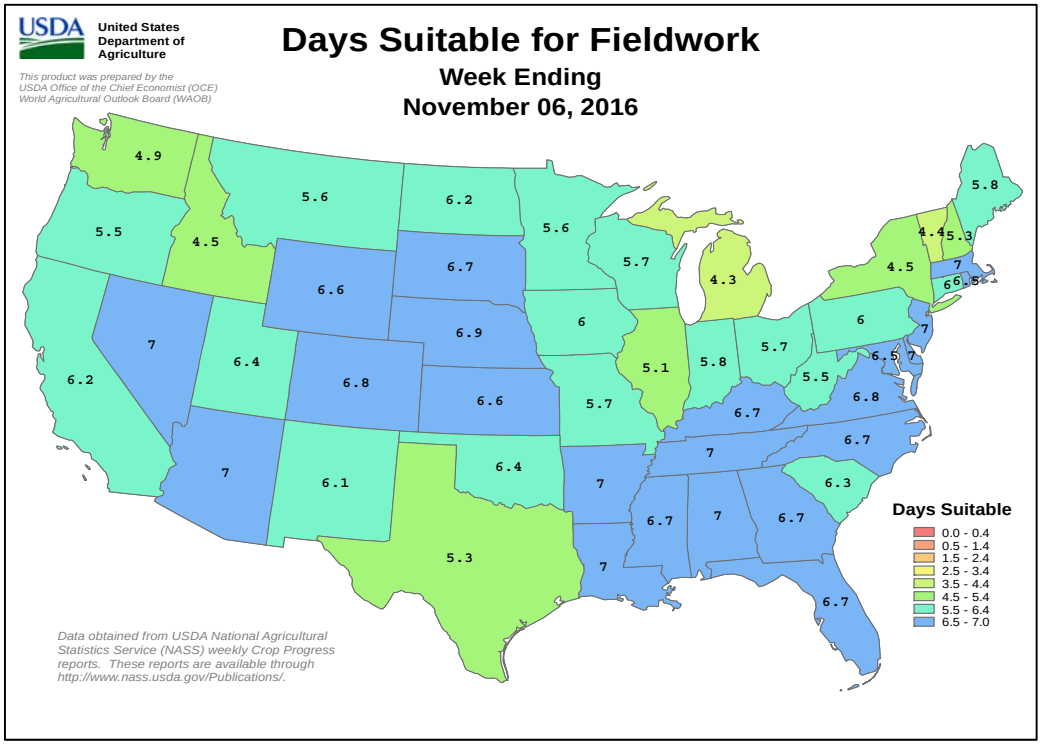
These 18 States planted 90% of last year's winter wheat acreage.

Winter Wheat Condition by Percent

	VP	P	F	G	EX
AR	6	9	38	38	9
CA	0	0	0	30	70
CO	3	10	36	45	6
ID	0	0	26	50	24
IL	3	1	27	56	13
IN	1	3	23	57	16
KS	2	8	34	48	8
MI	1	4	20	59	16
MO	2	4	34	54	6
MT	0	2	22	48	28
NE	2	10	33	49	6
NC	1	15	36	48	0
OH	0	1	15	60	24
OK	3	7	36	47	7
OR	2	3	30	57	8
SD	1	6	38	50	5
TX	3	12	46	35	4
WA	0	0	7	76	17
18 Sts	2	7	33	48	10
Prev Wk	2	7	33	48	10
Prev Yr	2	9	38	41	10

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

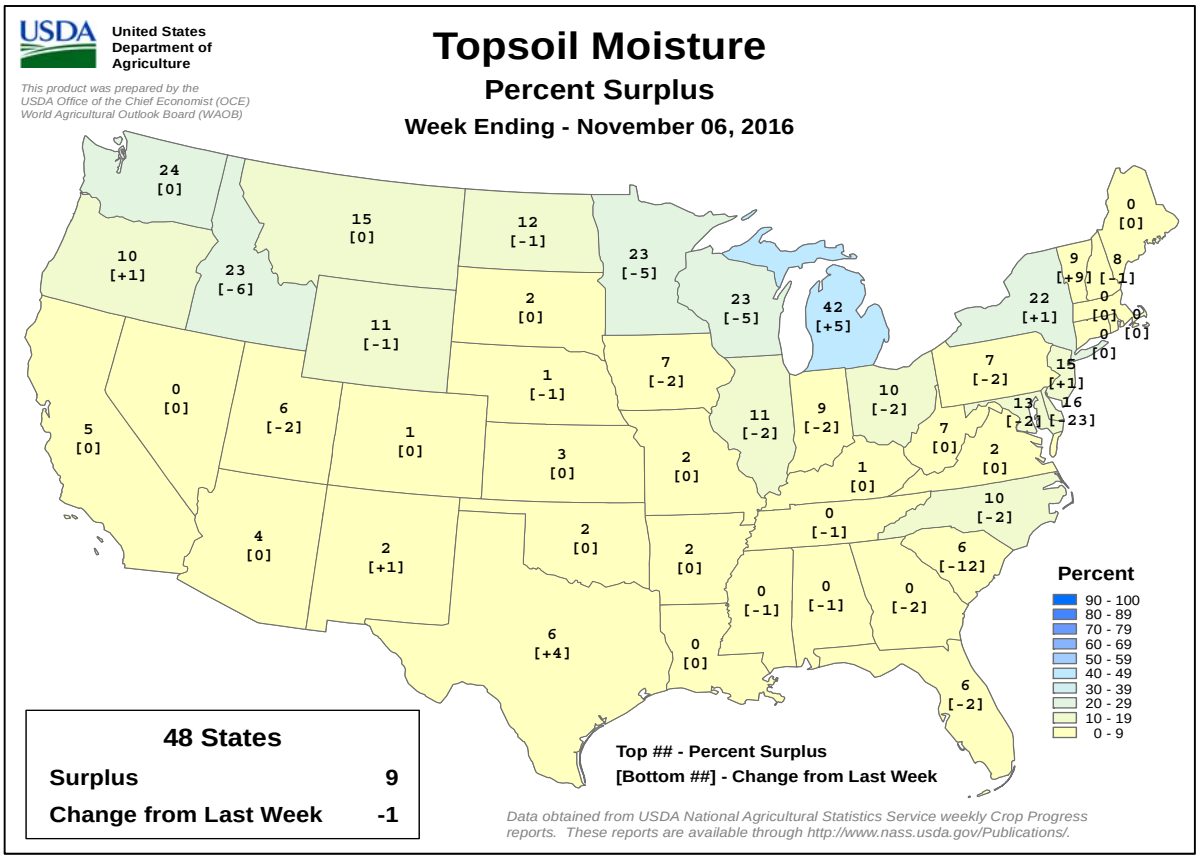
NA - Not Available; ***Revised**

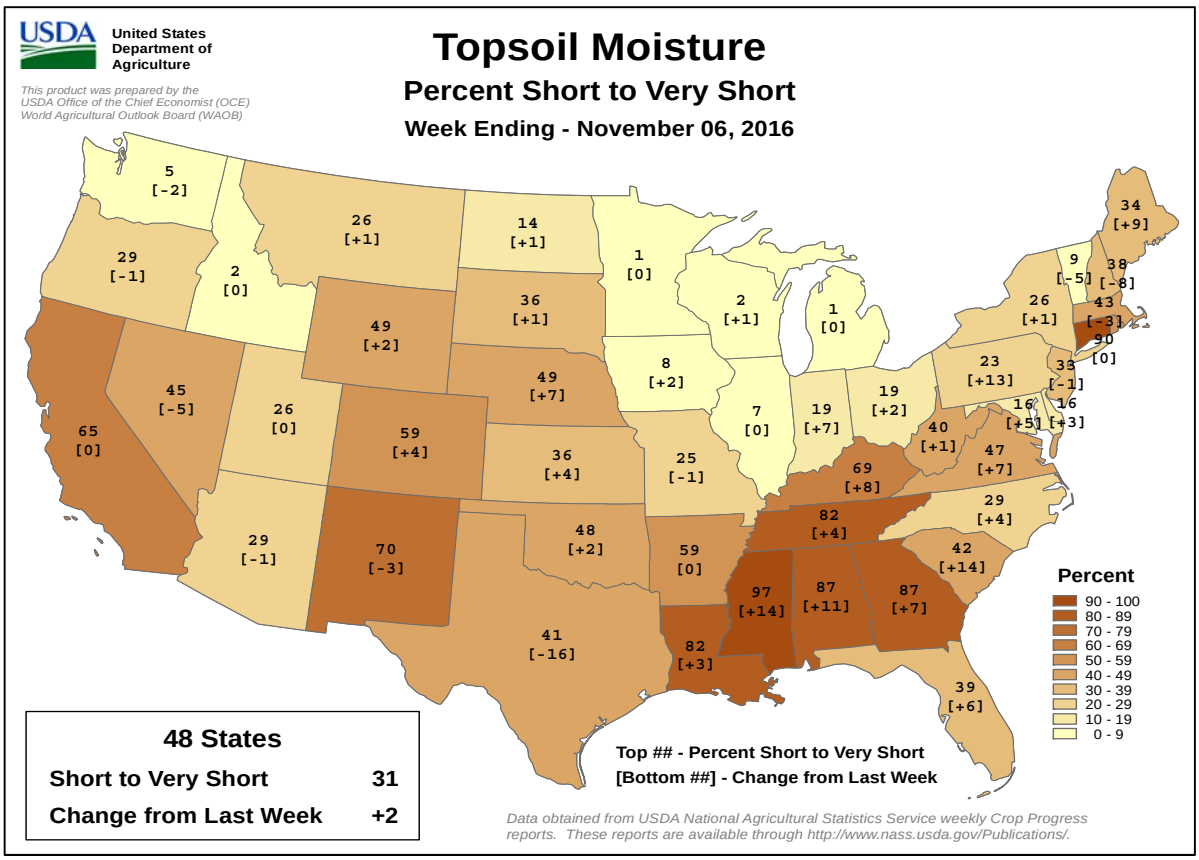


Crop Progress and Condition

Week Ending November 6, 2016

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

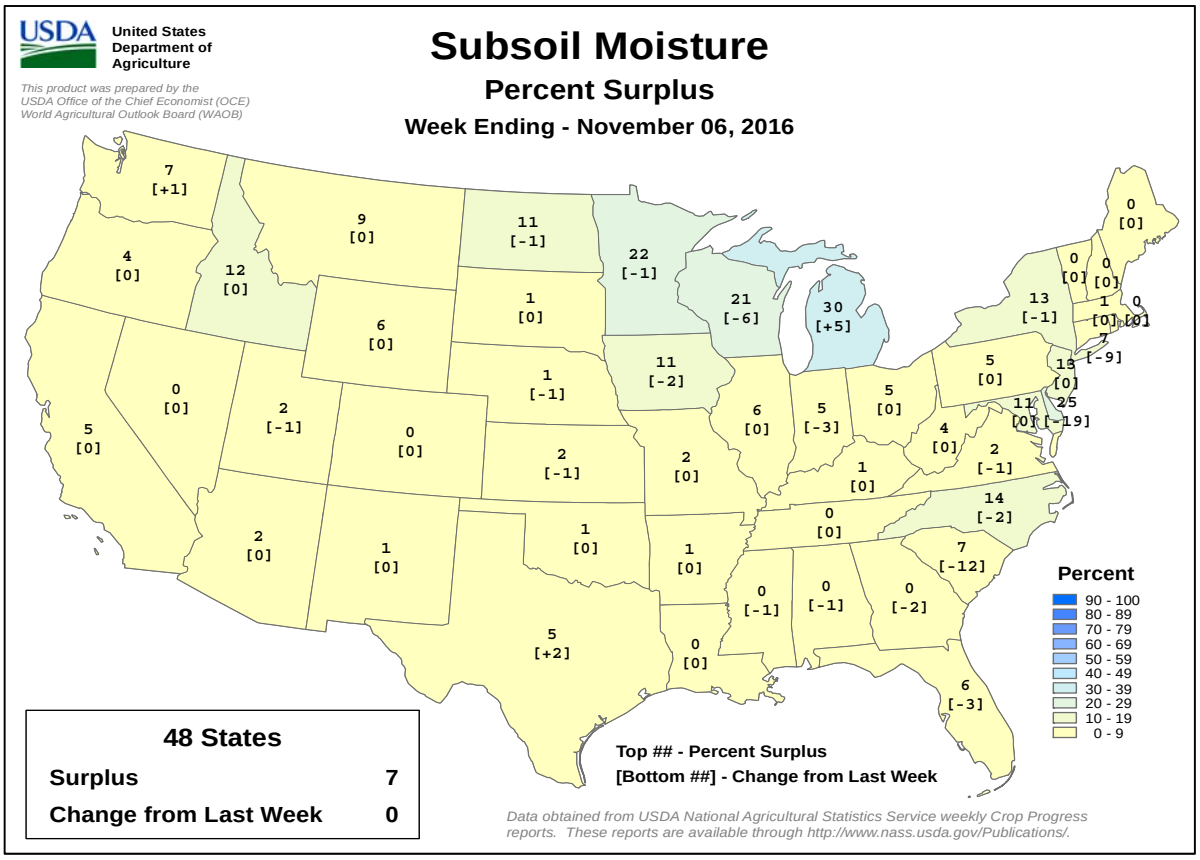


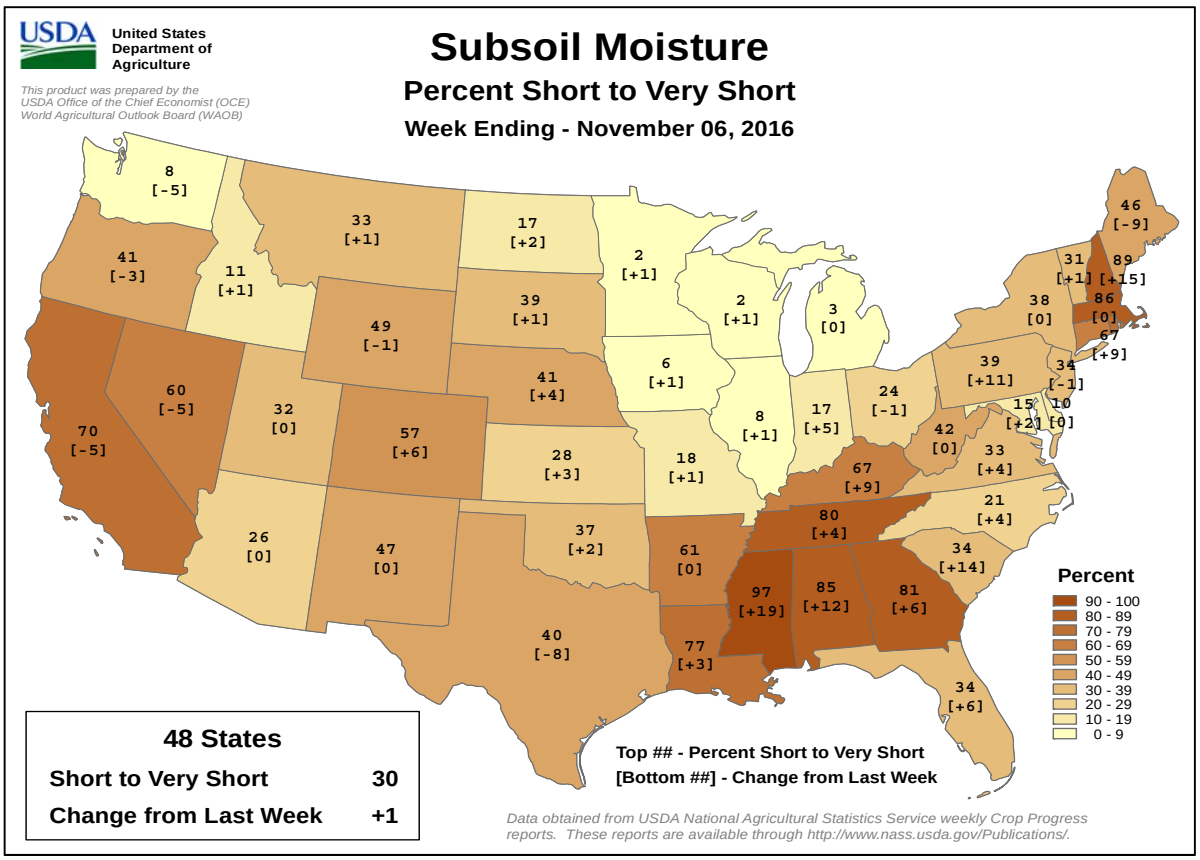


Crop Progress and Condition

Week Ending November 6, 2016

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





International Weather and Crop Summary

October 30 - November 5, 2016

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

EUROPE: Rain further improved soil moisture for winter crops in western Europe, while cold, snowy weather eased winter crops toward dormancy in northeastern growing areas.

FSU-WESTERN: Winter crops were dormant in all but southern-most growing areas, as cold, snowy weather prevailed over much of the region.

MIDDLE EAST: Dry weather increased concerns over developing short-term drought in Turkey, while rain boosted moisture supplies for winter grains in central portions of the region.

NORTHWEST AFRICA: Hot, dry weather promoted fieldwork across the region but exacerbated short-term drought in Algeria.

SOUTH ASIA: Seasonably hot, dry weather in India aided summer (kharif) crop harvesting as well as winter (rabi) crop sowing.

EAST ASIA: Cool, drier weather promoted wheat development in eastern China.

SOUTHEAST ASIA: Drier weather in Thailand supported summer rice harvesting and winter rice sowing, while heavy showers slowed fieldwork elsewhere in the region.

AUSTRALIA: Mostly dry weather continued to favor the latter stages of winter grain and oilseed development.

SOUTH AFRICA: Warm, showery weather favored growth of emerging corn.

ARGENTINA: Light rain benefited emerging summer grains and oilseeds in central Argentina.

BRAZIL: Conditions remained overall favorable for soybeans and corn in key production areas.

October 2016

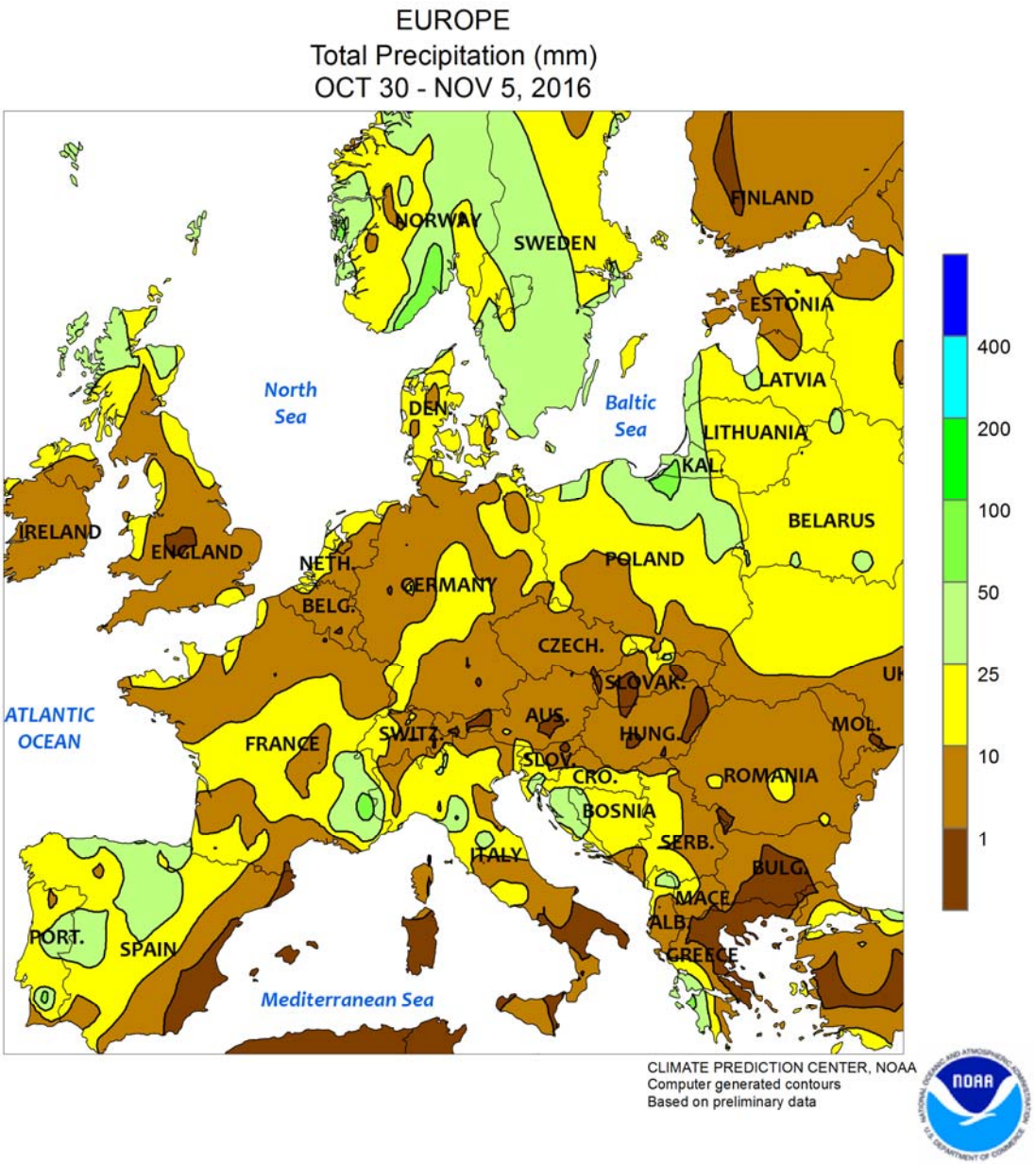
COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	29	16	39	10	23	3.7	8	-50
	BATNA	27	11	34	2	19	3.2	6	-19
ARGENT	IGUAZU	28	16	37	8	22	-0.2	319	106
	FORMOSA	28	18	38	10	23	0.3	224	97
	CERES	25	13	32	6	19	-0.4	113	38
	CORDOBA	24	10	31	3	17	-1.3	78	9
	RIO CUARTO	23	11	30	4	17	-0.3	109	14
	ROSARIO	23	13	29	6	18	0.2	153	57
	BUENOS AIRES	21	12	28	2	17	0.3	129	24
	SANTA ROSA	21	9	27	2	15	-0.8	243	172
	TRES ARROYOS	20	9	27	0	15	0.9	50	-33
AUSTRA	DARWIN	33	25	37	23	29	0.1	85	6
	BRISBANE	25	15	28	11	20	-0.4	36	-61
	PERTH	22	9	33	5	16	-0.7	32	-15
	CEDUNA	24	11	39	3	17	0.5	0	-27
	ADELAIDE	20	11	30	6	16	-0.2	25	-18
	MELBOURNE	19	8	27	1	14	0	46	-16
	WAGGA	20	7	27	2	14	-0.6	41	-20
	CANBERRA	19	5	24	-1	12	-0.9	42	-15
AUSTRI	VIENNA	13	7	23	0	10	-0.8	120	84
	INNSBRUCK	14	6	23	-1	10	0.8	94	36
BAHAMA	NASSAU	30	24	33	20	27	1	120	-45
BARBAD	BRIDGETOWN	31	25	32	24	28	0.9	137	-30
BELARU	MINSK	8	3	22	-3	5	-1.1	135	84
BERMUD	ST GEORGES	27	23	30	19	25	0.2	308	160
BOLIVI	LA PAZ	16	2	19	-4	9	-0.3	41	-3
BRAZIL	FORTALEZA	31	25	35	21	28	0.3	1	-9
	RECIFE	30	25	31	24	28	-0.3	6	-29
	CAMPO GRANDE	30	20	35	11	25	-0.6	119	-26
	FRANCA	29	18	34	11	24	1.4	188	30
	RIO DE JANEIRO	27	21	37	17	24	0.2	34	-47
	LONDRINA	30	17	37	11	23	1.7	191	43
	SANTA MARIA	25	15	35	6	20	0	377	238
	TORRES	22	16	26	9	19	-2.2	218	89
BULGAR	SOFIA	15	7	27	-3	11	0	61	24
BURKIN	OUAGADOUGOU	37	24	39	21	31	1.6	4	-29
CANADA	TORONTO	16	8	26	0	12	2.9	41	-23
	MONTREAL	14	6	25	-1	10	1.6	163	84
	WINNIPEG	11	3	26	-3	7	1.4	0	-36
	REGINA	8	0	23	-7	4	-0.4	0	-22
	SASKATOON	6	-1	16	-8	2	-2	0	-16
	LETHBRIDGE	***	***	***	***	***	*****	*****	******
	CALGARY	8	-2	15	-5	3	-2.2	28	14
	VANCOUVER	14	8	17	0	11	1	203	94
CANARY	LAS PALMAS	26	20	30	18	23	0.6	26	12
CHILE	SANTIAGO	24	10	32	4	17	2.4	16	1
CHINA	HARBIN	9	0	23	-10	5	-1.3	18	-7
	HAMI	18	3	30	-7	10	0.4	4	0
	BEIJING	18	10	28	0	14	0.3	71	50
	TIENTSIN	19	11	28	1	15	0.3	26	3
	LHASA	19	5	23	-1	12	2.7	1	-7
	KUNMING	23	14	26	10	18	2.7	128	51
	CHENGCHOW	20	14	32	6	17	1.6	119	72
	YEHCHANG	21	15	31	7	18	-0.1	113	29
	HANKOW	21	16	30	9	19	0.2	130	36
	CHUNGKING	23	19	35	11	21	2.6	110	6
	CHIHKIANG	23	16	35	8	20	1.8	77	-25
	WU HU	21	17	26	10	19	0.8	217	148
	SHANGHAI	23	19	32	14	21	2.2	300	231
	NANCHANG	24	19	29	12	21	1.7	47	-11
	TAIPEI	30	25	35	22	28	2.8	140	-4
	CANTON	29	22	32	17	26	1.4	141	54
	NANNING	30	21	36	17	26	1.8	154	89
COLOMB	BOGOTA	20	9	22	5	15	1.4	159	43
COTE D	ABIDJAN	30	25	31	23	28	1.3	102	-60
CUBA	HAVANA	30	21	32	15	25	-0.3	0	-185
CYPRUS	LARNACA	29	18	33	15	24	1.6	0	-14
CZECHR	PRAGUE	11	6	25	0	9	0.5	71	41
DENMAR	COPENHAGEN	12	8	18	1	10	0.1	72	20
EGYPT	CAIRO	31	21	35	19	26	2	0	-1

Based on Preliminary Reports

October 2016

COUNTRY	CITY	TEMPERATURE (C)						PRECIP. (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DEP NRM	TOT	DEP NRM
	ASWAN	38	23	44	19	30	1.9	0	0
ESTONI	TALLINN	7	3	15	-3	5	-1.1	47	-26
ETHIOP	ADDIS ABABA	24	11	26	8	17	1.4	8	-40
F GUIA	CAYENNE	33	23	35	21	28	1.2	26	-55
FIJI	NAUSORI	28	22	31	19	25	0.9	316	117
FINLAN	HELSINKI	7	3	15	-3	5	-0.4	21	-55
FRANCE	PARIS/ORLY	16	7	21	2	12	-0.6	30	-29
	STRASBOURG	15	6	19	1	11	0.4	46	-7
	BOURGES	16	7	21	1	11	-0.4	49	-17
	BORDEAUX	19	9	26	3	14	0.4	25	-69
	TOULOUSE	20	11	28	4	15	1.5	45	-8
	MARSEILLE	21	11	27	5	16	0.7	60	-24
GABON	LIBREVILLE	29	25	30	23	27	1.4	187	-220
GERMAN	HAMBURG	12	7	17	0	9	-0.2	25	-39
	BERLIN	12	7	18	2	9	-0.5	40	2
	DUSSELDORF	14	7	20	-1	10	-1.1	28	-47
	LEIPZIG	12	7	19	0	9	-0.6	58	17
	DRESDEN	11	7	22	1	9	-1.5	101	55
	STUTTGART	13	6	20	0	10	-0.4	52	-7
	NURNBERG	13	5	22	-2	9	0.0	52	1
	AUGSBURG	12	4	22	-2	8	-0.9	31	-24
GREECE	THESSALONIKA	20	13	28	6	17	0.5	50	5
	LARISSA	22	12	31	7	17	0.9	48	-1
	ATHENS	24	17	30	11	20	0.9	32	4
GUADEL	RAIZET	31	24	33	22	28	0.9	129	-68
HONGKO	HONG KONG INT	31	26	33	21	28	2.5	205	85
HUNGAR	BUDAPEST	13	7	24	1	10	-0.8	50	11
ICELAN	REYKJAVIK	10	7	13	1	8	3.8	174	97
INDIA	AMRITSAR	33	19	36	14	26	2.1	0	-15
	NEW DELHI	34	21	36	15	27	1.2	2	-15
	AHMEDABAD	34	22	36	17	28	-0.7	102	82
	INDORE	31	19	33	15	25	-0.1	32	-14
	CALCUTTA	33	25	36	23	29	0.9	92	-20
	VERAVAL	32	23	36	21	28	-0.7	74	51
	BOMBAY	32	23	36	18	28	-1.0	76	-22
	POONA	30	18	32	12	24	-0.7	81	2
	BEGAMPET	32	20	33	16	26	0.0	31	-78
	VISHAKHAPATNAM	33	25	36	23	29	1.4	125	-114
	MADRAS	35	25	36	22	30	1.4	13	-271
	MANGALORE	31	23	33	22	27	-0.2	42	-157
INDONE	SERANG	32	24	34	23	28	0.3	161	54
IRELAN	DUBLIN	14	8	17	3	11	0.2	63	-10
ITALY	MILAN	17	10	24	4	14	0.3	69	-48
	VENICE	***	***	24	8	***	*****	*****	******
	GENOA	20	14	26	11	17	-0.4	93	-81
	ROME	22	13	27	7	18	0.7	155	39
	NAPLES	23	15	29	10	19	1.5	152	21
JAMAIC	KINGSTON	32	26	34	23	29	0.9	65	-62
JAPAN	SAPPORO	14	8	25	1	11	-0.2	81	-47
	NAGOYA	24	16	29	10	20	2.5	149	30
	TOKYO	22	16	32	10	19	0.9	99	-66
	YOKOHAMA	22	17	32	11	20	1.6	69	-136
	KYOTO	24	17	31	9	20	2.2	106	-17
	OSAKA	25	17	31	11	21	2.3	42	-69
KAZAKH	KUSTANAY	5	-1	18	-7	2	-1.9	21	-5
	TSELINOGRAD	4	-2	18	-9	1	-3.9	29	1
	KARAGANDA	3	-4	17	-15	0	-4.2	49	22
KENYA	NAIROBI	29	14	30	12	21	1.5	35	-3
LITHUA	KAUNAS	8	3	20	-2	6	-1.5	107	57
LUXEMB	LUXEMBOURG	13	6	18	3	9	0.1	45	-38
MALAYS	KUALA LUMPUR	33	25	35	23	29	2.1	175	-75
MALI	BAMAKO	36	22	40	18	29	1.1	34	-27
MARSHA	MAJURO	31	27	34	26	29	1.5	389	44
MARTIN	LAMENTIN	32	25	35	23	28	1.7	196	-47
MAURIT	NOUAKCHOTT	36	23	43	20	30	0.4	0	-8
MEXICO	GUADALAJARA	27	16	29	10	21	2.0	15	-55
	TLAXCALA	23	11	27	8	17	0.4	157	96
	ORIZABA	24	16	26	12	20	1.3	444	243
MOROCC	CASABLANCA	26	18	31	15	22	2.4	15	-17
	MARRAKECH	30	17	37	14	24	2.9	26	8
MOZAMB	MAPUTO	28	20	40	12	24	1.2	31	-27
N KORE	PYONGYANG	20	10	27	-2	15	2.3	69	28
NEW CA	NOUMEA	27	20	29	17	23	0.9	8	-43
NIGER	NIAMEY	39	26	41	23	33	2	3	-12
NORWAY	OSLO	7	2	14	-2	5	0.1	30	-62
NZEALA	AUCKLAND	18	12	21	7	15	*****	67	******
	WELLINGTON	16	11	19	4	13	*****	90	******
P RICO	SAN JUAN	32	26	34	24	29	1.2	134	5
PAKIST	KARACHI	34	24	37	19	29	1.1	0	******
PERU	LIMA	22	17	23	16	19	1.6	0	-3
PHILIP	MANILA	33	26	34	24	29	0.8	161	-37
PNEWGU	PORT MORESBY	31	26	34	24	28	1.7	35	2
POLAND	WARSAW	10	6	23	0	8	-0.4	109	70
	LODZ	10	5	20	-1	8	-1.3	144	111
	KATOWICE	11	5	24	-2	8	-1.2	72	24
PORTUG	LISBON	23	16	30	13	19	1.5	56	-20
ROMANI	BUCHAREST	14	6	25	-1	10	-1.3	130	90
RUSSIA	ST.PETERSBURG	7	4	15	-1	5	-0.4	39	-24
	KAZAN	7	2	20	-3	4	0.5	40	-10
	MOSCOW	6	3	20	-3	5	-0.5	55	-8
	YEKATERINBURG	3	-1	14	-7	1	-1.4	36	-4
	OMSK	2	-4	10	-11	-1	-3.8	41	12
	BARNAUL	2	-4	11	-11	-1	-4.5	70	29
	KHABAROVSK	6	-2	19	-12	2	-2.5	20	-28
	VLADIVOSTOK	11	5	20	-3	8	-0.5	120	57
	VOLGOGRAD	11	3	24	-8	7	-1.5	21	1
	ASTRAKHAN	13	4	25	-5	9	-1.1	22	4
	ORENBURG	8	1	23	-9	5	-0.5	31	-5
S AFRI	JOHANNESBURG	26	13	32	2	19	3.0	110	35
	DURBAN	23	17	30	11	20	-0.3	112	10
	CAPE TOWN	23	12	34	7	18	1.6	11	-18
S KORE	SEOUL	21	12	29	2	17	2.0	76	15
SAMOA	PAGO PAGO	31	26	33	23	29	1.6	118	-137
SENEGA	DAKAR	31	26	33	21	29	1.2	1	-43
SPAIN	VALLADOLID	21	9	27	3	15	1.8	49	6
	MADRID	23	10	29	4	17	1.6	50	13
	SEVILLE	27	16	34	11	22	1.8	120	66
SWITZE	ZURICH	12	6	21	2	9	-0.3	66	-19
	GENEVA	14	7	20	0	10	-0.2	92	1
SYRIA	DAMASCUS	30	12	35	9	21	2.7	0	-8
TAHITI	PAPEETE	30	23	31	21	27	1.0	70	-30
TANZAN	DAR ES SALAAM	32	21	33	20	27	1.5	150	83
THAILA	PHITSANULOK	33	25	35	23	29	0.9	187	32
	BANGKOK	33	26	35	25	30	1.3	292	29
TOGO	LOME	30	26	32	23	28	1.6	0	-98
TRINID	PORT OF SPAIN	34	25	36	23	30	2.6	72	-120
TUNISI	TUNIS	27	19	34	14	23	2.4	30	-24
TURKEY	ISTANBUL	21	14	28	8	17	1.0	20	-47
	ANKARA	20	5	27	-3	12	0.9	3	-28
TURKME	ASHKHABAD	21	10	29	1	15	-0.3	4	-11
UKINGD	ABERDEEN	13	6	16	0	10	0.6	84	-1
	LONDON	16	9	20	5	12	0.5	26	-45
UKRAIN	KIEV	10	4	26	-2	7	-1.1	104	67
	LVOV	10	4	23	-3	7	-0.7	178	126
	KIROVOGRAD	11	3	26	-7	7	-1.8	146	118
	ODESSA	12	7	20	1	10	-1.6	166	138
	KHARKOV	10	3	24	-7	7	-0.8	47	6
UZBEKI	TASHKENT	19	7	28	-2	13	-0.9	43	16
YUGOSL	BELGRADE	16	8	28	3	12	-0.5	77	26
ZAMBIA	LUSAKA	33	21	36	16	27	1.8	3	-8
ZIMBAB	KADOMA	34	18	38	12	26	0.4	1	-30

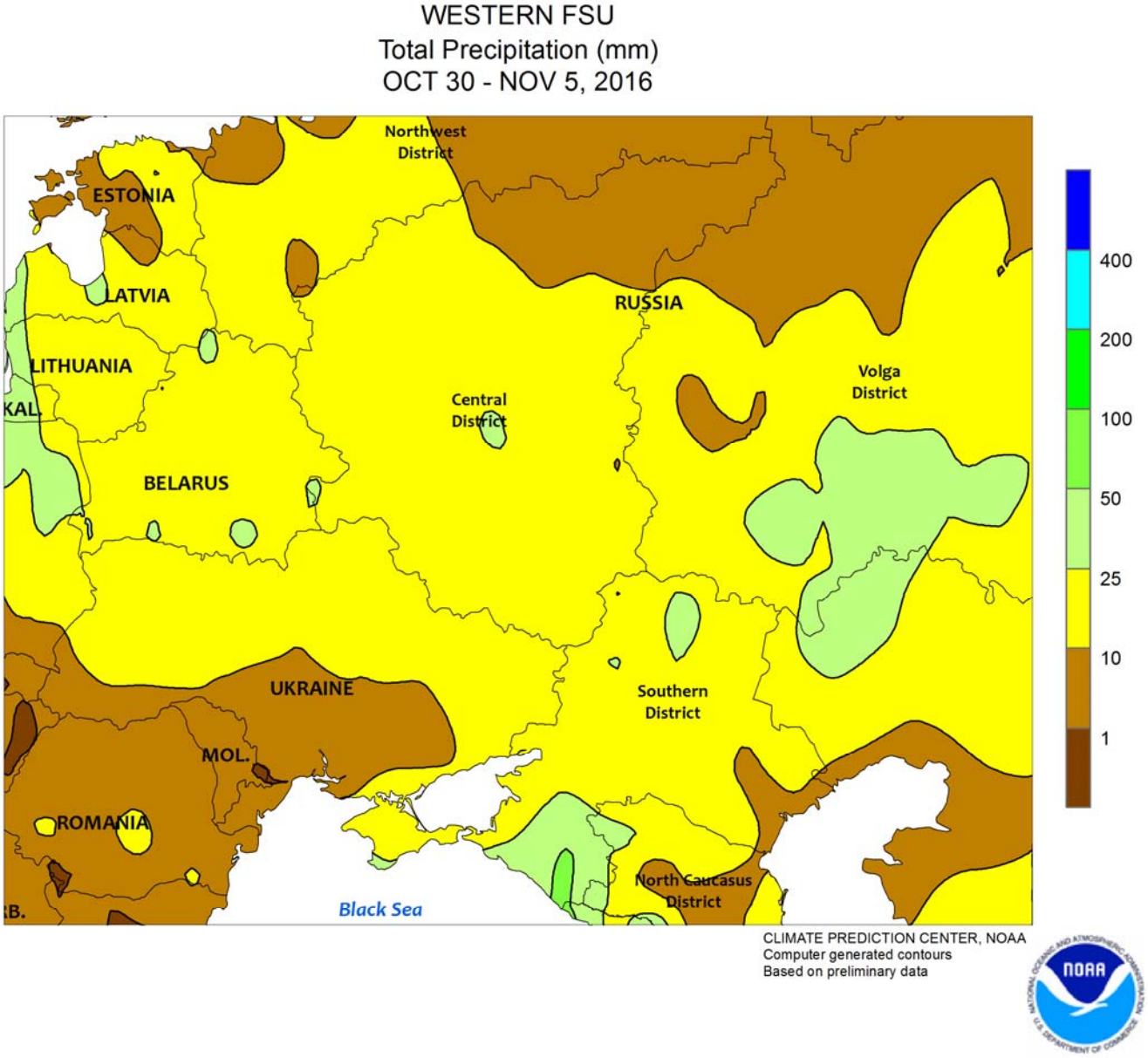
Based on Preliminary Reports



EUROPE

Additional rain benefited winter crops in western Europe, while cold, snowy conditions ushered winter crops into dormancy in northeastern growing areas. In Spain and Portugal, another round of moderate to heavy rainfall (10-30 mm, locally more) boosted soil moisture for winter grain planting and improved reservoir levels for warm-season irrigation. Light to moderate showers (2-20 mm) also fell across France, improving soil moisture for winter wheat and rapeseed establishment. Nevertheless, pockets of pronounced short-term dryness (less than 60 percent of normal over the past 60 days) persisted over western and northeastern portions of the country. Light to moderate showers (2-25 mm) maintained favorable moisture supplies for winter crops from Germany into most of eastern and southern Europe, with locally heavy rain (25 mm or more) reported in Italy. In northeastern Europe, cold weather (1-4°C below normal) along with the season's first snow (5-20 cm) ushered winter crops into dormancy in northern Poland and the Baltic States. Light showers (less than 10 mm) were reported in southeastern England and the Danube River Valley, allowing for fieldwork but sustaining overall favorable conditions for winter wheat and rapeseed establishment.

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



WESTERN FSU

Cold weather persisted, with the season's first snow observed across central and northern growing areas. Temperatures during the period averaged 2 to 4°C below normal, with winter wheat dormant in all but southern-most portions of the region. Widespread moderate to heavy precipitation (10-50 mm liquid equivalent) was reported, though amounts were somewhat lighter (less than 10 mm) in south-central Ukraine. Snow was reported from northern Ukraine into central Russia, though warmer weather changed the precipitation over to rain during the latter half of the period. Nevertheless, snow cover (5-20 cm) was widespread at week's end from northeastern Belarus into central Russia.

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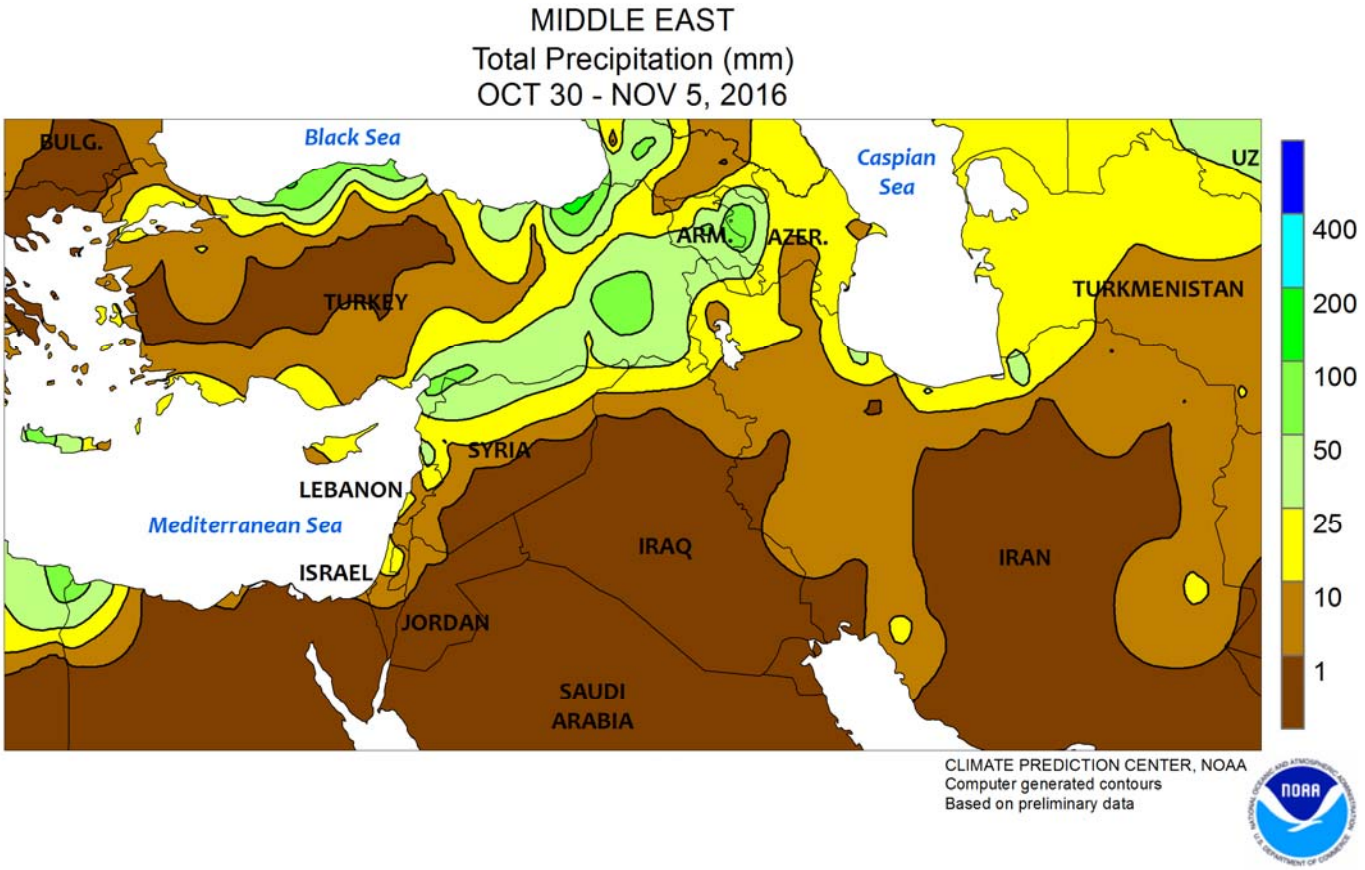
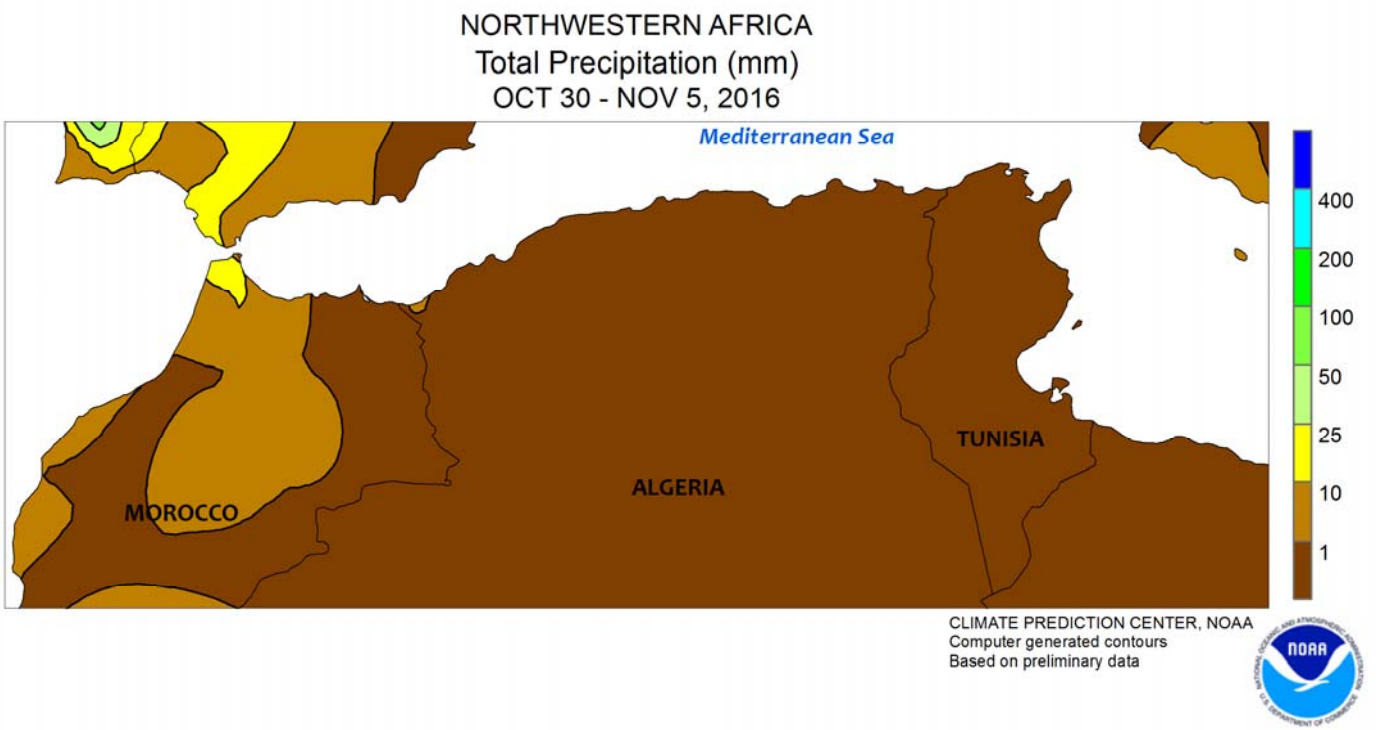


MIDDLE EAST

Despite welcomed rainfall across central portions of the region, short-term drought intensified on Turkey's Anatolian Plateau. Across western and central Turkey, dry weather continued to adversely affect winter grain establishment. There has been little — if any — rain since the latter half of September over central Turkey's primary winter crop areas; regional-average precipitation on the Anatolian Plateau has totaled a meager 5 mm since September 24, or 10 percent of normal. Moisture will be needed soon to ensure proper winter grain establishment before crops enter dormancy (typically at the end of November). Meanwhile, moderate to heavy rain (10-90 mm) fell along a stationary frontal boundary from the eastern Mediterranean Coast into northern Iran and southeastern Turkey, improving soil moisture for winter crops while boosting reservoir levels for warm-season irrigation. Rain was lighter (less than 10 mm) over winter crop areas of Iraq and western Iran, but nevertheless still beneficial for wheat and barley establishment. South of the front, temperatures averaged 2 to 4°C above normal from southern Iraq into central and eastern Iran, while colder conditions (2-4°C below normal) settled over Turkey and immediate environs north of the front.

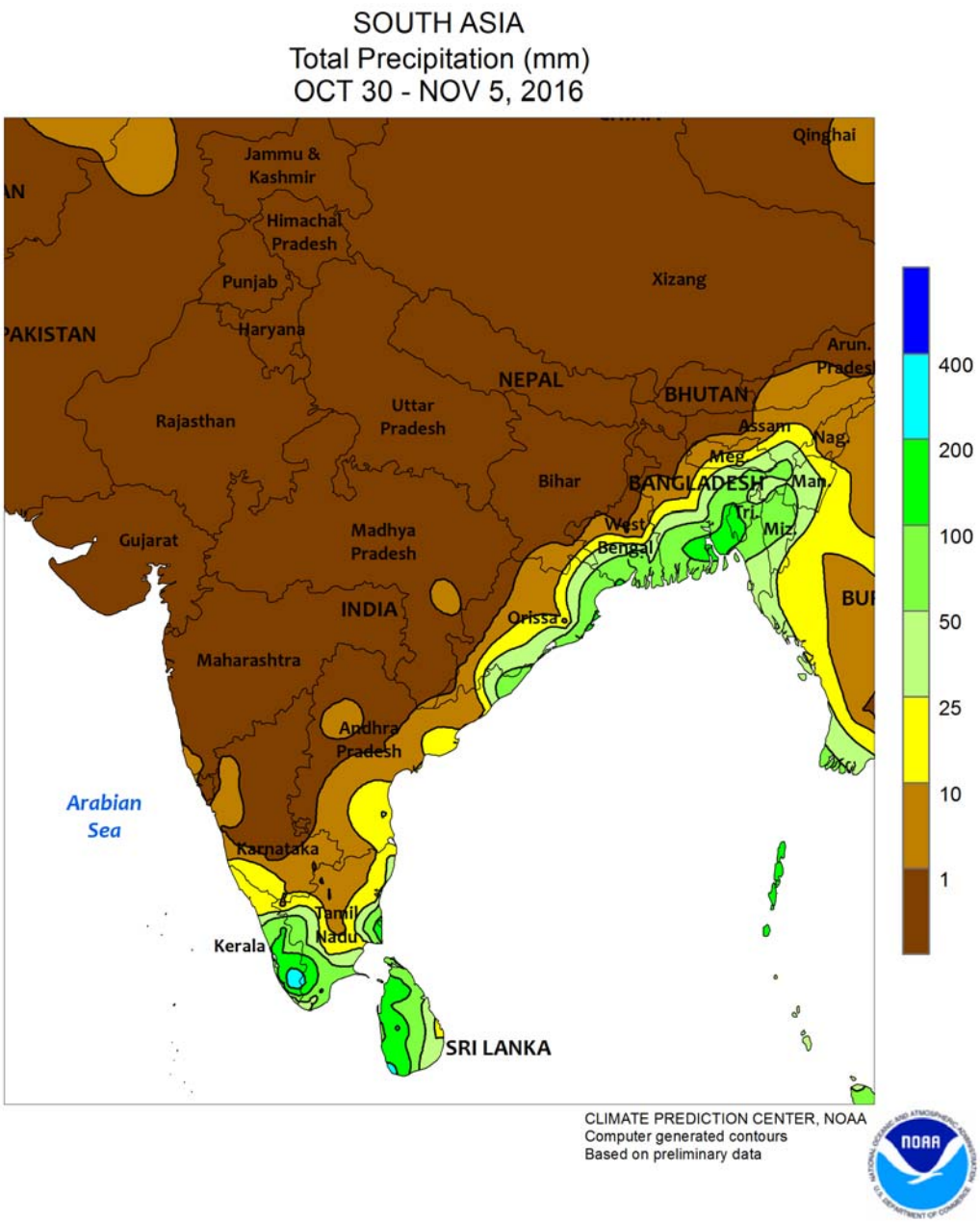
For additional information contact: mbrusberg@oce.usda.gov



NORTHWESTERN AFRICA

A continuation of dry, hot weather promoted fieldwork but increased soil moisture losses, particularly in central portions of the region. Showers for the week were light (less than 2 mm) and generally confined to coastal Morocco; most winter grain areas reported little — if any — measureable precipitation. The sunny skies coupled with late-summer heat (2-6°C above normal, with highs in the lower 30s) promoted a rapid pace of fieldwork but rapidly depleted already-low soil moisture supplies. Short-term drought was most pronounced in western and central Algeria, where season-to-date (since September 1) regional-average rainfall has totaled less than 10 and 20 mm, respectively, or approximately 20 percent of normal. Dryness has also crept into northern Morocco, where rain has been sparse since mid-October. In contrast, soil moisture remained in good supply in northern Tunisia, and to a lesser extent southern Morocco, due to near- to above-normal rainfall since September 1.

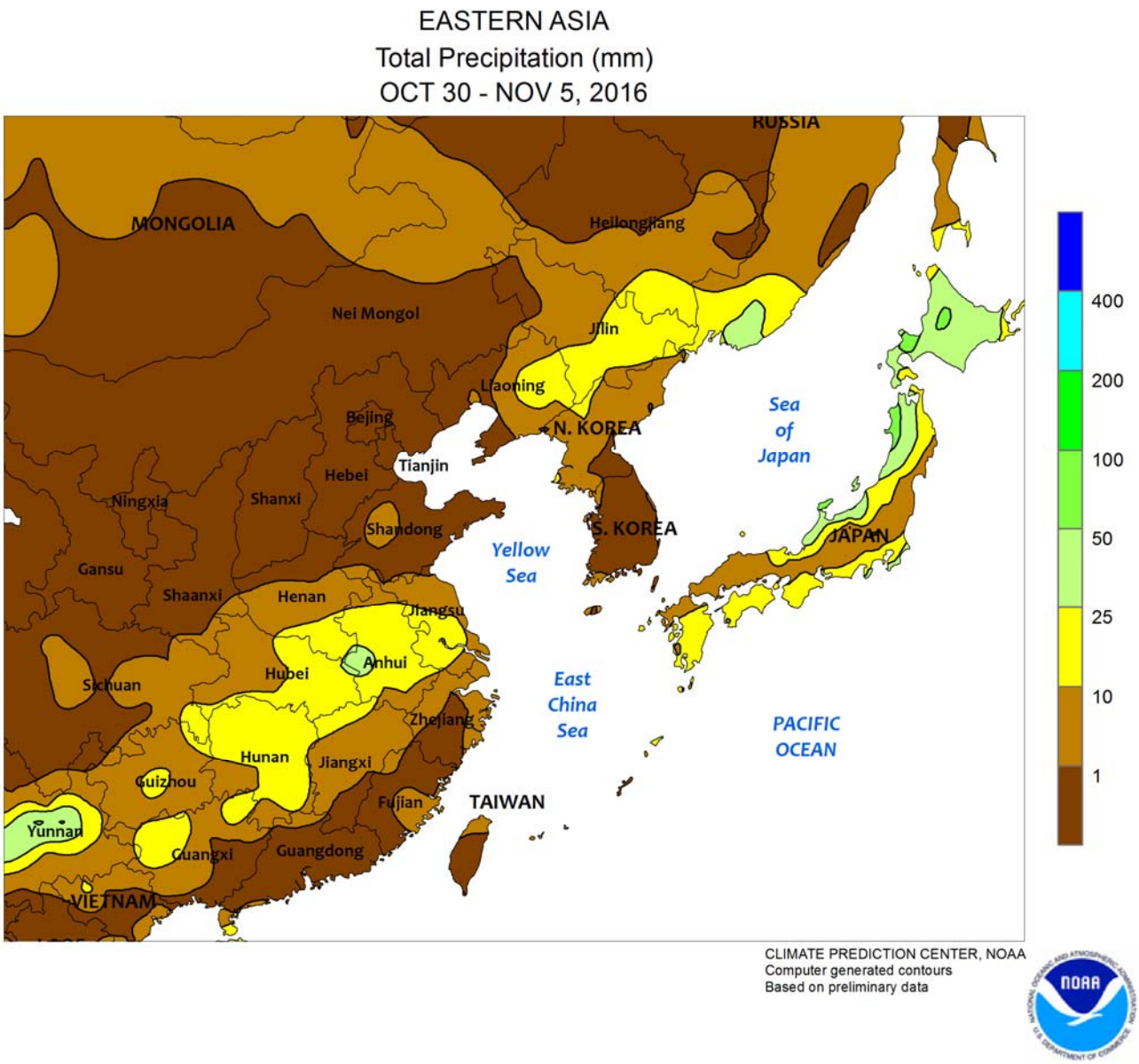
For additional information contact: mbrusberg@oce.usda.gov



SOUTH ASIA

Seasonably hot, dry weather facilitated summer (kharif) crop harvesting throughout India as well as aiding winter (rabi) crop sowing. The conditions have been particularly favorable for western cotton after receiving late-season rainfall. The winter monsoon was well established in eastern sections of the region, with showers (50-100 mm or more) confined to eastern and southern-most portions of India as well as southern Bangladesh and Sri Lanka. The showers increased water supplies and soil moisture for winter rice grown in these areas.

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



EASTERN ASIA

Cool, dry weather promoted the completion of winter wheat planting in eastern China. In addition, ample soil moisture, along with weekly average temperatures between 10 and 15°C, aided establishment and overall vegetative health of the crop. Showers were mainly confined to the Yangtze Valley, where 10 to 25 mm maintained favorable soil moisture reserves for vegetative rapeseed. Temperatures averaged 1 to 2°C below normal in most eastern winter crop areas, with nighttime lows dropping below 0°C around mid-week in Hebei and portions of Shandong. Despite the cooler-than-normal weather, vegetative development was progressing at a normal pace; good vegetative growth prior to dormancy (typically occurring in mid to late December) increases yield potential.

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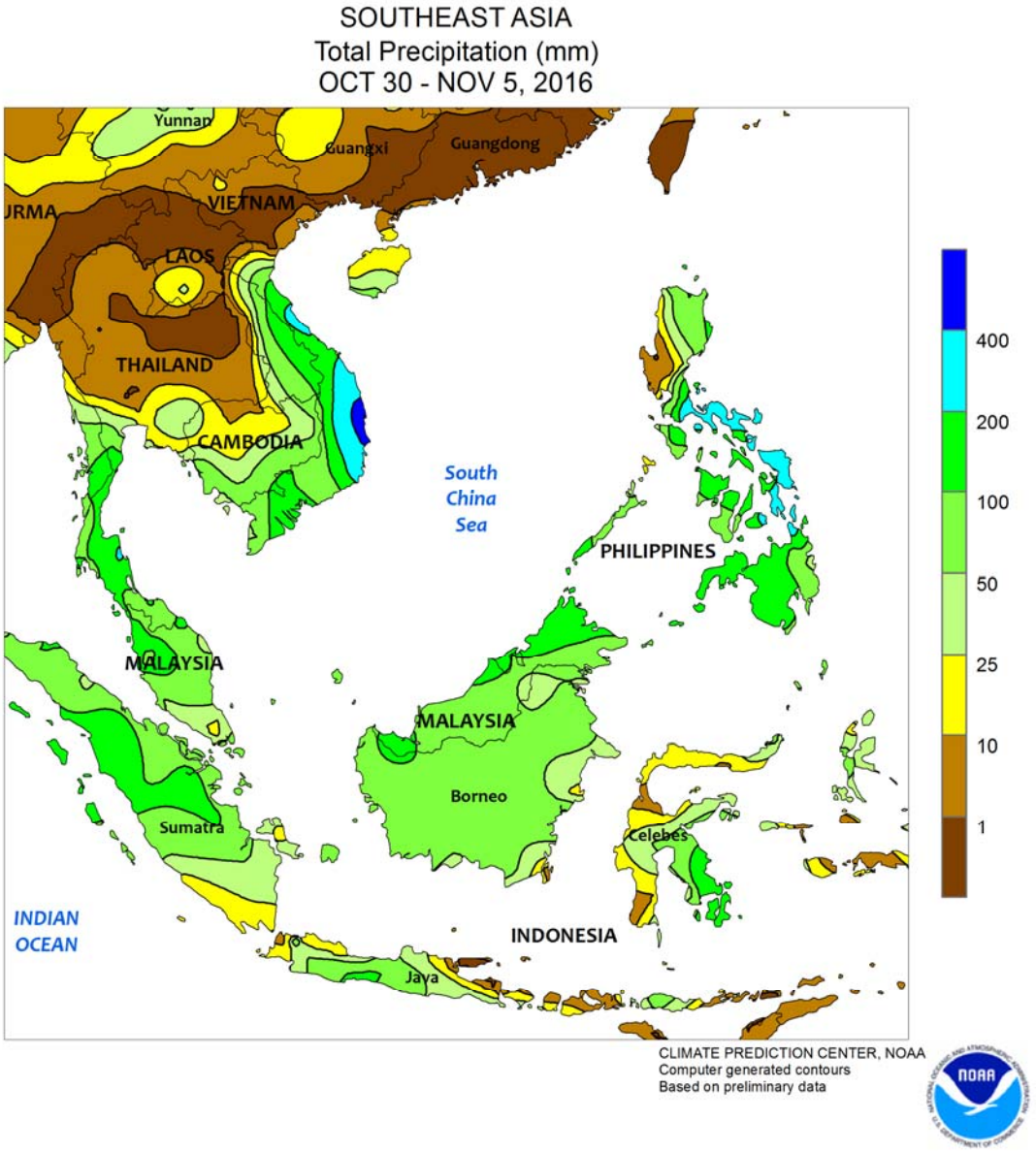

SOUTHEAST ASIA

Drier weather overspread much of Thailand, aiding summer rice harvesting as well as the beginning of winter rice sowing. A robust summer monsoon ensured good replenishment of irrigation supplies in Thailand, increasing early prospects for winter (dry-season) rice. Easterly winds that brought drier weather to Thailand also brought soaking rainfall to central Vietnam. Over 500 mm of rain was reported along the central coast, with amounts in excess of 200 mm extending into northern rice areas where harvesting of the winter crop was underway. In addition, unfavorably wet weather slowed coffee harvesting in the Central Highlands. In the Philippines, easterly winds produced heavy showers across the country. Over 200 mm of rain was reported from southeastern Luzon to northeastern Mindanao, while over 100 mm prevailed in other areas. The excessively wet weather slowed summer rice harvesting, although a key rice area in western Luzon was beneficially dry for the week. In the remainder of the region, widespread seasonal showers (50-100 mm or more) continued to improve oil palm prospects in Malaysia and Indonesia following a prolonged drought last winter and spring. In Java, Indonesia, unusually heavy early-season showers (25-100 mm) continued to boost soil moisture and irrigation supplies for wet-season rice. Since August 1, rainfall has totaled over 500 mm, over 300 percent of normal, marking the wettest start to the rainy season in 30 years.

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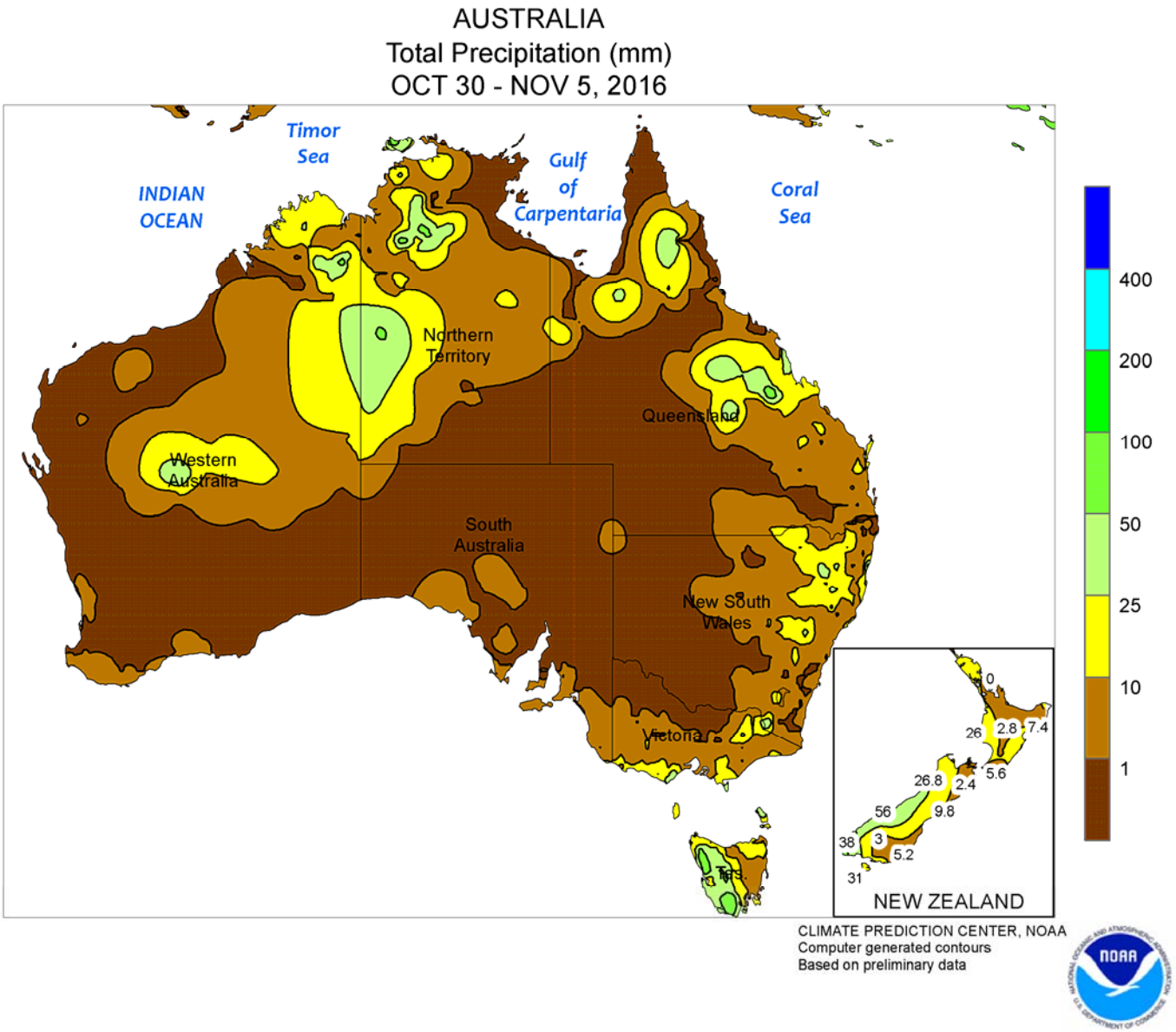

AUSTRALIA

For the second consecutive week, mostly dry weather covered major crop producing areas in western and southeastern Australia. A combination of adequate to abundant soil moisture and sunny skies continued to benefit wheat, barley, and canola, promoting further development of immature winter grains and oilseeds while aiding drydown of crops that were sown earlier in the growing season. Elsewhere in the wheat belt, scattered showers (5-25 mm) in northern New South Wales and southern Queensland likely slowed winter wheat maturation and harvesting locally. However, the rain maintained good to excellent early season yield prospects for summer crops, helping to sustain reservoir levels for irrigated crops, such as cotton, while increasing topsoil moisture for dryland crops, such as sorghum. Temperatures in the wheat belt averaged near to slightly below normal, with the coolest weather (temperatures averaging 1ºC below normal) confined to southeastern Australia.

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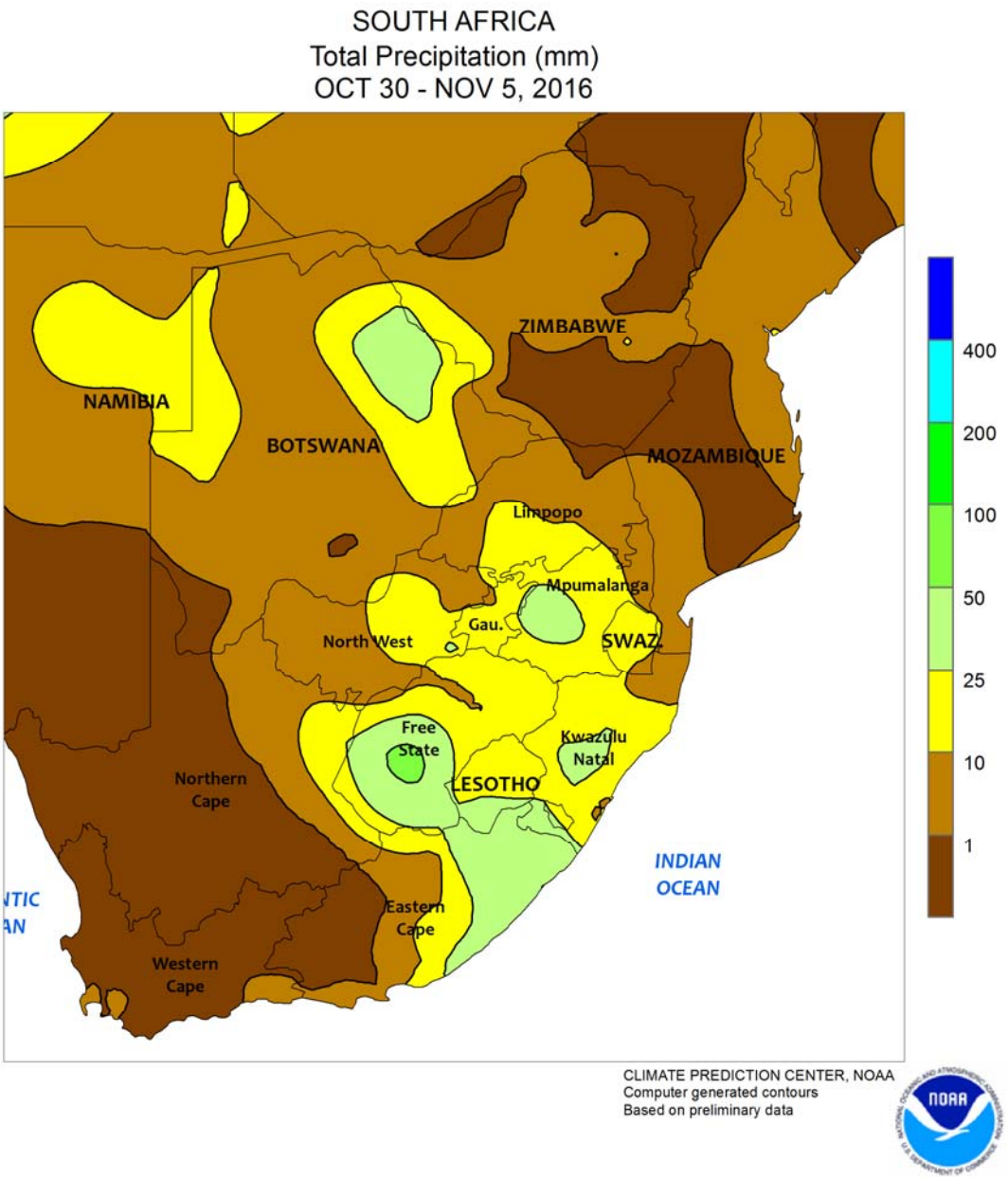

SOUTH AFRICA

Warm, showery weather kept topsoils moist for corn germination in eastern production areas. Rainfall totaled more than 10 mm in eastern sections of the corn belt (in and around Mpumalanga), providing additional moisture for germination of corn and other rain-fed summer crops. However, weekly temperatures averaging up to 5°C above normal (daytime highs in the lower 30s degrees C) maintained high evaporative losses. Hot, mostly dry weather dominated most northern and western summer crop areas (North West and northern Free State to Limpopo), with daytime highs approaching 40°C in the warmest locations. Planting in these areas typically occurs later in the planting season, sometimes as late as early January. Elsewhere, light to moderate rain (10-25 mm) fell in sugarcane areas of KwaZulu-Natal, with heavier amounts (greater than 25 mm) in eastern Cape. Mostly dry, warmer-than-normal weather prevailed elsewhere in the Cape Provinces.

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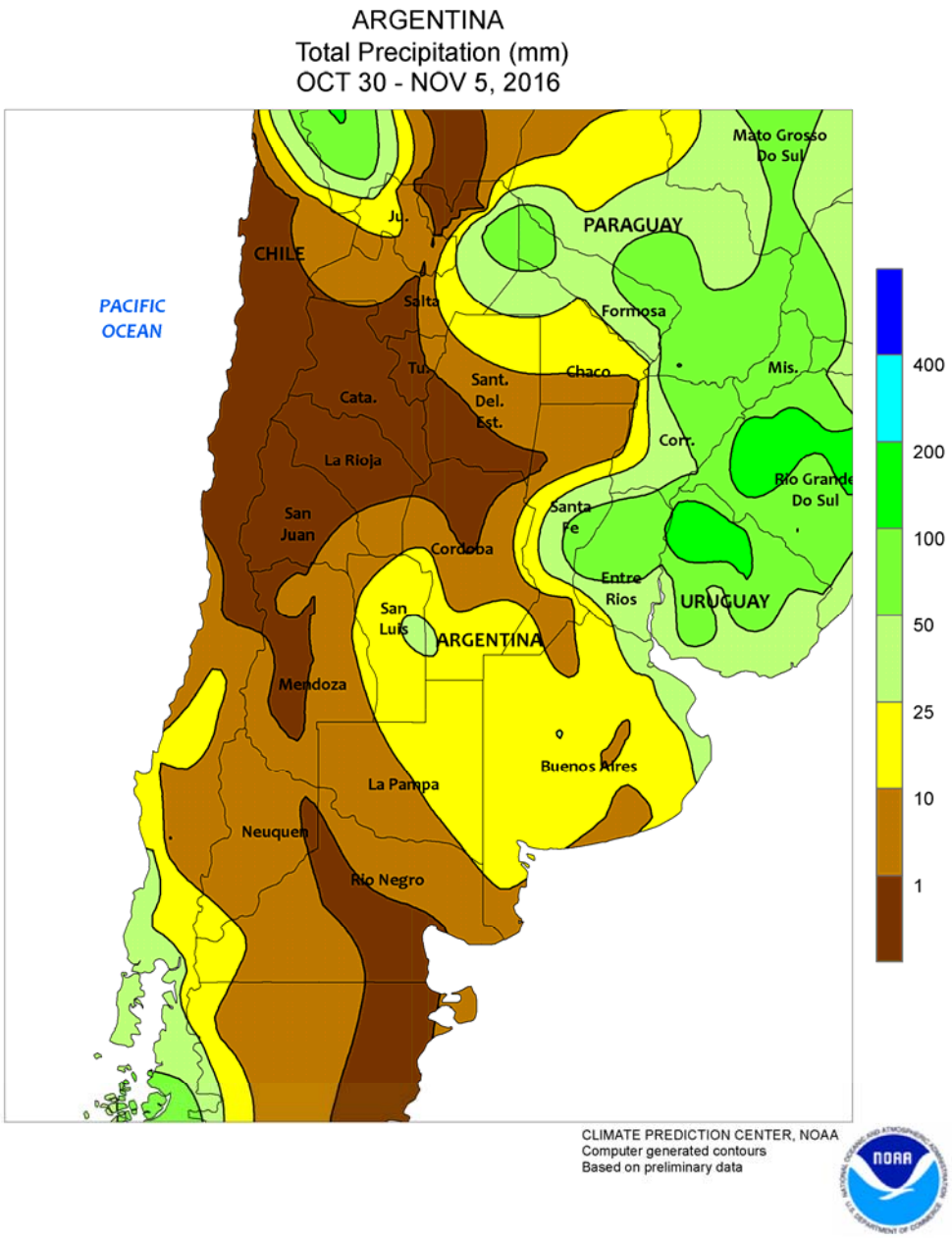

ARGENTINA

Warm, showery weather promoted early growth of emerging summer grains and oilseeds in central Argentina. Rainfall was lighter than in recent weeks, totaling 5 to 25 mm in agricultural areas of Buenos Aires, La Pampa, and Cordoba. Heavier rain (25-50 mm, locally higher) fell in the northeast (Entre Rios to eastern Formosa) — with lighter showers (5-25 mm) covering Chaco and western Formosa — but mostly dry weather prevailed in the northwest, including Santiago del Estero and Salta. Weekly average temperatures were near to above normal in southern farming areas, where daytime highs reached the lower 30s (degrees C) for the first time this season. Average temperatures were near to slightly cooler than normal across the north, although daytime highs reached the upper 30s on several days. According to the government of Argentina, sunflowers were 62 percent planted as of November 3, 19 points ahead of last year's pace. Corn was 31 percent planted versus 34 percent last year.

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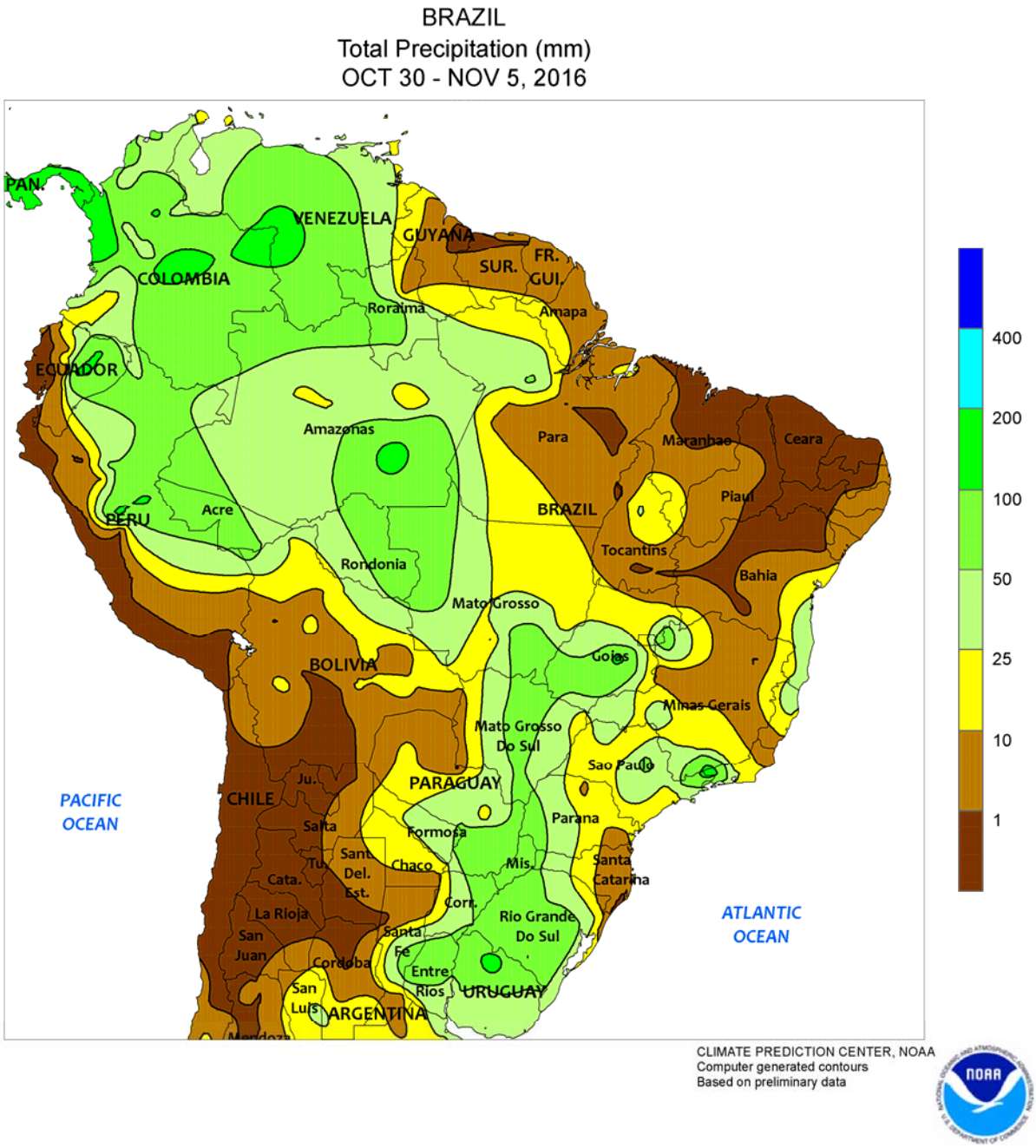

BRAZIL

Locally heavy showers maintained overall favorable early soybean and corn prospects in major production areas of southern and central Brazil. Most southern farming areas recorded at least 25 mm of rainfall, with amounts totaling more than 50 mm from Rio Grande do Sul northward through western Parana and central Mato Grosso do Sul. Weekly average temperatures reaching the lower 30s (degrees C) hastened early development of summer crops. According to the government of Parana, corn and soybeans were 96 and 72 percent planted, respectively, as of October 31. In addition, wheat was 81 percent harvested. Soybeans were reportedly 9 percent planted in Rio Grande do Sul as of November 3; wheat was 22 percent harvested as of the same date. Showers also continued in central Brazil, with amounts reaching 50 mm in sections of Mato Grosso and Goias; however, mostly dry weather prevailed in the northeastern interior (Tocantins, western Bahia, and environs). Weekly temperatures averaged up to 3°C above normal in the drier areas of northeastern Brazil, with daytime highs reaching the upper 30s. Reports emanating from Brazil depicted soybean planting at about 80 percent complete as of November 4, roughly 20 points ahead of last year's pace.

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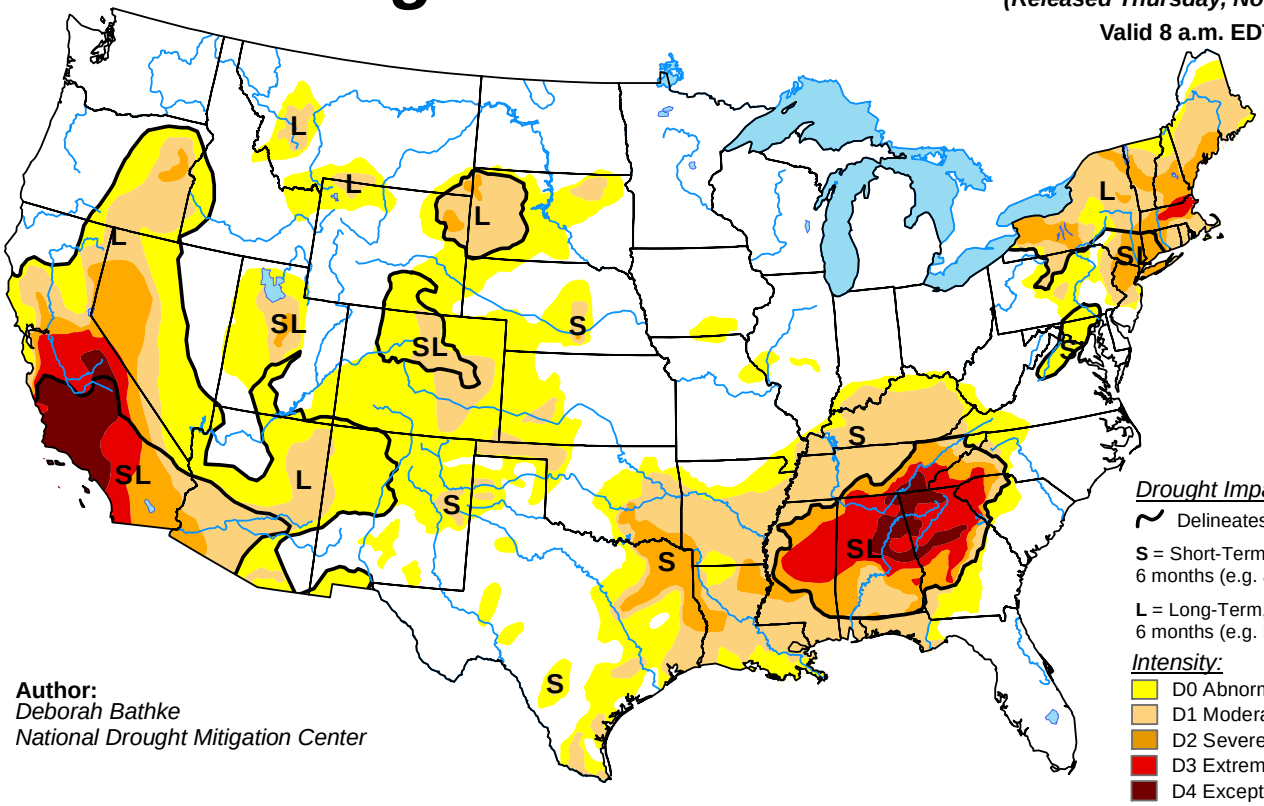
U.S. Drought Monitor

November 1, 2016

(Released Thursday, Nov. 3, 2016)

Valid 8 a.m. EDT



Author:
Deborah Bathke
National Drought Mitigation Center

Drought Impact Types:

Delineates dominant impacts

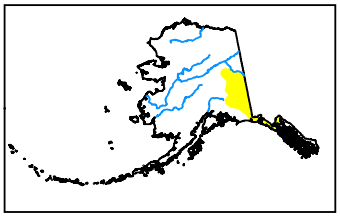
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

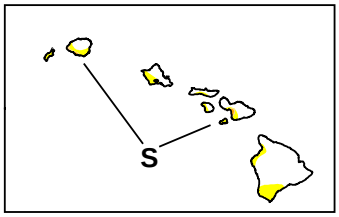
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

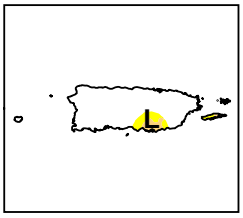
Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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







http://droughtmonitor.unl.edu/

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