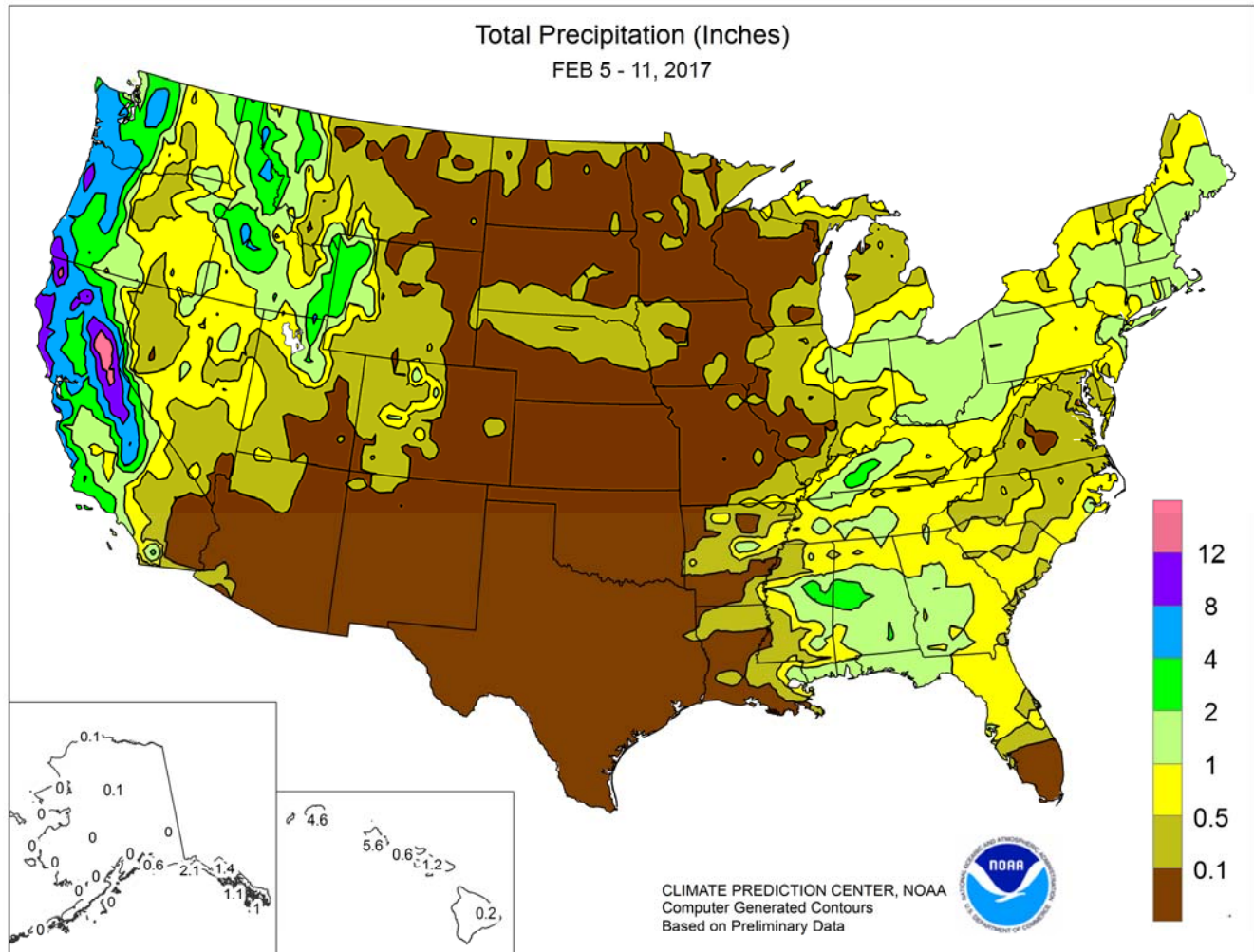


WEEKLY WEATHER AND CROP BULLETIN

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

February 5 – 11, 2017

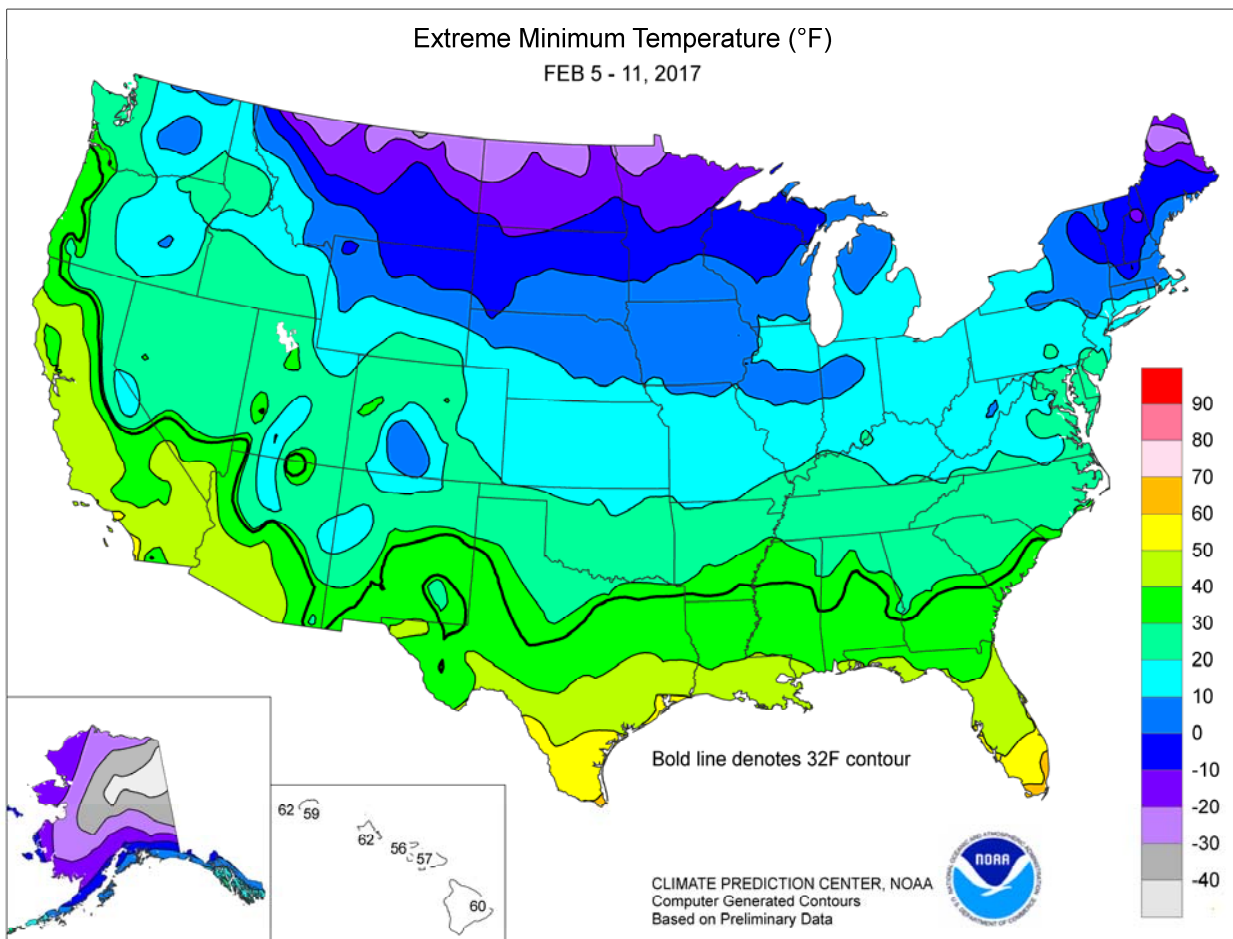
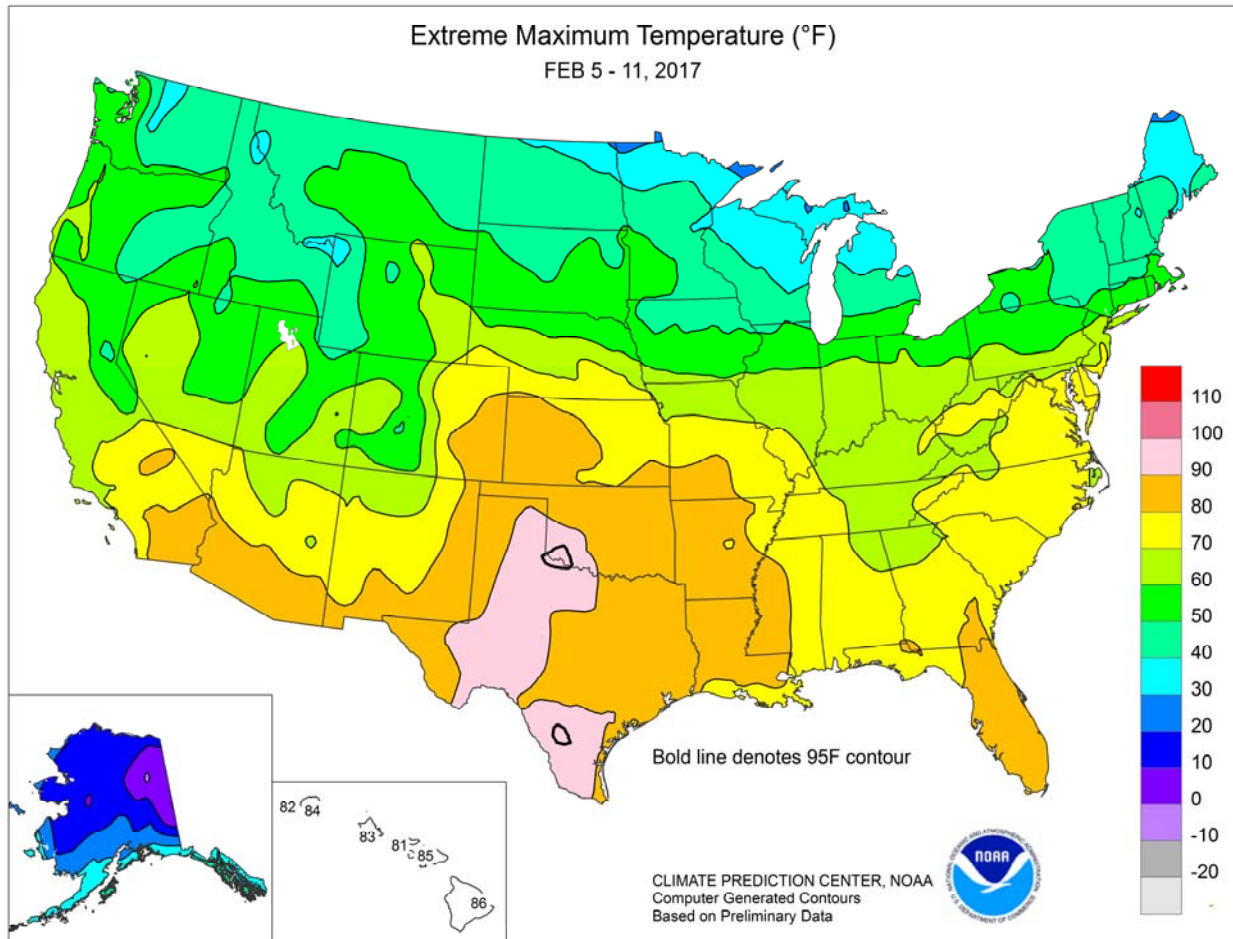
Highlights provided by USDA/WAOB

Pounding rain in **northern and central California** pushed **Oroville Dam** nearly to the breaking point, as excess runoff and rising lake levels initially damaged the main spillway and later overtopped and caused erosion of the auxiliary spillway. By Sunday, February 12, evacuations were ordered for nearly 200,000 individuals downstream of **Lake Oroville** due to the risk of failure of the auxiliary spillway—even as officials worked to temporarily repair the erosion and deflect pressure by releasing water through the already damaged but structurally sound main spillway.

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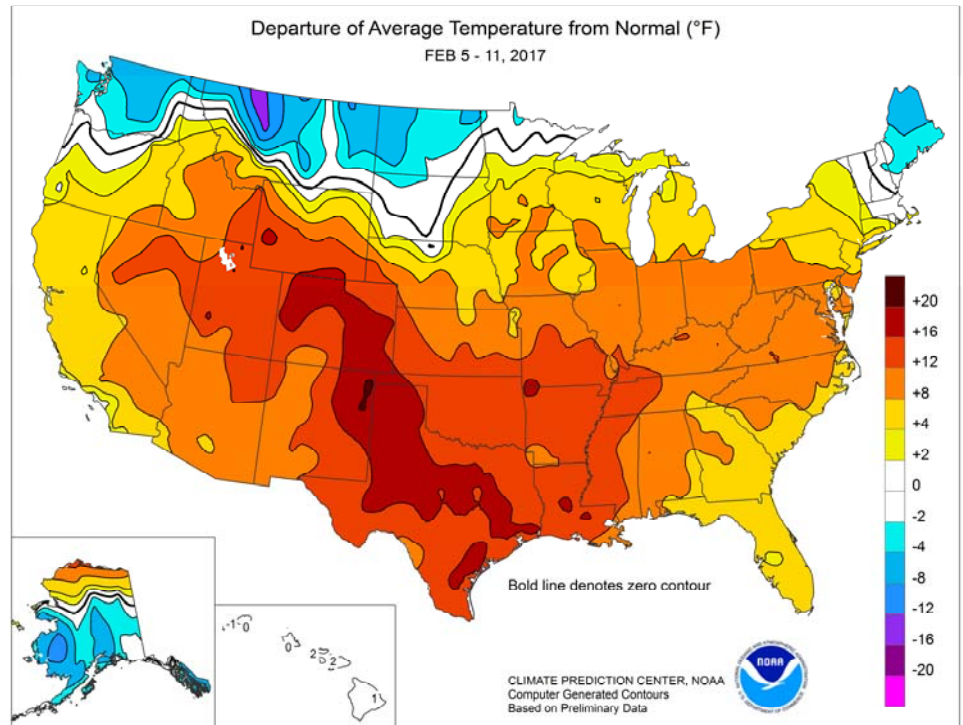
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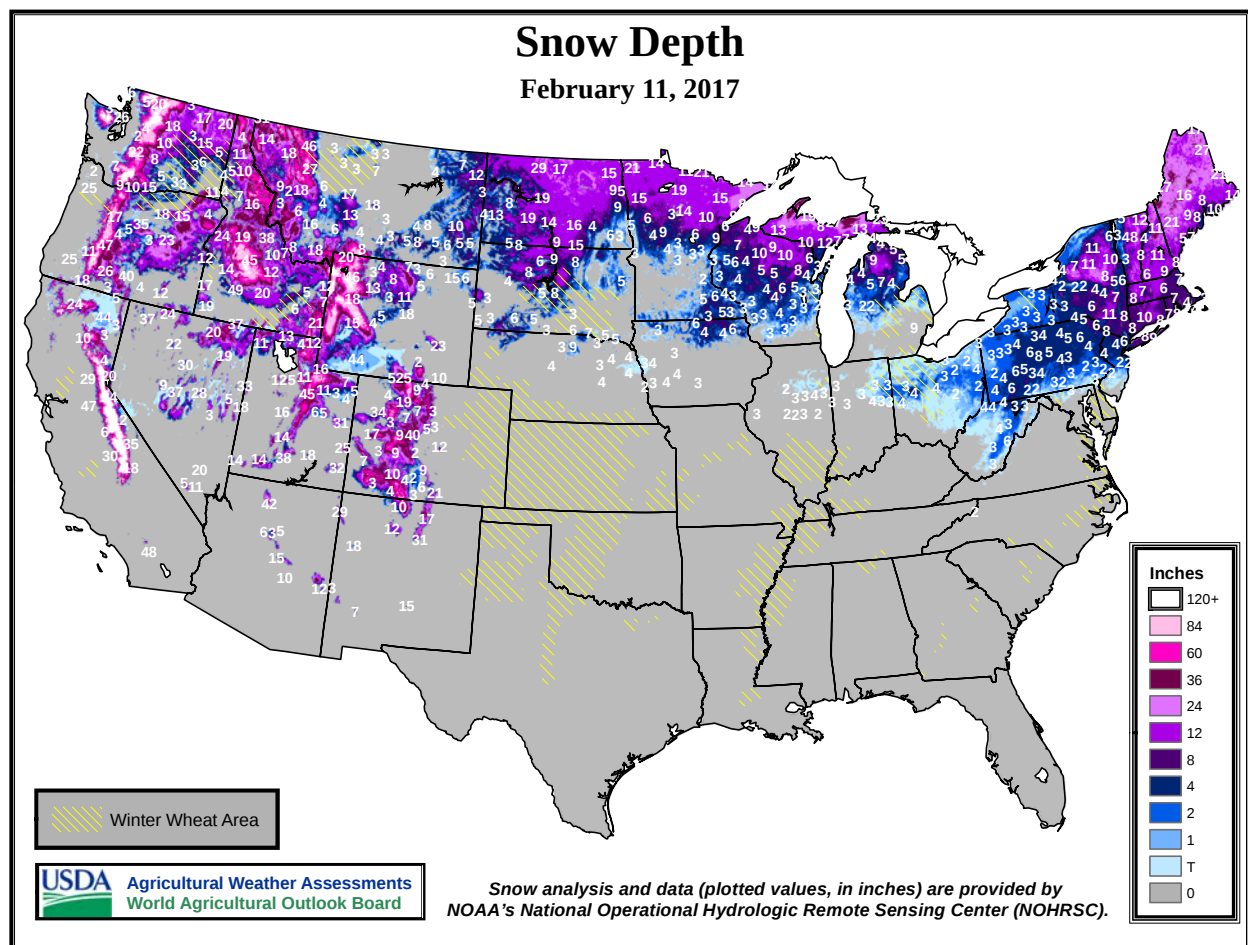
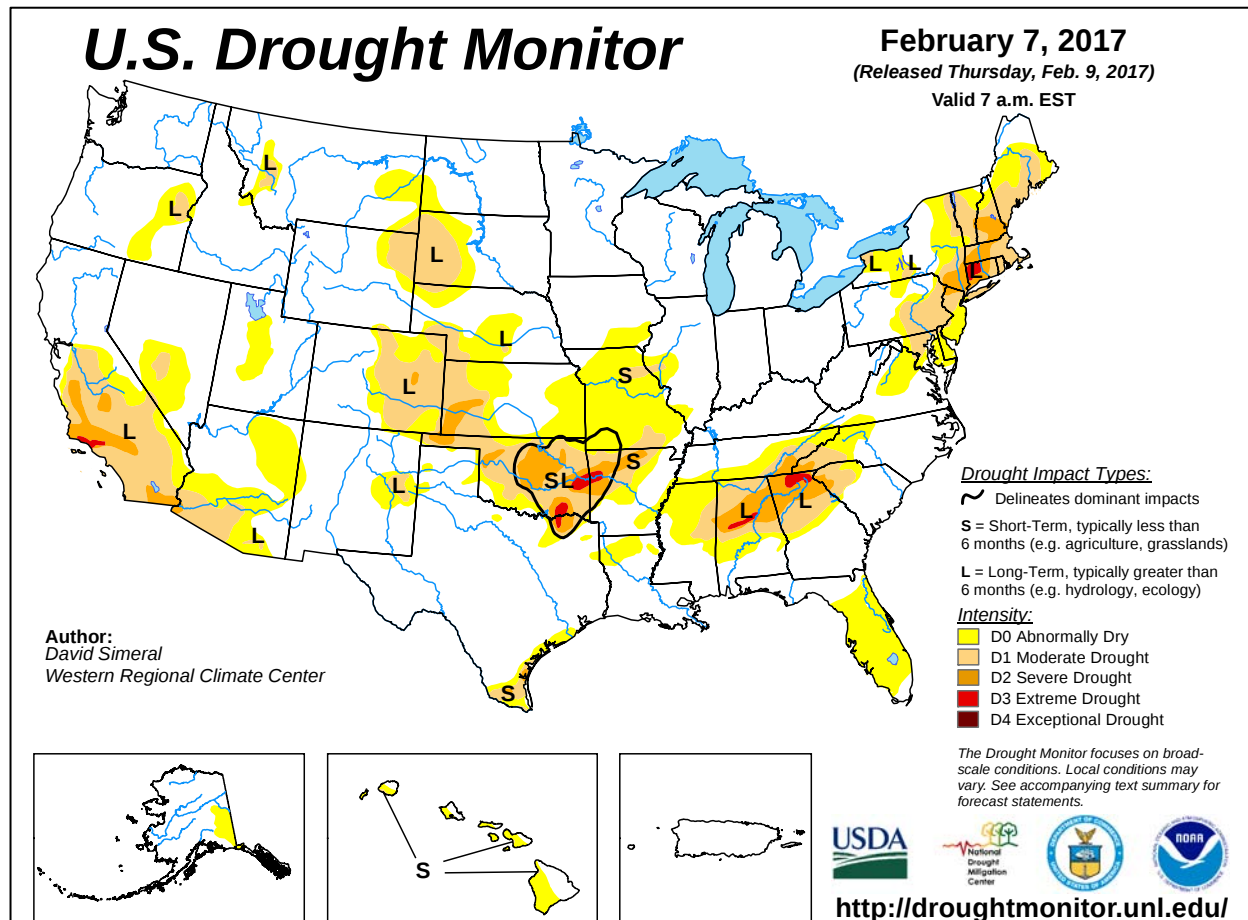
Meanwhile, stormy weather also prevailed in the **Northwest**, where temperatures finally rebounded to above-normal levels except along the **Canadian border**. In fact, above-normal temperatures dominated the country, except across the **nation's northern tier**. Weekly temperatures averaged 10 to 20°F above normal in a broad area covering much of the **southern two-thirds of the U.S.**, highlighted by a late-week heat wave that pushed temperatures above 90°F as far north as **western Oklahoma**. Outside of the **West**, significant precipitation was confined to the **eastern one-third of the U.S.**, where highlights included a severe weather outbreak (on February 7) across the **Deep South** and wind-driven snow (on February 8-9) from the **lower Great Lakes region into the Northeast**. Additional snow blanketed the **Northeast** at week's end, while dry weather finally returned to **California**.

During the first 11 days of February, storms added an average of roughly 8 inches of water to the **Sierra Nevada** snowpack, boosting the season-to-date accumulation to 38 inches (about 180 percent of average). Early in the week, however, the most impressive precipitation fell in the **Pacific Northwest**. In **Oregon**, the 5th was the wettest February day on record in **Newport** (4.44 inches) and **Portland** (2.19 inches). Previous records had been 4.00 inches in **Newport** on February 8, 1899, and 2.16 inches in **Portland** on February 6, 1996. Elsewhere, it was among the five wettest February days on record in **McMinnville, OR** (2.51 inches); **Salem, OR** (2.44 inches); and **Vancouver, WA** (2.15 inches). Periods of heavy rain and snow also fell across the **interior Northwest**, where **Stanley, ID**, received measurable precipitation—totaling 4.32 inches—on each of the first 10 days in February. Meanwhile, heavy showers erupted across the **South** on February 7, accompanied by severe thunderstorms and isolated tornadoes. One particularly severe (EF-3) tornado cut a 10-mile swath with winds estimated as high as 150 mph through **Orleans Parish, LA**, causing dozens of injuries and moderate to severe damage to more than 600 homes and at least 40 businesses. Daily-record rainfall totals on February 7 included 1.62 inches in **Apalachicola, FL**, and 1.43 inches in **Tuscaloosa, AL**. At the same time, snow spread across the **nation's northern tier**. February 7 snowfall totals reached 4.0 inches in **Casper, WY**, and **Duluth, MN**—records for the date in both locations. Some rain fell in the **Corn Belt**, where daily-record amounts for February 7 reached 1.42 inches in **South Bend, IN**, and 0.99 inch in **Dubuque, IA**. By the 8th, a band of snow spread across the **Midwest**, where **Lincoln, IL**, netted a daily-record sum of 3.4 inches. On February 9, snow and wind resulted in blizzard conditions along portions of the **northern Atlantic Coast**. On that date, at least 10 inches of snow fell, and wind gusts were clocked above 40 mph, at **New York's LaGuardia Airport** (10.0 inches and 44 mph); **Bridgeport, CT** (10.3 inches and 45 mph); **Boston, MA** (10.9 inches and 49 mph); **Providence, RI** (11.9 inches and 54 mph); **Worcester, MA** (13.0 inches and 60 mph); **Islip, NY** (14.3 inches and 48 mph); and **Hartford, CT** (15.5 inches and 40 mph). In addition, snow quickly returned to the **Northeast**, where **Binghamton, NY**, received 6.3 and 10.6 inches of snow on February 9-10 and 12-13, respectively. Similarly, **Portland, ME**, measured 7.7 inches of snow on February 9, followed by 22.1 inches from February 11-13. Farther west, another surge of heavy precipitation arrived in **California** starting on February 9, when record-setting totals reached 2.13 inches in **Mt. Shasta City** and 2.04 inches in **Ukiah**.



With cold air nearly absent from the **contiguous U.S.**, the focus was on early-season warmth. An early-week surge of warmth across the **nation's mid-section** led to daily-record highs for February 6 in locations such as **Tulsa, OK** (76°F), and **Joplin, MO** (74°F). (Those highs for **Tulsa** and **Joplin** would later be dwarfed, when respective highs on February 11 soared to 86 and 82°F.) **Houston, TX**, collected a trio of daily-record highs (81, 86, and 87°F) from February 6-8. Elsewhere in **Texas**, **Galveston** tied a February record with a high of 80°F on the 7th. Warm air also overspread the **East**, where consecutive daily-record highs were set on February 7-8 in locations such as **Washington, DC** (73 and 74°F), and **Richmond, VA** (74 and 75°F). Toward week's end, as cooler air arrived in the **Midwest** and **Northeast**, phenomenal warmth spread from the **Southwest to the southern Plains**. By the 10th, February records were broken in **Colorado** locations such as **Pueblo** (82°F), **Denver** (80°F), and **Colorado Springs** (77°F). With a high of 75°F on February 10, **Albuquerque, NM**, recorded its earliest ever high of 75°F or greater (previously, 75°F on February 18, 2016). **Dodge City, KS** (87°F on the 10th), registered its second-highest February reading behind 88°F on February 18, 2016. Many locations in **Texas**, including **Childress** (90 and 95°F); **Lubbock** (86 and 91°F); and **Amarillo** (89 and 88°F), closed the week on February 10-11 with consecutive daily-record highs. All-time February records were shattered on February 11 in **Texas** locations such as **Wichita Falls** (94°F) and **Midland** (92°F), while a high of 99°F was reported in **Mangum, OK**.

Mild weather lingered across **northern Alaska**, but most of the state experienced a return to cold conditions. By the morning of February 12, temperatures dipped to -40°F or below in locations such as **Fairbanks** and **McGrath**. Meanwhile, heavy precipitation developed at week's end across **southeastern Alaska**, where daily-record totals for February 11 reached 3.39 inches in **Sitka** and 1.86 inches in **Juneau**. From February 8-12, **Yakutat** received 2.64 inches of precipitation and 19.3 inches of snow. Farther south, generally tranquil weather in **Hawaii** ended abruptly with late-week downpours. On February 11, daily-record totals included 5.03 inches in **Honolulu, Oahu**, and 4.13 inches in **Lihue, Kauai**. That represented **Honolulu's** wettest day since December 19, 2010, when 5.41 inches fell, and wettest February day since February 27, 2004, when 5.43 inches occurred. However, mostly dry weather persisted on the **Big Island**, where **Hilo's** February 1-11 rainfall totaled just 0.19 inch (5 percent of normal) and a daily record-tying high of 86°F occurred on the 6th.



National Weather Data for Selected Cities

Weather Data for the Week Ending February 11, 2017

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP	
																	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	64	47	72	33	56	11	1.75	0.73	0.97	11.02	95	8.63	122	93	58	0	0	4	1
	HUNTSVILLE	62	44	69	30	53	11	0.40	-0.73	0.19	12.77	99	6.86	94	89	80	0	1	4	0
	MOBILE	72	50	77	36	61	9	0.62	-0.58	0.62	19.88	161	11.55	151	90	60	0	0	1	1
	MONTGOMERY	70	47	78	35	59	11	1.51	0.25	1.15	16.79	140	12.68	181	81	52	0	0	2	1
AK	ANCHORAGE	18	6	20	-2	12	-5	0.30	0.14	0.14	3.48	177	2.01	218	86	75	0	7	3	0
	BARROW	6	-7	15	-20	-1	14	0.05	0.02	0.02	0.80	286	0.55	344	80	72	0	7	3	0
	FAIRBANKS	0	-21	10	-34	-11	-4	0.11	0.03	0.08	3.06	214	1.07	155	83	78	0	7	3	0
	JUNEAU	33	20	37	11	26	-2	1.41	0.42	1.33	14.41	122	7.68	121	72	56	0	7	2	1
	KODIAK	34	21	43	9	28	-2	0.03	-1.53	0.02	7.12	39	3.01	28	84	72	0	6	2	0
	NOME	6	-9	17	-18	-1	-6	0.00	-0.19	0.00	1.48	66	0.41	34	85	73	0	7	0	0
	FLAGSTAFF	51	29	63	17	40	9	0.09	-0.49	0.05	9.07	185	4.65	151	94	47	0	4	2	0
	PHOENIX	77	53	83	46	65	8	0.00	-0.14	0.00	2.05	104	1.10	105	63	42	0	0	0	0
	PRESCOTT	65	38	75	25	52	13	0.04	-0.37	0.04	4.63	133	1.97	89	88	32	0	1	1	0
	TUCSON	79	48	89	45	64	10	0.00	-0.19	0.00	2.25	97	1.17	91	55	33	0	0	0	0
	FORT SMITH	71	41	85	27	56	15	0.00	-0.55	0.00	3.10	47	2.33	72	77	39	0	2	0	0
	LITTLE ROCK	69	43	80	29	56	13	0.78	0.00	0.78	6.64	70	2.25	46	95	50	0	2	1	1
CA	BAKERSFIELD	67	53	74	46	60	8	0.71	0.43	0.36	5.97	252	3.56	221	85	74	0	0	5	0
	FRESNO	62	53	69	45	57	7	0.88	0.38	0.57	9.06	212	6.55	223	90	82	0	0	5	1
	LOS ANGELES	62	56	66	53	59	1	1.68	0.91	0.95	12.23	205	9.45	226	99	93	0	0	5	1
	REDDING	61	50	64	44	55	7	3.08	1.66	1.44	21.64	161	15.61	178	93	80	0	0	6	1
	SACRAMENTO	61	52	63	46	57	7	3.88	2.95	1.22	18.65	241	15.04	284	99	79	0	0	6	3
	SAN DIEGO	66	57	71	55	62	3	0.16	-0.34	0.13	7.38	168	3.17	103	87	72	0	0	3	0
	SAN FRANCISCO	62	53	64	47	58	6	2.64	1.59	0.97	17.38	193	12.75	208	89	76	0	0	6	2
	STOCKTON	63	52	66	46	58	8	2.62	1.99	0.80	11.47	208	9.37	253	98	91	0	0	6	2
CO	ALAMOSA	46	15	58	0	31	12	0.00	-0.03	0.00	2.44	394	1.36	469	91	60	0	6	0	0
	CO SPRINGS	66	34	77	24	50	20	0.00	-0.03	0.00	1.03	137	0.35	106	52	14	0	3	0	0
	DENVER INTL	63	35	80	29	49	19	0.00	0.00	0.00	1.32	244	0.54	235	54	22	0	3	0	0
	GRAND JUNCTION	60	37	69	31	48	17	0.22	0.14	0.22	1.96	157	1.23	168	75	49	0	2	1	0
	PUEBLO	71	30	82	20	51	19	0.00	-0.03	0.00	1.51	199	0.75	203	55	22	0	5	0	0
	BRIDGEPORT	43	28	63	16	36	6	5.22	4.51	5.06	11.93	143	8.50	175	78	57	0	4	3	1
	HARTFORD	37	21	50	4	29	2	0.79	0.05	0.40	7.05	82	4.32	86	84	59	0	7	5	0
	WASHINGTON	58	35	74	23	47	11	0.12	-0.49	0.12	5.48	76	2.87	69	76	38	0	3	1	0
DE	WILMINGTON	53	31	70	20	42	10	0.59	-0.06	0.52	5.85	74	3.26	73	83	44	0	5	2	1
FL	DAYTONA BEACH	76	50	82	44	63	4	0.46	-0.19	0.25	3.14	46	2.44	59	99	47	0	0	2	0
	JACKSONVILLE	75	47	81	38	61	7	0.48	-0.32	0.48	6.82	90	4.53	91	96	42	0	0	1	0
	KEY WEST	80	70	83	69	75	5	0.00	-0.40	0.00	2.74	55	1.00	35	88	68	0	0	0	0
	MIAMI	82	66	87	63	74	6	0.00	-0.51	0.00	5.73	118	3.40	128	87	55	0	0	0	0
	ORLANDO	80	54	84	49	67	6	0.37	-0.15	0.37	4.87	88	2.35	72	91	48	0	0	1	0
	PENSACOLA	70	57	74	47	64	11	0.35	-0.76	0.35	21.70	196	12.08	170	89	64	0	0	1	0
	TALLAHASSEE	75	45	80	37	60	7	1.43	0.36	1.39	12.83	115	8.64	122	93	56	0	0	2	1
	TAMPA	78	57	81	51	68	6	0.71	0.10	0.40	2.04	37	1.61	50	89	50	0	0	2	0
GA	WEST PALM BEACH	81	63	87	60	72	6	0.01	-0.71	0.01	4.48	56	1.01	20	90	54	0	0	1	0
	ATHENS	64	38	72	28	51	7	0.62	-0.43	0.58	9.61	95	7.19	113	86	62	0	2	4	1
	ATLANTA	65	43	71	31	54	9	0.84	-0.30	0.63	12.06	113	9.06	133	85	64	0	1	3	1
	AUGUSTA	70	38	80	29	54	8	0.86	-0.15	0.59	15.45	167	11.04	181	85	42	0	2	3	1
	COLUMBUS	68	43	76	33	55	7	1.00	-0.05	0.92	16.85	156	12.48	194	91	51	0	0	3	1
	MACON	69	41	77	30	55	8	1.12	-0.01	0.90	18.33	171	12.38	182	87	49	0	2	3	1
	SAVANNAH	72	43	80	34	58	7	0.24	-0.53	0.03	11.14	139	6.85	132	85	47	0	0	2	0
	HILO	80	64	86	60	72	1	0.19	-1.93	0.13	32.92	139	12.53	96	87	75	0	0	2	0
	HONOLULU	80	67	83	62	73	0	5.63	5.05	4.95	6.70	103	5.84	160	80	68	0	0	3	2
	KAHULUI	81	66	85	57	74	2	1.17	0.52	0.77	8.34	106	1.72	36	81	72	0	0	3	1
	LIHUE	79	64	84	59	72	0	4.65	3.82	4.48	6.04	56	4.85	82	83	67	0	0	2	1
	BOISE	49	36	57	28	42	8	0.72	0.44	0.37	5.73	179	3.74	204	84	67	0	3	4	0
ID	LEWISTON	46	33	52	27	39	3	0.50	0.27	0.35	2.97	116	1.38	91	84	70	0	3	4	0
	POCATELLO	46	34	52	24	40	12	1.20	0.98	0.65	6.91	267	4.05	272	85	69	0	2	4	1
	CHICAGO/O'HARE	41	23	55	13	32	8	0.47	0.08	0.47	5.11	107	3.34	142	78	59	0	6	1	0
	MOLINE	43	21	58	13	32	8	0.26	-0.07	0.17	3.38	79	1.76	85	80	58	0	7	2	0
	PEORIA	45	23	62	10	34	9	0.57	0.23	0.22	3.36	76	2.14	105	89	60	0	6	4	0
	ROCKFORD	41	22	53	12	32	10	0.33	0.03	0.33	4.46	113	2.58	137	78	57	0	7	1	0
	SPRINGFIELD	51	26	68	9	38	10	0.16	-0.19	0.16	2.67	57	1.18	55	85	57	0	5	1	0
	EVANSVILLE	56	33	69	20	45	12	0.48	-0.22	0.34	6.67	88	2.75	69	79	63	0	4	3	0
	FORT WAYNE	46	24	59	11	35	10	1.10	0.66	0.86	8.12	147	5.81	212	87	61	0	5	4	1
	INDIANAPOLIS	51	29	66	14	40	11	0.38	-0.17	0.21	6.25	98	4.73	142	84	56	0	5	4	0
	SOUTH BEND	43	23	57	14	33	8	1.42	0.95	1.42	6.96	114	4.77	158	83	69	0	5	1	1
	BURLINGTON	45	22	61	9	33	7	0.08	-0.22	0.08	2.98	77	1.54	88	89	61	0	6	1	0
IA	CEDAR RAPIDS	39	18	52	4	29	7	0.29	0.04											

Weather Data for the Week Ending February 11, 2017

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL IN. SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE	
KY	WICHITA	61	32	74	17	47	14	0.00	-0.13	0.00	3.45	145	2.79	271	84	50	0	3	0	0	
	JACKSON	59	36	71	19	48	12	1.26	0.43	0.95	12.13	133	5.97	123	84	40	0	2	3	1	
	LEXINGTON	56	34	65	18	45	11	1.36	0.66	0.91	12.25	145	6.07	137	79	54	0	4	3	1	
	LOUISVILLE	57	37	68	23	47	12	0.62	-0.10	0.50	10.13	125	4.83	110	74	51	0	2	2	1	
LA	PADUCAH	59	36	72	21	48	12	0.64	-0.30	0.63	9.15	98	3.14	64	82	52	0	3	2	1	
	BATON ROUGE	79	57	84	42	68	16	0.24	-1.13	0.24	19.64	144	9.93	119	91	48	0	0	1	0	
	LAKE CHARLES	75	59	78	43	67	15	0.03	-0.91	0.03	17.72	152	5.67	80	92	66	0	0	1	0	
	NEW ORLEANS	75	57	81	47	66	12	1.02	-0.45	1.02	13.78	104	5.92	72	91	70	0	0	1	1	
ME	SHREVEPORT	74	50	86	38	62	13	0.23	-0.84	0.21	5.94	55	2.80	45	88	48	0	0	2	0	
	CARIBOU	16	-5	32	-16	6	-4	0.82	0.30	0.43	8.54	122	4.35	114	79	56	0	7	5	0	
	PORTLAND	30	14	50	3	22	-1	1.23	0.44	0.59	10.21	106	4.90	92	75	49	0	7	4	1	
	BALTIMORE	57	30	72	20	43	10	0.24	-0.45	0.23	5.70	72	2.93	64	72	43	0	5	2	0	
MA	BOSTON	38	22	52	11	30	0	1.06	0.23	0.44	8.56	95	5.31	101	83	48	0	7	5	0	
	WORCESTER	32	16	46	4	24	0	1.25	0.49	0.59	9.01	99	5.21	98	83	50	0	7	5	1	
MI	ALPENA	28	16	34	9	22	5	0.54	0.23	0.37	5.68	139	3.64	161	86	66	0	7	3	0	
	GRAND RAPIDS	36	21	45	12	29	6	0.51	0.12	0.42	7.00	131	4.04	152	82	60	0	5	3	0	
	HOUGHTON LAKE	30	14	39	7	22	4	0.48	0.18	0.43	5.68	148	3.46	166	82	68	0	7	2	0	
	LANSING	37	22	45	13	30	8	0.79	0.43	0.67	6.66	153	4.50	207	78	58	0	5	2	1	
MN	MUSKEGON	37	23	47	15	30	6	0.13	-0.27	0.12	6.38	116	3.16	110	81	63	0	6	2	0	
	TRAVERSE CITY	31	18	36	7	24	3	0.42	-0.11	0.40	8.13	125	4.47	116	84	56	0	7	2	0	
	DULUTH	24	6	39	-11	15	3	0.35	0.14	0.32	3.64	151	1.57	107	84	66	0	7	2	0	
	INT'L FALLS	16	-3	34	-20	7	0	0.64	0.47	0.21	4.23	232	2.04	182	81	63	0	7	5	0	
MS	MINNEAPOLIS	32	15	46	1	24	7	0.03	-0.15	0.02	3.15	135	1.01	76	75	58	0	6	2	0	
	ROCHESTER	31	14	43	0	22	7	0.00	-0.17	0.00	4.19	187	2.12	174	86	73	0	6	0	0	
	ST. CLOUD	28	10	46	-5	19	6	0.10	-0.04	0.07	2.42	145	0.84	86	84	56	0	7	2	0	
	JACKSON	72	50	81	37	61	14	0.47	-0.68	0.41	14.11	110	8.37	111	87	51	0	0	2	0	
MO	MERIDIAN	69	48	78	32	59	11	0.76	-0.52	0.73	12.03	91	8.13	102	96	67	0	1	2	1	
	TUPELO	65	44	78	31	55	12	0.01	-1.03	0.01	10.68	83	5.78	85	89	69	0	1	1	0	
	COLUMBIA	56	29	74	16	43	12	0.00	-0.48	0.00	2.32	47	1.31	53	83	56	0	4	0	0	
	KANSAS CITY	51	27	69	12	39	9	0.00	-0.24	0.00	2.58	82	1.39	91	78	50	0	6	0	0	
MT	SAINT LOUIS	57	31	74	18	44	11	0.04	-0.45	0.02	2.97	52	1.84	63	72	59	0	3	3	0	
	SPRINGFIELD	63	34	82	16	48	14	0.00	-0.52	0.00	4.69	77	4.07	140	82	61	0	3	0	0	
	BILLINGS	32	13	52	-2	22	-6	0.47	0.35	0.20	3.16	188	1.49	148	88	60	0	6	3	0	
	BUTTE	40	18	50	13	29	9	0.20	0.12	0.10	1.00	84	0.56	85	89	50	0	7	5	0	
NE	CUT BANK	16	-3	41	-27	7	-15	0.00	-0.06	0.00	1.00	123	0.45	94	85	67	0	7	0	0	
	GLASGOW	20	3	45	-16	12	-3	0.20	0.14	0.16	1.19	147	0.83	189	81	71	0	7	2	0	
	GREAT FALLS	23	3	53	-13	13	-11	0.20	0.11	0.16	2.03	135	1.14	137	82	57	0	7	3	0	
	HAVRE	23	2	48	-23	13	-6	0.15	0.09	0.11	1.49	139	1.02	182	83	73	0	6	3	0	
NV	MISSOULA	39	24	47	14	32	5	0.93	0.76	0.44	3.84	154	2.35	175	93	84	0	7	6	0	
	GRAND ISLAND	46	21	77	11	34	8	0.01	-0.08	0.01	2.08	155	1.10	162	90	67	0	6	1	0	
	LINCOLN	46	21	71	11	34	9	0.01	-0.07	0.01	2.73	164	1.11	139	85	59	0	7	1	0	
	NORFOLK	38	18	57	1	28	4	0.45	0.32	0.24	2.74	194	1.70	224	85	63	0	6	2	0	
OH	NORTH PLATTE	49	21	66	13	35	8	0.01	-0.07	0.01	2.21	246	1.59	318	85	42	0	7	1	0	
	OMAHA	42	20	61	6	31	6	0.17	0.03	0.17	2.80	147	1.23	124	79	62	0	7	1	0	
	SCOTTSBLUFF	56	27	69	14	41	13	0.11	0.00	0.11	2.08	164	1.47	207	77	52	0	5	1	0	
	VALENTINE	39	15	57	0	27	3	0.42	0.35	0.22	2.81	380	1.77	432	83	63	0	5	3	0	
NY	ELY	48	32	53	24	40	12	0.88	0.73	0.47	3.56	242	2.40	247	83	69	0	3	3	0	
	LAS VEGAS	69	54	76	46	62	12	0.05	-0.09	0.05	1.78	147	0.95	117	58	42	0	0	1	0	
	RENO	56	38	63	29	47	10	0.87	0.62	0.33	7.72	331	6.51	449	77	59	0	2	4	0	
	WINNEMUCCA	56	36	67	26	46	12	0.28	0.14	0.20	4.29	231	2.09	199	86	59	0	2	4	0	
NC	CONCORD	31	13	49	-2	22	1	1.01	0.42	0.41	6.96	101	3.64	93	78	50	0	7	5	0	
	NEWARK	46	29	65	18	37	5	1.12	0.39	0.81	8.68	99	5.77	112	80	56	0	4	3	1	
	ALBUQUERQUE	65	36	75	31	50	11	0.00	-0.08	0.00	1.55	140	1.04	168	65	23	0	2	0	0	
	ALBANY	34	18	44	3	26	3	1.37	0.85	0.62	6.51	109	4.56	138	77	52	0	7	5	2	
ND	BINGHAMTON	35	19	47	9	27	5	0.70	0.09	0.46	8.15	124	4.56	129	80	61	0	7	5	0	
	BUFFALO	39	23	55	17	31	7	0.92	0.31	0.72	7.90	99	3.84	93	80	54	0	7	4	1	
	ROCHESTER	39	24	56	15	32	8	0.57	0.07	0.52	6.37	109	3.46	111	78	57	0	7	2	1	
	SYRACUSE	36	20	52	11	28	5	0.92	0.39	0.63	7.46	114	4.22	123	90	57	0	7	6	1	
OH	ASHEVILLE	62	33	73	22	48	11	0.25	-0.68	0.20	6.31	71	4.00	72	75	43	0	4	3	0	
	CHARLOTTE	66	37	77	27	51	8	0.61	-0.23	0.45	9.28	109	6.37	120	85	37	0	4	3	0	
	GREENSBORO	64	36	73	25	50	11	0.16	-0.58	0.10	6.99	90	5.29	112	82	35	0	4	3	0	
	HATTERAS	62	44	66	33	53	7	0.43	-0.59	0.34	10.62	88	5.61	75	83	52	0	0	3	0	
OH	RALEIGH	66	37	76	26	51	10	0.21	-0.63	0.10	6.23	74	4.04	75	76	42	0	4	4	0	
	WILMINGTON	66	39	73	29	53	6	0.49	-0.42	0.26	10.14	104	4.78	80	95	35	0	1	2	0	
	BISMARCK	23	2	49	-15	13	-2	0.13	0.02	0.13	3.28	309	1.22	197	80	68	0	7	1	0	
	DICKINSON	21	4	41	-15	13	-5	0.02	-0.09	0.01	1.73	197	0.57	106	84	72	0	6	2	0	
OH	FARGO	22	6	46	-9	14	3	0.05	-0.07	0.04	2.81	184	1.04	108	81	65	0	7	2	0	
	GRAND FORKS	19	0	38	-12	9	-1	0.11	-0.03	0.04	3.16	218	1.00	111	78	63	0	7	4	0	

Weather Data for the Week Ending February 11, 2017

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP	
																	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
OK	TOLEDO	44	25	58	14	35	10	0.94	0.50	0.87	7.60	144	5.12	195	86	68	0	5	2	1
	YOUNGSTOWN	44	25	59	13	35	9	1.06	0.59	0.79	10.04	166	6.47	209	78	60	0	6	5	1
	OKLAHOMA CITY	68	39	89	24	54	14	0.02	-0.23	0.02	2.38	67	1.59	96	77	38	0	3	1	0
OR	TULSA	68	39	86	22	54	15	0.00	-0.36	0.00	3.86	84	3.42	159	79	53	0	3	0	0
	ASTORIA	48	36	57	32	42	-2	5.43	3.37	1.74	23.23	100	12.88	100	89	79	0	2	7	3
	BURNS	40	25	45	8	33	5	0.65	0.40	0.48	5.68	198	3.96	252	91	77	0	5	5	0
PA	EUGENE	51	39	60	30	45	3	3.20	1.54	1.35	13.51	73	8.41	82	97	90	0	1	6	2
	MEDFORD	54	39	63	32	47	5	1.32	0.79	0.48	11.04	178	6.48	196	98	69	0	1	6	0
	PENDLETON	45	28	54	22	36	-1	0.24	-0.06	0.15	4.29	126	2.00	104	92	75	0	6	3	0
	PORTLAND	47	35	59	32	41	-1	4.40	3.31	2.06	14.25	114	9.64	142	93	83	0	1	6	3
	SALEM	48	38	60	34	43	1	5.51	4.18	2.53	18.30	127	13.15	166	91	84	0	0	6	4
	ALLENTOWN	44	25	61	18	35	7	0.94	0.26	0.61	6.76	85	4.33	94	75	52	0	6	3	1
	ERIE	42	26	57	20	34	7	0.79	0.25	0.71	9.74	137	5.86	174	79	61	0	5	5	1
	MIDDLETOWN	48	28	61	22	38	9	0.87	0.18	0.56	5.85	82	3.50	90	84	49	0	5	3	1
	PHILADELPHIA	52	32	66	22	42	9	0.58	-0.08	0.54	6.21	79	3.49	76	74	49	0	4	2	1
	PITTSBURGH	48	26	63	14	37	8	0.76	0.20	0.45	8.75	136	5.32	148	87	56	0	6	4	0
RI	WILKES-BARRE	42	24	53	14	33	6	0.75	0.22	0.50	6.10	104	4.04	122	79	51	0	6	4	1
	WILLIAMSPORT	43	26	51	19	35	8	0.89	0.23	0.51	7.30	107	4.34	112	74	50	0	7	3	1
	PROVIDENCE	39	22	57	8	31	2	0.91	0.04	0.60	9.02	91	5.88	102	82	53	0	6	4	1
SC	BEAUFORT	70	43	78	34	57	8	0.36	-0.45	0.23	9.75	115	5.34	99	93	44	0	0	3	0
	CHARLESTON	68	42	77	33	55	6	0.36	-0.41	0.31	8.92	104	4.14	78	90	42	0	0	2	0
	COLUMBIA	70	40	78	28	55	9	0.29	-0.67	0.20	10.84	113	7.49	121	83	48	0	2	3	0
SD	GREENVILLE	66	38	73	27	52	10	0.69	-0.27	0.42	7.90	81	5.21	88	86	39	0	3	3	0
	ABERDEEN	25	8	51	-5	17	2	0.06	-0.02	0.05	3.04	307	1.07	175	79	64	0	7	2	0
	HURON	31	13	55	0	22	4	0.14	0.06	0.14	2.71	271	1.32	216	89	63	0	6	1	0
TN	RAPID CITY	38	14	59	-6	26	1	0.12	0.05	0.09	1.64	186	0.87	181	85	62	0	6	2	0
	SIOUX FALLS	34	16	59	5	25	7	0.10	0.02	0.10	3.38	291	1.46	228	85	64	0	6	1	0
	BRISTOL	58	31	72	20	45	9	0.79	-0.01	0.62	9.12	112	3.76	79	93	48	0	5	5	1
TX	CHATTANOOGA	59	38	65	27	48	7	0.86	-0.30	0.57	10.90	90	5.85	81	84	62	0	2	4	1
	KNOXVILLE	59	37	71	24	48	8	1.02	0.08	0.54	12.02	114	5.06	84	86	55	0	3	3	1
	MEMPHIS	68	46	79	31	57	14	0.19	-0.81	0.18	11.98	104	4.65	80	86	50	0	1	2	0
	NASHVILLE	61	40	70	23	51	12	0.67	-0.16	0.39	10.95	112	4.01	76	84	52	0	2	2	0
	ABILENE	77	48	89	29	63	17	0.00	-0.23	0.00	3.32	128	1.93	146	69	46	0	1	0	0
	AMARILLO	76	36	89	29	56	17	0.00	-0.10	0.00	3.44	247	3.17	406	57	16	0	3	0	0
	AUSTIN	81	52	88	40	67	14	0.02	-0.41	0.02	7.82	157	4.71	185	79	59	0	0	1	0
	BEAUMONT	80	61	88	47	71	17	0.00	-0.94	0.00	14.08	113	1.06	15	90	54	0	0	0	0
	BROWNSVILLE	83	67	86	63	75	14	0.02	-0.33	0.02	3.06	101	1.39	73	95	64	0	0	1	0
	CORPUS CHRISTI	83	63	92	54	73	15	0.00	-0.43	0.00	3.16	79	0.96	42	96	69	1	0	0	0
UT	DEL RIO	79	50	90	45	65	11	0.01	-0.20	0.01	2.68	164	0.20	23	85	67	1	0	1	0
	EL PASO	75	46	84	40	61	12	0.00	-0.08	0.00	1.90	141	1.04	179	45	17	0	0	0	0
	FORT WORTH	76	52	88	36	64	17	0.00	-0.46	0.00	4.99	97	4.39	170	77	39	0	0	0	0
	GALVESTON	75	65	80	57	70	13	0.00	-0.73	0.00	11.97	136	0.89	17	95	70	0	0	0	0
	HOUSTON	81	60	87	47	71	18	0.05	-0.71	0.05	9.70	113	6.14	126	86	60	0	0	1	0
	LUBBOCK	80	39	91	32	60	19	0.00	-0.15	0.00	2.52	180	2.03	278	57	24	1	2	0	0
	MIDLAND	82	45	92	33	63	17	0.00	-0.11	0.00	1.53	113	1.12	158	68	36	1	0	0	0
	SAN ANGELO	81	47	93	32	64	17	0.00	-0.26	0.00	2.22	104	1.48	123	77	43	1	1	0	0
	SAN ANTONIO	79	55	88	48	67	15	0.00	-0.40	0.00	8.94	211	2.72	119	87	46	0	0	0	0
	VICTORIA	83	61	91	48	72	17	0.05	-0.45	0.04	6.88	120	3.87	119	92	65	1	0	2	0
VA	WACO	76	51	84	37	64	16	0.00	-0.52	0.00	4.38	81	3.11	116	87	65	0	0	0	0
	WICHITA FALLS	74	42	94	26	58	15	0.00	-0.30	0.00	2.70	83	1.87	119	73	52	1	1	0	0
	SALT LAKE CITY	57	40	66	32	49	17	0.76	0.46	0.39	4.75	154	2.77	150	80	46	0	1	2	0
WV	BURLINGTON	29	14	44	6	22	4	0.46	0.03	0.18	4.96	96	2.62	90	81	54	0	7	6	0
	LYNCHBURG	60	31	72	18	46	10	0.08	-0.66	0.05	6.96	88	3.86	82	69	37	0	5	2	0
	NORFOLK	63	38	73	28	51	10	0.18	-0.63	0.18	7.13	86	4.59	88	75	37	0	3	1	0
WA	RICHMOND	63	36	75	18	49	11	0.08	-0.61	0.08	7.17	92	4.37	94	78	41	0	3	1	0
	ROANOKE	61	34	73	23	48	11	0.18	-0.56	0.18	7.07	97	4.28	97	69	41	0	4	1	0
	WASH/DULLES	57	33	72	20	45	12	0.20	-0.46	0.20	5.28	74	2.93	72	63	39	0	5	1	0
WY	OLYMPIA	44	31	57	22	38	-2	4.29	2.64	1.64	15.91	88	9.52	94	100	93	0	4	6	3
	QUILLAYUTE	44	33	51	28	39	-3	3.57	0.41	1.68	27.08	82	13.95	75	97	90	0	4	7	2
	SEATTLE-TACOMA	44	35	56	30	39	-3	3.88	2.78	1.77	13.54	108	9.67	141	94	83	0	2	6	4
WV	SPOKANE	37	25	43	18	31	0	1.10	0.74	0.39	5.31	114	3.82	159	93	77	0	6	4	0
	YAKIMA	39	22	48	12	30	-3	0.86	0.66	0.35	4.11	143	3.24	216	84	73	0	7	4	0
	BECKLEY	55	32	68	13	43	11	0.45	-0.24	0.35	9.80	132	5.16	120	78	54	0	4	5	0
WI	CHARLESTON	60	33	74	17	46	11	0.73	-0.01	0.63	10.33	133	6.50	147	83	38	0	4	5	1
	ELKINS	55	29	72	9	42	12	0.36	-0.38	0.21	10.59	132	5.69	124	82	37	0	4	4	0
	HUNTINGTON	58	34	71	19	46	11	0.77	0.07	0.57	9.76	127	5.75	134	81	41	0	4	3	1
WY	EAU CLAIRE	30	12	43	-1	21	6	0.00	-0.19	0.00	4.58	192	2.34	172	86	58	0	7	0	0
	GREEN BAY	31	16	36	4	23	5	0.01	-0.23	0.01	4.79	160	2.54	160						

January Weather Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: Aside from persistently cold weather across the northern High Plains and the Northwest, the nation experienced spring-like temperatures. Conditions were especially mild across the eastern half of the U.S., where cold outbreaks were fleeting and mostly limited to a few days in early January. In fact, monthly temperatures averaged more than 8°F above normal in parts of the Southeast, promoting some early-season growth of pastures and winter grains, but raising concerns about potential impacts on blooming fruit crops if spring freezes materialize.

Widespread storminess accompanied the general warmth, especially in the western and central U.S. In fact, phenomenally wet January storms added an average of 2 feet of liquid to the Sierra Nevada snowpack—more than 80 percent of the normal seasonal total. Periods of wintry precipitation plagued the northern Plains and the Northwest, leading to ample moisture and insulation for winter wheat but resulting in hardship for livestock and rural travel difficulties. Monthly temperatures averaged more than 10°F below normal in parts of the interior Northwest.

Farther east, a mid-January storm produced the bulk of the month's precipitation (mainly rain and freezing rain) in drought-affected areas of the central and southern Plains, benefiting winter wheat. Still, at least one-fifth of the wheat crop was rated in very poor to poor condition at month's end in Texas (27 percent), Colorado (21 percent), and Kansas (20 percent). In contrast, less than one-tenth of the wheat was rated very poor to poor in Nebraska (9 percent), Montana (4 percent), and South Dakota (1 percent).

Meanwhile, pockets of dryness lingered across the middle Mississippi Valley, but most of the remainder of the Midwest received plenty of rain and snow. In fact, muddy conditions were a concern at times in the central and eastern Corn Belt, especially during a mid- to late-month spell of warm, showery weather. Nevertheless, less than 5 percent of the winter wheat was rated very poor to poor at month's end in Illinois, Indiana, and Ohio.

Elsewhere, pockets of long-term drought lingered across the interior Southeast and the northern Atlantic States, while short-term dryness affected Deep South Texas and Florida's peninsula. In winter agricultural areas of Texas and Florida, the warm, dry weather maintained irrigation demands for crops such as citrus and vegetables. The remainder of the South reported warm, showery weather.

Historical Perspective: According to preliminary information provided by the National Centers for Environmental Information, the contiguous U.S. experienced its 18th-warmest, ninth-wettest January during the 123-year period of record. The nation's average temperature of 33.6°F was 3.5°F above the 20th century mean, while precipitation averaged 3.18 inches—138 percent of normal. It was the nation's wettest January since 1998.

Statewide temperature rankings ranged from the 18th-coldest January in Washington to the seventh-warmest January in Georgia and Maine (figure 1). It was also among the ten

warmest in New Hampshire, Vermont, Alabama, Louisiana, and Mississippi. Meanwhile, state precipitation rankings ranged from the 18th-driest January in Montana to the second-wettest January in New Mexico (figure 2). Top-ten rankings for January precipitation also occurred in Alabama, Georgia, and Wisconsin, as well as a strip of five states from California to Kansas.

Figure 1 Statewide Average Temperature Ranks
January 2017
Period: 1895–2017

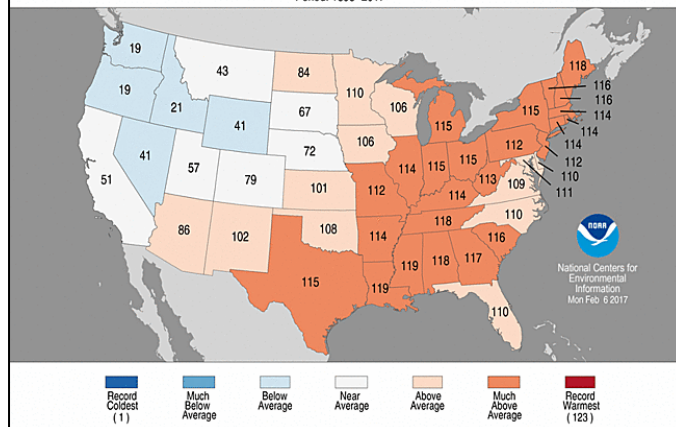
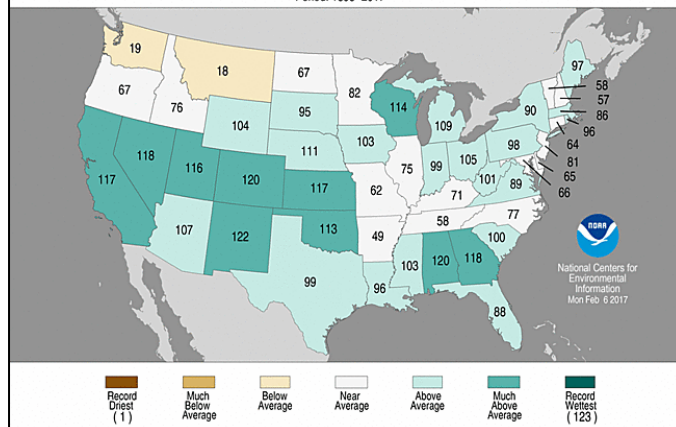


Figure 2 Statewide Precipitation Ranks
January 2017
Period: 1895–2017



Summary: Starting early in the month and resuming on January 7, powerful storms lashed California and neighboring states with rain, wind, and high-elevation snow. The California Department of Water Resources indicated that the average water content of the Sierra Nevada snowpack increased to 21 inches during the first two weeks of the year, up from 6 inches (64 percent) at the beginning of 2017. With snow levels remaining high and precipitation totaling 8 inches or more in many locations, flooding occurred on both sides of the Sierra Nevada crest, affecting both the western foothills and the western Great Basin. Heavy rain also triggered local flooding closer to the California coast, while heavy snow blanketed portions of the Intermountain West as Pacific moisture spread across entrenched cold air. January 1-8 rainfall in California totaled 7.74 inches in Santa Rosa; 6.84 inches in Vacaville; and 5.98 inches in Watsonville. Elsewhere in California, totals between 4 and 5 inches were reported from January 1-8 in locations such as Redding, Sacramento, Napa, Crescent City, and Ukiah. Blue Canyon, in

the Sierra Nevada foothills, received 14.55 inches during the first 8 days of the year—well above the January normal of 9.87 inches. High winds associated with the storminess swept across the Sierra Nevada crest, resulting in a wind gust to 173 mph on January 8 at Squaw Summit. Meanwhile, heavy rain also deluged portions of the Southeast. The heaviest Southeastern rain fell on January 1-2, when Montgomery, AL, received 6.07 inches. Elsewhere, daily-record rainfall amounts for January 2 included 2.99 inches in Jackson, MS; 2.92 inches in Augusta, GA; 2.88 inches in Tuscaloosa, AL; and 1.57 inches in Columbia, SC.

According to the National Weather Service, snow cover in the contiguous U.S. increased from 39.3 to 66.4 percent of the landmass between January 4 and 8—with some coverage on the latter date in every state but Florida. The snow fell in several waves, with early-January accumulations occurring in the already snow-covered north-central U.S. Fargo, ND, received a daily-record snowfall of 9.2 inches on January 3. However, snow also blanketed parts of the West, where Medford, OR, netted a January 3 total of 8.3 inches. It was Medford's snowiest day since December 11, 1919, when 11.0 inches fell, and the snowiest January day on record, supplanting 6.8 inches on January 13, 1971. Eventually, heavy snow spread as far east as the High Plains, where daily-record totals included 6.4 inches (on January 4) in North Platte, NE, and 6.0 inches (on January 5) in Pueblo, CO. Snow also stretched eastward from the central Plains, resulting in a daily-record sum (2.2 inches on January 5) in Jackson, KY. Later, snow took aim on parts of the South. On January 6, Amarillo, TX, received 2.2 inches, a record for the date, while totals reached 0.8 inch in Jackson and Meridian, MS. In the southern Mid-Atlantic region, record-setting snowfall amounts for January 7 included 9.0 inches in Salisbury, MD, and 7.0 inches in Richmond, VA. Eight inches of snow fell in Greensboro, NC, on January 6-7.

Early-January temperatures were fairly uneventful except for warmth across the South. On January 3, Galveston, TX, posted a monthly record high of 79°F, supplanting the record of 78°F most recently attained on January 2, 2006. Meanwhile in Florida, record-setting highs for January 3 climbed to 86°F in Melbourne, Miami, Orlando, and Vero Beach. Miami's warmth lingered through January 7, when the daily-record high soared to 87°F. In stark contrast, bitterly cold air began to overspread the contiguous U.S. on January 4-5. From January 5-7, Big Piney, WY, collected a trio of daily-record lows (-33, -39, and -34°F). Consecutive daily-record lows were set on January 5-6 in locations such as Challis, ID (-27 and -26°F); Klamath Falls, OR (-19°F both days); and Montague, CA (-12 and -14°F). With lows of 12 and 6°F, Medford, OR, also notched consecutive record lows on January 5-6. Very cold air reached nearly to the Pacific Coast on January 5, when daily-record lows occurred in Oregon locations such as Eugene (13°F) and Portland (17°F). Farther inland, record-setting lows for January 6 plummeted to -40°F in Laramie, WY, and -39°F in Randolph, UT. By January 7, freezes affected the western and central Gulf regions. Deep South Texas experienced a freeze on the 7th, with temperatures in the upper 20s and lower 30s. On January 7-8, hard freezes occurred in southern Louisiana's sugarcane area, with minimum temperatures mostly ranging from 20 to 25°F. On the southern Plains, daily-record lows on January 7 included -3°F in Oklahoma City, OK, and 1°F in Childress, TX.

The cold air remained in place for several days. Elizabeth City, NC, posted consecutive daily-record lows (13 and 11°F, respectively) on January 8-9. With snow covering the ground,

record-setting minima for January 9 included -1°F in Danville, VA; 0°F in Richmond, VA; and 0°F in Salisbury, MD. It was Danville's lowest reading since January 20, 1994, when it was also -1°F. Meanwhile, warmth briefly overspread California and returned across the South. Bakersfield, CA, collected a daily-record high of 76°F on January 8. The following day in Texas, record-setting highs for January 9 included 82°F in Childress and 81°F in Lubbock. Just 2 days earlier, on January 7, lows had plunged to 1°F in Childress and 7°F in Lubbock. Later, warmth expanded across the remainder of the South and at times reached the Midwest and Northeast. Selected daily-record highs reached 83°F (on January 11) in Midland, TX; 81°F (on January 12) in Shreveport, LA; 81°F (on January 13) in Montgomery, AL; and 80°F (on January 13) in Columbia, SC. Mobile, AL, posted consecutive daily-record highs of 79°F on January 13-14. In stark contrast, bitterly cold weather returned to the Northwest. From January 12-14, Whitman Mission, WA, notched a trio of daily-record lows (-11, -15, and -17°F). Similarly, January 13-16 featured four consecutive daily-record lows in locations such as Challis, ID (-25, -31, -32, and -29°F), and Burns, OR (-16, -14, -15 and -14°F). Elsewhere in Oregon, Hillsboro posted three daily-record lows (3, 4, and 6°F) from January 13-15.

The cold air across the Northwest contributed to wintry weather. Portland, OR, experienced an ice storm on January 8, with about one-half inch of accretion, followed by 8.0 inches of snow on January 10-11. Portland's snow marked the greatest 24-hour accumulation in that location since February 12, 1995, when 12.0 inches fell. The official observation site in downtown Portland, OR, which received 11.8 inches on January 10-11, recorded its snowiest 24-hour period since January 21, 1943, when 15.5 inches fell. From January 8-11, Boise, ID, received precipitation and snowfall totaling 1.39 and 3.9 inches, respectively. Farther south, immense quantities of rain and snow continued to fall in northern and central California. In a 120-hour (5-day) period ending on the morning of January 11, precipitation totals topped 22 inches at Strawberry Valley in Yuba County and at Downieville in Sierra County. More than 20 inches soaked Cisco in Placer County, CA. The Middle Fork River near Portola, CA, rose 1.72 feet above flood stage on January 9, second only to 2.12 feet above flood stage on January 21, 1969. Elsewhere on the 9th, the Truckee River at Reno, NV, rose to its highest level (1.30 feet above flood stage) since December 31, 2005. Near the crest of the Sierra Nevada, Squaw Valley reported nearly 15 feet (177 inches) of snow during the first 12 days of the month. Northern and central California eventually got a mid-month respite from relentless rain and snow, but stormy weather continued in several other regions. Across the North, daily-record snowfall totals included 6.4 inches (on January 9) in Glasgow, MT, and 8.4 inches (on January 10) in Wausau, WI. Unusually heavy mid-winter precipitation fell in a broader area of the Midwest, with daily-record totals occurring on January 10 in locations such as La Crosse, WI (0.81 inch), and Waterloo, IA (0.77 inch). Meanwhile, high winds swept across many parts of the U.S. Colorado Springs, CO, set an all-time record with a gust to 80 mph on January 9, surpassing 78 mph on February 3, 1999. The following day, a gust to 70 mph was clocked in Lima, OH. Early on the 11th, winds in western New York gusted to 64 mph in Niagara Falls and 60 mph in Buffalo. Meanwhile, California's last in a long series of storms crossed the Southeast, contributing to daily-record totals for January 14 in Amarillo, TX (1.32 inches), and Flagstaff, AZ (0.76 inch). Amarillo's January 14-15 total reached 2.32 inches, while temperatures ranged from 28 to 33°F, as significant freezing rain occurred in an area covering the southern half of the Plains. On January 15, Dodge City,

KS, reported a daily-record precipitation total of 1.41 inches, no snow, and a high temperature of 31°F. Dodge City's 3-day (January 14-16) sum reached 2.36 inches. Other daily-record amounts for January 15 included 1.98 inches in Medicine Lodge, KS, and 1.24 inches in Oklahoma City, OK. Meanwhile, strong thunderstorms swept across parts of Texas on January 15, when Dallas-Ft. Worth (DFW) received 3.16 inches of rain and reported a peak wind gust to 54 mph. A gust to 63 mph was clocked in Grand Prairie, TX. The only wetter January day at DFW occurred on January 25, 2012, when 3.54 inches fell. By January 16, rain spread into the Midwest, where daily-record totals in Illinois reached 1.01 inches in Rockford and 0.90 inch in Chicago.

By January 17-18, stormy weather returned to the Pacific Coast States, where wind gusts reached 73 mph at Cape Disappointment, WA, and 61 mph at Astoria, OR, and Travis Air Force Base, CA. Where cold air remained entrenched in the Northwest, accumulations of snow and freezing rain compounded the problems of an already difficult winter. Portland, OR, received 1.76 inches of precipitation on January 17-18, with nearly half falling while the temperature was at or below 32°F. California's quiet weather did not last long, as a new series of storms began on January 18 and continued for nearly a week. According to the California Department of Water Resources, the average water content of the Sierra Nevada snowpack jumped to 30 inches (nearly twice the average for the date) by January 23, up sharply from 6 inches at the beginning of the year. In southern California, a briefly heavy rainfall, ending on January 22, led to flash flooding and mudslides, as well as relief from long-term drought in the form of reservoir and groundwater replenishment. With 3.97 inches on the 22nd, Long Beach, CA, endured its wettest January day on record (previously, 3.75 inches on January 4, 1995). Aided by a daily-record sum of 2.94 inches on January 22, the monthly rainfall in Los Angeles (LAX Airport), CA, climbed to 7.44 inches. This marked the wettest month at LAX Airport since December 2010, when 8.83 inches fell. During the drought, annual precipitation at LAX Airport had totaled just 3.65 inches in 2013 and 5.96 inches in 2015. Farther inland, another round of heavy snow blanketed the Intermountain West. Pocatello, ID, noted its snowiest January day on record on the 23rd, when 8.6 inches fell (previously, 8.3 inches on January 8, 2005). Pocatello also achieved its snowiest January on record, with 32.2 inches (previously, 29.6 inches in 1993).

Meanwhile, heavy rain affected the South, where daily-record totals reached or exceeded 3 inches in locations such as Baton Rouge, LA (4.90 inches on January 19), and Lufkin, TX (3.00 inches on January 18). The first deadly tornado of the severe-weather outbreak struck before dawn on January 21, carving a 31.3-mile path up to one-half mile wide across Hattiesburg, MS, and environs. Four deaths and more than 50 injuries were attributed to the tornado, which rated EF-3 with estimated winds up to 145 mph. On January 22, both of Georgia's deadly tornadoes were rated EF-3. The pre-dawn Brooks-Cook-Berrien tornado cut a 25-mile path across parts of three counties, killing 11 people due to winds estimated as high as 140 mph. During the afternoon of the 22nd, a long-track tornado touched down in Dougherty County and sliced nearly 71 miles across four counties before lifting in Wilcox County. That twister claimed five lives in Dougherty County due to winds that likely reached 150 mph. In sum, the three deadly tornadoes accounted for more fatalities (20) than were noted during all of 2016 (17). Also, 1- and 2-day records were set in Georgia for the number of tornadoes (27 and 40 on January 21 and 21-22, respectively). The low-pressure system responsible for the tornadoes also produced torrential rain. Record-setting

totals in Georgia for January 22 reached 4.19 inches in Savannah; 3.15 inches in Alma; and 2.69 inches on St. Simons Island. For Alma, it was the second-wettest January day behind 5.84 inches on January 2, 2006. It was also the second-wettest January day on St. Simons Island, behind only 3.88 inches on January 21, 1983. Later, high winds developed along the Atlantic Coast, where January 23-24 gusts were clocked to 61 mph in Atlantic City, NJ, and at the Blue Hill Observatory in Milton, MA. January 23 also featured daily-record precipitation totals in Roanoke, VA (1.87 inches), and Bluefield, WV (1.53 inches). Binghamton, NY, received 3.7 inches of snow on January 24.

In advance of the storm, warmth dominated the South. Daily-record highs exceeded the 80-degree mark in many locations, including Baton Rouge, LA (81°F on January 16); Hattiesburg, MS (81°F on January 17); Augusta, GA (81°F on January 18 and 20); and Jacksonville, FL (83°F on January 20). Temperatures spiked across southern Texas, topping out on January 21 at 96°F in McAllen; 95°F in Brownsville; and 92°F in Corpus Christi—and setting monthly record highs in all three locations. At times, warmth reached as far north as the Great Lakes States, where Youngstown, OH, set daily-record highs (59 and 60°F, respectively) on January 17 and 21. In Michigan, daily-record highs for January 21 surged to 62°F in Muskegon and 61°F in Grand Rapids. However, colder air in the storm's wake ended a freeze-free streak in La Crosse, WI, at 8 days (January 17-24). La Crosse had never experienced more than 3 consecutive freeze-free days in January. In Indiana, Fort Wayne and South Bend similarly notched record-setting 9-day (January 17-25) streaks without a January freeze. Fort Wayne also posted a daily-record high of 63°F on January 22. Warmth was even more prevalent across the Deep South, where daily-record highs in Florida soared to 87°F on January 22 in Melbourne, Miami, and Vero Beach. Miami also collected a daily-record high (85°F) on January 26. Meanwhile, January 24 was a particularly warm day in southern Texas, where highs soared to daily-record levels in Laredo (94°F) and McAllen (91°F).

In late January, a brief period of tranquility led to few additional precipitation and temperature highlights. However, precipitation returned to the Northwest at month's end. On January 31, Sheridan, WY, collected a daily-record precipitation total of 0.50 inch—all in the form of snow. In Montana, record-setting snowfall totals for January 31 included 5.6 inches in Billings and 3.8 inches in Great Falls. January snowfall records were broken in several Western locations, including Pocatello, ID (32.2 inches; previously, 29.6 inches in 1993), and Alamosa, CO (21.9 inches; previously, 15.8 inches in 1939). Farther south, the month fittingly ended on a warm note, with consecutive daily-record highs (75 and 76°F, respectively) on January 30-31 in McAlester, OK. Other daily-record highs included 78°F (on January 31) in Ft. Smith, AR, and 73°F (on January 30) in Wichita, KS.

Colder air arrived during January across much of Alaska, although mild conditions lingered in the north. The month opened on a warm, wet note, with Barrow (36°F on January 1) experiencing a temperature above the freezing mark for the first time since October 31 and tying a month record originally set on January 4, 1974. Barrow also netted a daily-record snowfall, 3.1 inches, on New Year's Day. In the Aleutians, Cold Bay received 1.98 inches of rain during the first 3 days of the year, aided by a daily-record sum (1.10 inches) on January 2. Farther inland, Fairbanks received 5.7 inches of snow from January 3-5. By mid-month, however, a significant cold wave

overspread the state. By January 18, Alaskan temperatures plunged to -50°F or lower in several locations, including Bettles (-56°F), McGrath (-52°F), and Fairbanks (-51°F). Such a frigid reading had not occurred in Fairbanks since January 29, 2012, when the low also dipped to -51°F. McGrath later received significant snow, with 7.6 inches falling on January 19-20. Some of the most impressive precipitation occurred across south-central Alaska, where Anchorage received 13.0 inches of snow from January 20-22. Anchorage's snow depth peaked at 27 inches on January 21. In fact, Anchorage completed its second-snowiest (31.7 inches), third-wettest (1.71 inches) January on record. Anchorage's records of 34.4 inches of snow in 2000 and 2.71 inches of precipitation in 1987 remain intact.

During January, unusually quiet weather dominated Hawaii. During an early-month cool spell, Lihue, Kauai, recorded a low of 58°F on January 6. It was Lihue's lowest reading since February 9, 2016, when the temperature dipped to 56°F. The tranquil weather ended in the form of late-month downpours in a few windward locations. On the Big Island, Hilo was inundated by 9.19 inches of rain on January 24, representing its wettest day since March 7, 2009—when 10.20 inches fell. However, at two other major airport sites—Honolulu and Lihue—January rainfall totaled less than one-quarter inch and ranged from 5 to 9 percent of normal.

Fieldwork

Fieldwork summary provided by USDA/NASS

Monthly precipitation was generally above normal across most of the nation. The highest totals were observed in California and the Southeast, resulting in significant reductions in drought coverage. Meanwhile, January temperatures were above normal in the eastern U.S., with parts of New England and the Southeast averaging at least 9°F above normal. Conversely, persistently cold weather in the Northwest held generally temperatures 6 to 15°F below normal.

Kansas winter wheat conditions were rated 44 percent in the good to excellent categories on January 29, unchanged from the beginning of the month. Winter wheat conditions improved over the month on the northern Plains. **Montana** winter wheat conditions increased 12 percentage points from the beginning of the month, with 70 percent rated good to excellent on January 29. **South Dakota** winter wheat was rated 62 percent good to excellent at the end of the month, up 6 percentage points from January 1. In **Nebraska**, winter wheat conditions were rated 47 percent in the good to excellent categories on January 29, compared with 46 percent at the beginning of the month. Declining wheat conditions in **Indiana, Michigan, and Ohio** were generally attributed to inadequate snow cover across the Great Lakes region.

In **Arizona**, alfalfa conditions were mostly good to excellent. Alfalfa harvesting occurred on almost three-quarters of the state's alfalfa acreage. Temperatures in Arizona were mostly above normal at the beginning of January but mostly below normal by the end of the month. Seventy-two percent of the intended barley acreage and 62 percent of the intended Durum wheat acreage had been planted by the end of January. Vegetable shipping activities continued throughout the month.

California producers began the month preparing fields and planting winter wheat and barley forage. Rain greatly

benefited the growth of already planted grains and field crops, but slowed planting. As the month progressed, ground preparations continued to be hindered, with low spots in fields showing stress from standing water. Growers continued to implement frost-protection measures for new fruit plantings, as well as removing older orchards to plant new varieties in drier locations. Rains slowed Navel orange and Satsuma mandarin harvests. Nut orchards continued to be pruned and brush shredded as weather conditions permitted; however, most post-harvest field activities were halted due to heavy rain and standing water. Some almond and walnut orchards were impacted by falling trees due to strong winds and saturated ground. Winter vegetables continued to mature ideally. Supplemental feeding of livestock continued, and standing water and flooding affected some valley pasture and dairies. Sheep grazed in idle fields and dormant alfalfa fields. Bees continued to be brought into the state in preparation for the bloom season. Bee keepers continued to feed their hives to compensate for the lack of blooming vegetation.

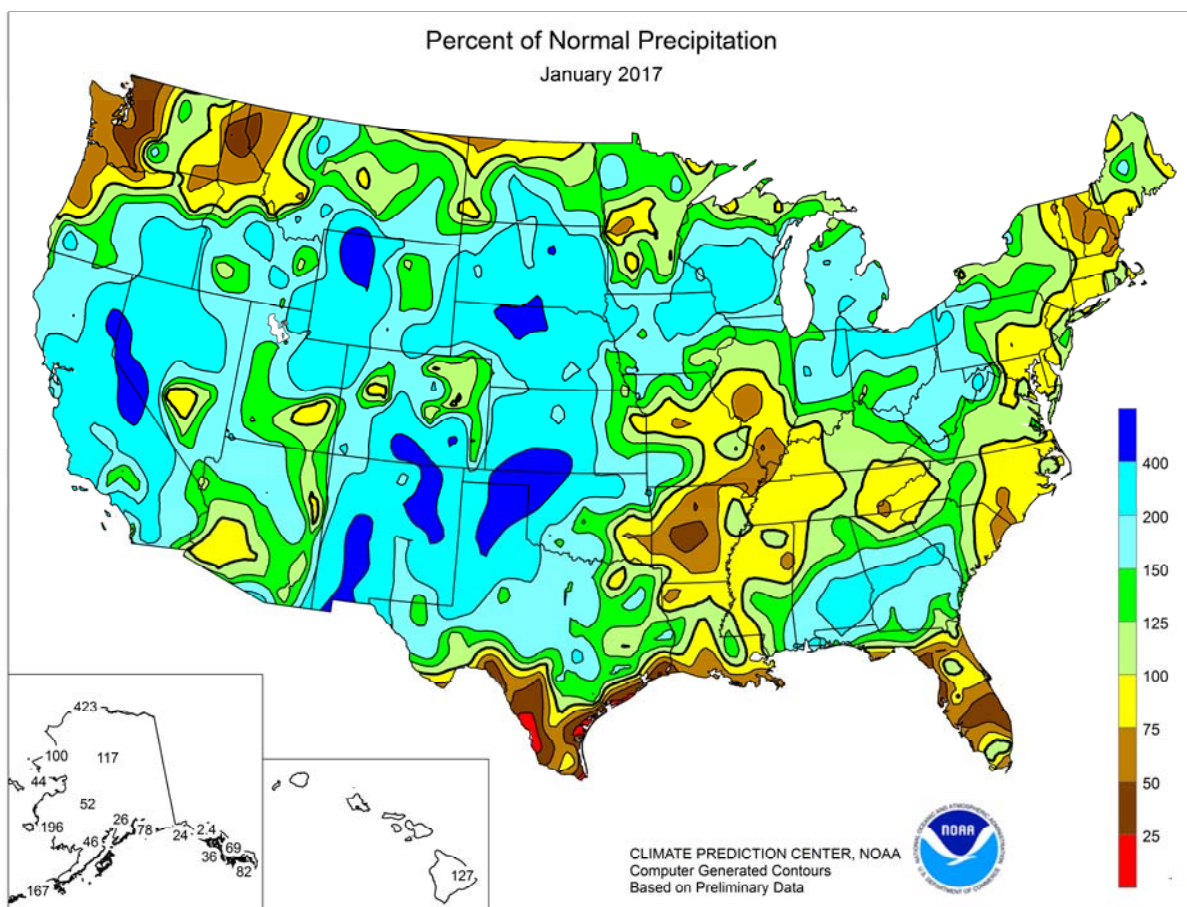
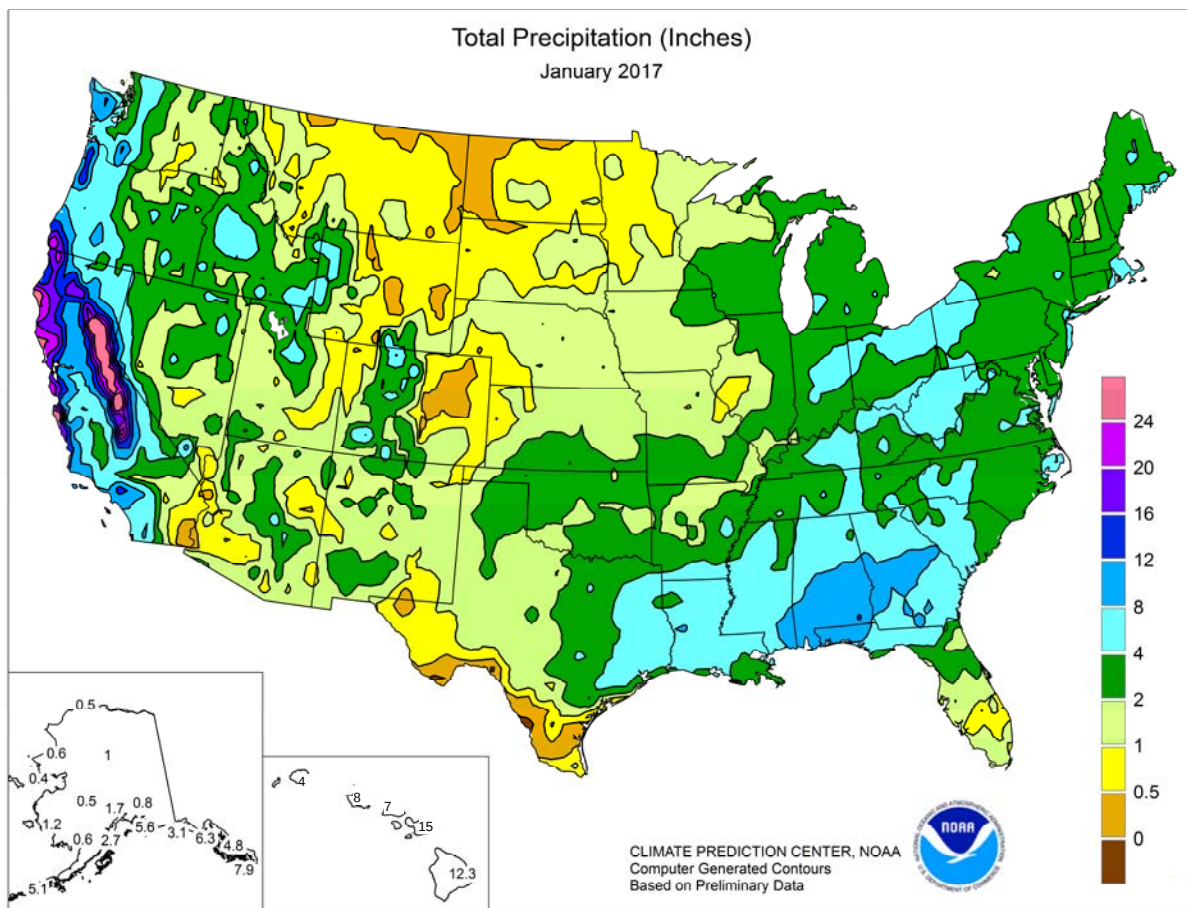
In **Florida**, warm, dry conditions were prevalent throughout the month, with only the panhandle and northern counties receiving any significant rain. Farmers were able to plant some cover crops toward the end of the month, and some haylage harvesting activities were reported as well. Sugarcane harvest continued on schedule in Broward, Glades, Hendry, and Palm Beach Counties. A wide variety of vegetables, including cucumbers, peppers, tomatoes, and sweet corn, were harvested and brought to market. Pastures continued to decline in quality and quantity throughout the month, with most cattle producers using supplemental feeding. Cattle remained in mostly fair to good condition. Mid-season orange harvest activities continued throughout the month, and grapefruit shipments were strong, with internal quality holding well. Honey and royal tangerines were harvested for the fresh market. Grove work included irrigating, mowing, spraying, and fertilizing. Caretakers were replacing unproductive trees and taking care of healthy older trees and resets with various types of fertilization programs.

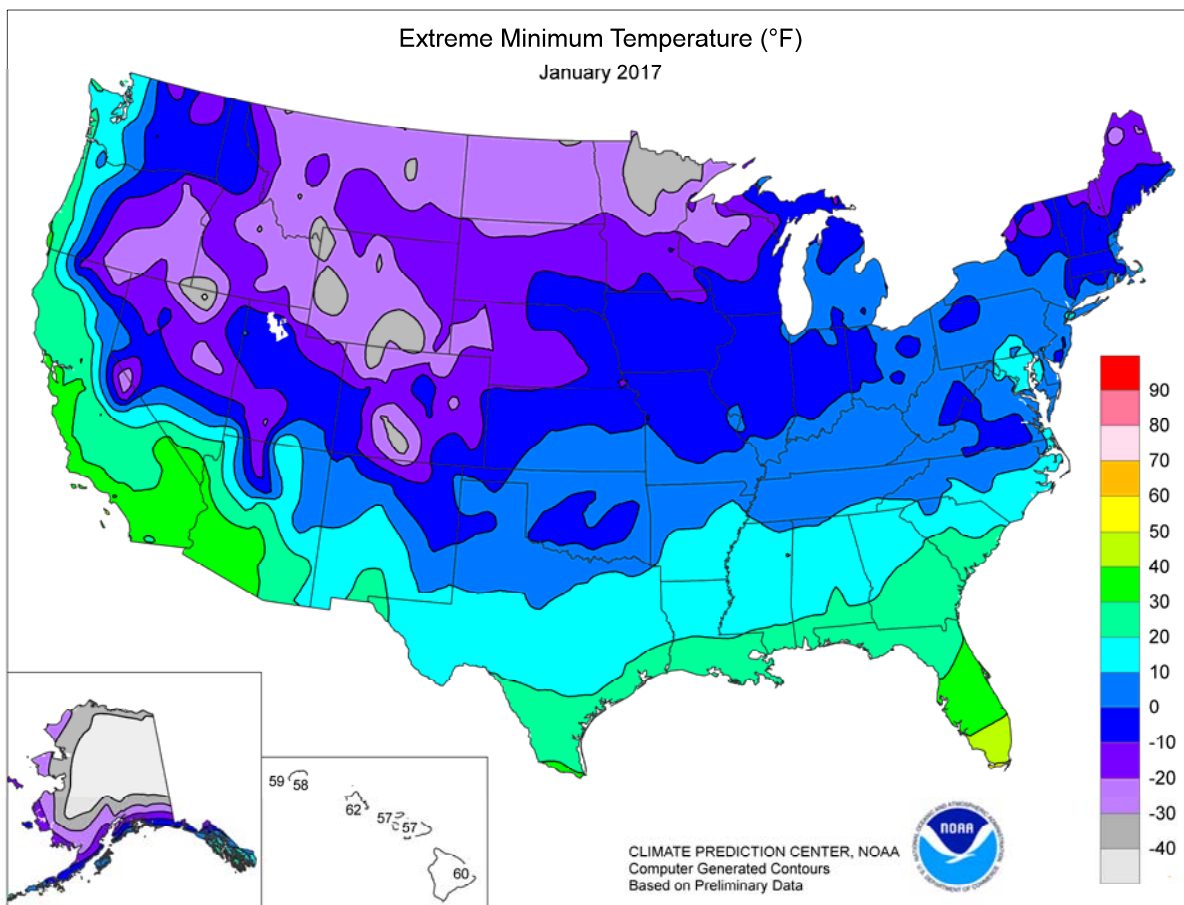
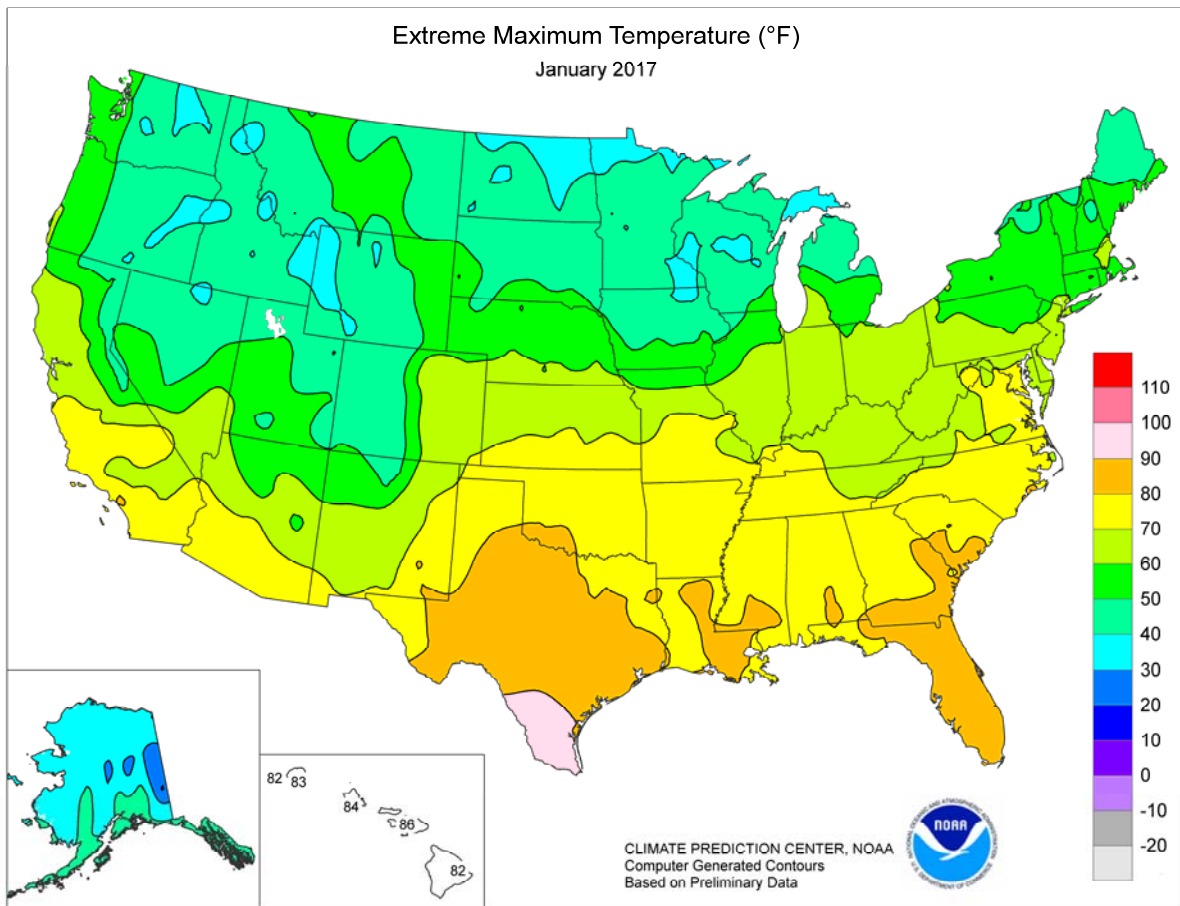
January began cold but ended warmer than normal in **Texas**. Generally light, scattered showers were observed across the state, with isolated areas along the Upper Coast receiving more than 10 inches. Winter wheat and oats continued to progress across the state, with emergence nearing completion by January 29. Overall, winter wheat was rated mostly fair to good at the end of the month. Statewide cotton harvest was 97 percent complete by January 29, two percentage points behind the 5-year average.

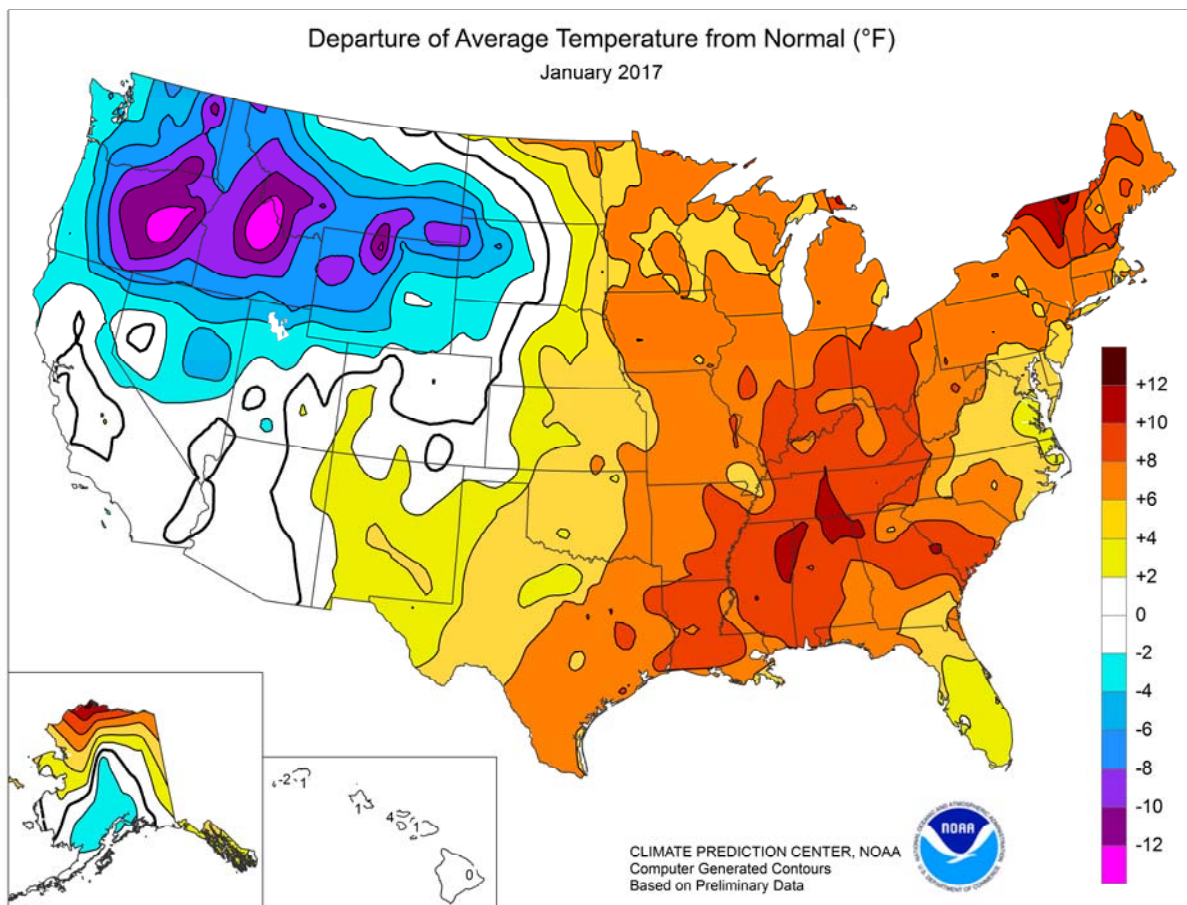
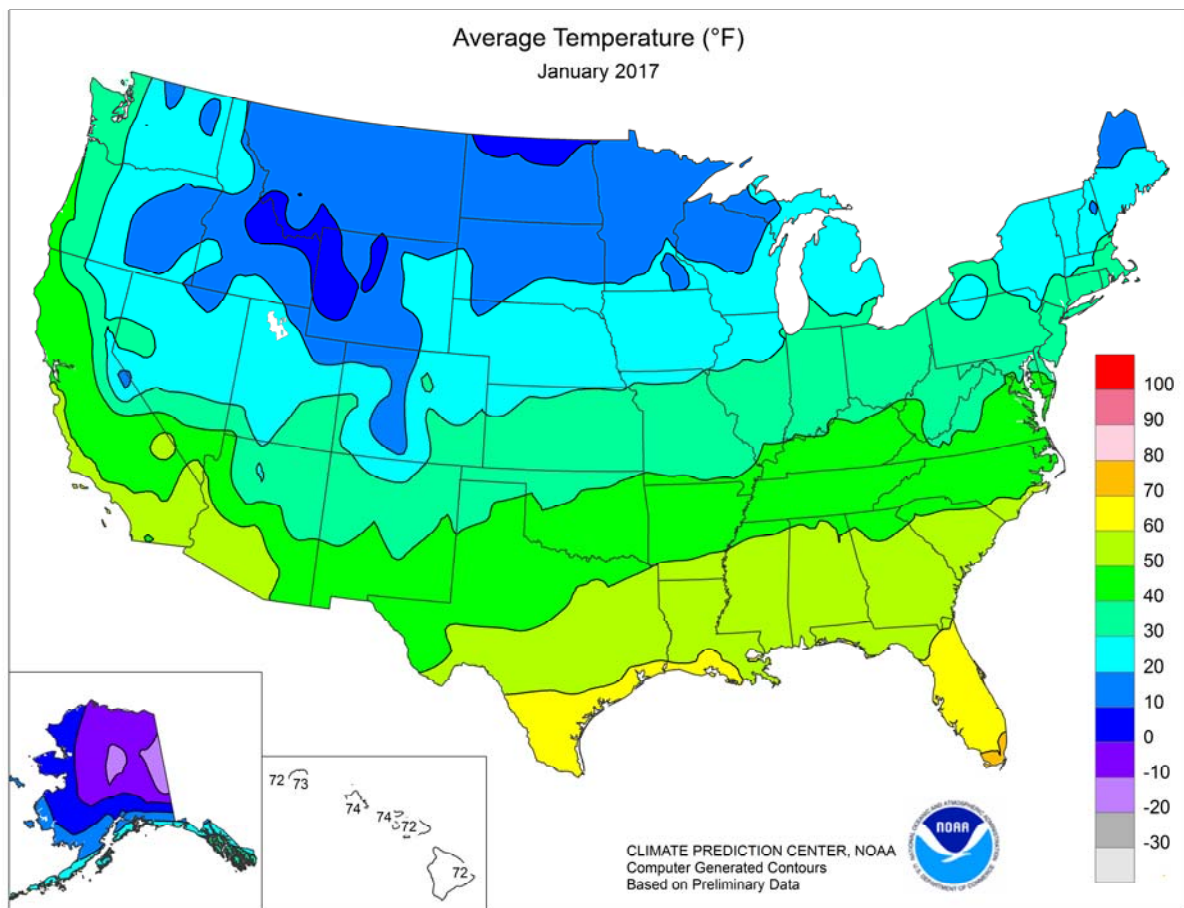
U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on February 9, 2016. Forecasts refer to February 1.

The U.S. **all orange** forecast for the 2016-2017 season is 5.35 million tons, down 1 percent from last month and down 10 percent from the 2015-2016 final utilization. The Florida all orange forecast, at 70.0 million boxes (3.15 million tons), is down 1 percent from last month and down 14 percent from last season. Early, midseason, and Navel varieties in Florida are forecast at 35.0 million boxes (1.58 million tons), down 3 percent from last month and down 3 percent from last season. The Florida Valencia orange forecast, at 35.0 million boxes (1.58 million tons), is unchanged from last month, but down 23 percent from last season's final utilization.







National Weather Data for Selected Cities

January 2017

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	53	10	6.71	1.26	LA	LEXINGTON	40	8	4.71	1.37	OK	COLUMBUS	37	9	3.83	1.30	
	HUNTSVILLE	51	11	6.40	0.88		LONDON-CORBIN	42	8	4.08	0.07		DAYTON	34	8	3.42	0.82	
	MOBILE	59	9	10.93	5.18		LOUISVILLE	42	9	4.21	0.93		MANSFIELD	33	9	5.91	3.28	
	MONTGOMERY	56	9	11.17	6.13		PADUCAH	42	9	2.50	-0.97		TOLEDO	31	7	4.15	2.22	
	ANCHORAGE	14	-2	1.71	1.03		BATON ROUGE	59	9	9.68	3.49		YOUNGSTOWN	32	7	5.35	3.01	
AK	BARROW	0	14	0.50	0.38	ME	LAKE CHARLES	60	9	4.91	-0.61	OR	OKLAHOMA CITY	42	5	1.57	0.29	
	COLD BAY	26	-2	5.13	2.05		NEW ORLEANS	60	7	4.90	-0.97		TULSA	42	6	3.42	1.82	
	FAIRBANKS	-9	1	0.96	0.40		SHREVEPORT	55	9	2.56	-2.04		ASTORIA	40	-2	5.81	-3.81	
	JUNEAU	30	4	6.27	1.46		BANGOR	25	7	3.63	0.29		BURNS	11	-13	3.24	2.06	
	KING SALMON	13	-2	0.15	-0.88		CARIBOU	18	8	3.45	0.48		EUGENE	36	-4	4.05	-3.60	
AZ	KODIAK	28	-2	2.95	-5.22	MD	PORTLAND	30	8	3.65	-0.44	PA	MEDFORD	37	-2	4.89	2.42	
	NOME	6	0	0.41	-0.51		BALTIMORE	39	7	2.69	-0.78		PENDLETON	23	-11	1.65	0.20	
	FLAGSTAFF	30	0	4.56	2.38		BOSTON	35	6	4.25	0.33		PORTLAND	33	-7	4.13	-0.94	
	PHOENIX	55	1	1.10	0.27		WORCESTER	30	6	3.91	-0.16		SALEM	36	-4	5.40	-0.44	
	TUCSON	53	1	1.17	0.18		ALPENA	25	7	3.00	1.24		ALLENTOWN	35	8	3.39	-0.11	
AR	FORT SMITH	45	7	2.33	-0.04	MI	DETROIT	32	8	2.83	0.92	SD	ERIE	33	6	4.88	2.35	
	LITTLE ROCK	46	6	1.47	-2.14		FLINT	29	8	3.13	1.56		MIDDLETOWN	36	7	2.63	-0.21	
	CA	BAKERSFIELD	50	2	2.76		1.58	GRAND RAPIDS	29	7	3.51		1.48	PHILADELPHIA	38	6	2.91	-0.61
		EUREKA	44	-4	10.51		4.54	HOUGHTON LAKE	24	6	2.97		1.36	PITTSBURGH	35	7	4.54	1.84
		FRESNO	48	2	5.50		3.34	LANSING	29	7	3.65		2.04	WILKES-BARRE	33	7	3.25	0.79
LOS ANGELES		56	-1	7.44	4.46	MUSKEGON	30	6	3.03	0.81	WILLIAMSPORT	33	7	3.43	0.58			
REDDING		46	0	11.45	4.95	TRAVERSE CITY	27	6	4.00	1.02	SAN JUAN	79	2	2.59	-0.43			
CO	SACRAMENTO	47	1	9.92	6.08	MN	DULUTH	16	8	1.16	0.04	RI	PROVIDENCE	35	6	4.96	0.59	
	SAN DIEGO	58	0	3.01	0.73		INT'L FALLS	11	8	1.27	0.43		CHARLESTON	56	8	3.78	-0.30	
	SAN FRANCISCO	51	2	9.33	4.88		MINNEAPOLIS	21	8	0.98	-0.06		COLUMBIA	53	8	7.04	2.38	
	STOCKTON	47	1	6.33	3.62		ROCHESTER	19	7	2.11	1.17		FLORENCE	52	7	3.26	-0.83	
	ALAMOSA	17	2	1.36	1.11		ST. CLOUD	17	8	0.74	-0.02		GREENVILLE	48	7	4.52	0.11	
CT	CO SPRINGS	31	3	0.32	0.04	MS	JACKSON	55	10	7.90	2.23	TN	MYRTLE BEACH	54	8	2.22	-1.44	
	DENVER	30	2	0.54	0.31		MERIDIAN	55	9	7.37	1.45		ABERDEEN	13	2	1.01	0.53	
	GRAND JUNCTION	31	5	1.01	0.41		TUPELO	51	11	5.77	0.63		HURON	17	3	1.18	0.70	
	PUEBLO	32	3	0.75	0.42		COLUMBIA	35	7	1.31	-0.42		RAPID CITY	19	-3	0.65	0.28	
	BRIDGEPORT	37	7	3.28	-0.45		JOPLIN	40	7	3.65	1.81		SIOUX FALLS	21	7	1.36	0.85	
DC	HARTFORD	33	7	3.49	-0.35	MO	KANSAS CITY	32	5	1.39	0.24	TX	BRISTOL	44	10	2.96	-0.56	
	WASHINGTON	42	7	2.75	-0.46		SPRINGFIELD	39	7	4.07	1.96		CHATTANOOGA	49	10	4.98	-0.42	
	DE	WILMINGTON	38	7	2.67		-0.76	ST JOSEPH	32	6	1.47		0.59	JACKSON	46	8	3.32	-1.01
	FL	DAYTONA BEACH	62	4	1.98		-1.15	ST LOUIS	38	8	1.80		-0.34	KNOXVILLE	47	9	3.97	-0.60
	FT LAUDERDALE	71	4	1.71	-1.23		BILLINGS	19	-5	0.93	0.12		MEMPHIS	49	9	4.26	0.02	
DE	FT MYERS	68	3	1.53	-0.70	MT	BUTTE	10	-8	0.31	-0.22	TX	NASHVILLE	47	10	3.34	-0.63	
	JACKSONVILLE	60	7	4.05	0.36		GLASGOW	11	0	0.47	0.12		ABILENE	47	3	1.93	0.96	
	KEY WEST	73	3	1.00	-1.22		GREAT FALLS	18	-4	0.85	0.17		AMARILLO	40	4	3.17	2.54	
	MELBOURNE	64	3	1.46	-1.02		HELENA	11	-9	0.62	0.10		AUSTIN	55	5	4.65	2.76	
	MIAMI	73	5	3.40	1.52		KALISPELL	14	-7	0.97	-0.50		BEAUMONT	61	9	0.94	-4.75	
FL	ORLANDO	65	4	1.98	-0.45	NE	MILES CITY	12	-5	0.87	0.37	UT	BROWNSVILLE	66	6	0.18	-1.18	
	PENSACOLA	61	9	11.73	6.39		MISSOULA	14	-10	1.02	-0.04		COLLEGE STATION	57	7	3.74	0.42	
	ST PETERSBURG	65	3	0.67	-2.09		GRAND ISLAND	26	4	1.07	0.53		CORPUS CHRISTI	63	7	0.27	-1.35	
	TALLAHASSEE	58	6	7.21	1.85		HASTINGS	28	4	1.03	0.48		DALLAS/FT WORTH	51	7	4.39	2.49	
	TAMPA	66	5	0.90	-1.37		LINCOLN	28	6	1.10	0.43		DEL RIO	56	5	0.19	-0.38	
GA	WEST PALM BEACH	69	3	1.00	-2.75	NV	MCCOOK	28	2	0.90	0.40	WA	EL PASO	49	4	1.04	0.59	
	ATHENS	51	9	6.51	1.82		NORFOLK	24	4	1.25	0.68		GALVESTON	63	7	0.89	-3.19	
	ATLANTA	52	9	8.18	3.16		NORTH PLATTE	25	2	1.47	1.08		HOUSTON	60	8	6.09	2.41	
	AUGUSTA	55	10	10.13	5.63		OMAHA/EPPLEY	28	6	1.06	0.29		LUBBOCK	44	6	2.03	1.53	
	COLUMBUS	54	7	11.48	6.70		SCOTTSBLUFF	24	0	1.32	0.78		MIDLAND	48	5	1.12	0.59	
HI	MACON	54	8	11.26	6.26	NY	VALENTINE	23	2	1.25	0.95	WV	SAN ANGELO	49	4	1.48	0.67	
	SAVANNAH	58	9	6.61	2.66		ELKO	22	-4	2.48	1.34		SAN ANTONIO	58	8	2.72	1.06	
	HILO	72	1	12.34	2.60		ELY	20	-5	1.52	0.78		VICTORIA	61	8	3.76	1.32	
	HONOLULU	74	1	0.21	-2.52		LAS VEGAS	49	2	0.90	0.31		WACO	52	6	3.11	1.21	
	KAHULUI	72	0	0.55	-3.19		RENO	33	-1	5.57	4.51		WICHITA FALLS	45	5	1.87	0.75	
ID	LIHUE	73	1	0.20	-4.39	NH	WINNEMUCCA	27	-3	1.81	0.98	VT	SALT LAKE CITY	27	-2	1.97	0.60	
	BOISE	21	-9	2.96	1.57		CONCORD	28	8	2.52	-0.45		BURLINGTON	29	11	2.00	-0.22	
	LEWISTON	26	-8	0.81	-0.33		ATLANTIC CITY	38	6	4.17	0.57		LYNCHBURG	40	5	3.78	0.24	
	POCATELLO	17	-7	2.85	1.71		NEWARK	38	7	4.65	0.67		NORFOLK	45	5	4.41	0.48	
	CHICAGO/O'HARE	29	7	2.87	1.12		ALBUQUERQUE	40	4	1.04	0.55		RICHMOND	42	6	4.29	0.74	
IL	MOLINE	29	8	1.50	-0.08	NJ	ALBANY	31	9	3.13	0.65	VA	ROANOKE	42	6	4.10	0.87	
	PEORIA	31	9	1.57	0.07		BINGHAMTON	27	5	3.79	1.21		WASH/DULLES	39	7	2.73	-0.32	
	ROCKFORD	28	9	2.25	0.84		BUFFALO	31	7	2.92	-0.24		OLYMPIA	36	-2	3.82	-3.72	
	SPRINGFIELD	34	9	1.02	-0.60		ROCHESTER	31	7	2.75	0.41		QUILLAYUTE	38	-3	8.28	-5.37	
	EVANSVILLE	40	9	2.27	-0.64		SYRACUSE	29	6	3.03	0.43		SEATTLE-TACOMA	38	-3	4.21	-0.92	
IN	FORT WAYNE	33	9	4.71	2.66	NC	ASHEVILLE	44	8	3.72	-0.34	WY	SPOKANE	20	-7	1.85	0.03	
	INDIANAPOLIS	35	9	4.35	1.87		CHARLOTTE	47	5	5.72	1.72		YAKIMA	23	-6	2.16	0.99	
	SOUTH BEND	30	7	3.34	1.07		GREENSBORO	44	6	5.12	1.58		BECKLEY	38	8	4.71	1.48	
	BURLINGTON	29	6	1.46	0.15		HATTERAS	51	5	4.98	-0.86		CHARLESTON	41	8	5.77	2.52	
	CEDAR RAPIDS	25	7	1.50	0.45		RALEIGH	46	6	3.77	-0.25		ELKINS	37	8	5.09	1.66	
IA	DES MOINES	28	8	1.74	0.71	ND	WILMINGTON	51	5	4.21	-0.31	WI	HUNTINGTON	41	8	4.98	1.77	
	DUBUQUE	24	7	2.01	0.73		BISMARCK	11	1	1.04	0.59		EAU CLAIRE	18	6	2.34	1.30	
	SIOUX CITY	25	6	1.67	1.08		DICKINSON	12	-2	0.54	0.17		GREEN BAY	23	7	2.53	1.32	
	WATERLOO	24	8	2.89	2.05		FARGO	15	8	0.98	0.22		LA CROSSE	24	8	2.69	1.50	
	CONCORDIA	31	4	1.75	1.09		GRAND FORKS	12	7	0.85	0.17		MADISON	24	7	2.76	1.51	
KS	DODGE CITY	33	3	2.56	1.94	OH	JAMESTOWN	12	3	0.82	0.20	WY	MILWAUKEE	28	7	2.16	0.31	
	GOODLAND	29	1	0.92	0.49		MINOT	14	4	0.57	-0.08		WAUSAU	18	5	2.33	1.24	
	HILL CITY	31	5	1.05	0.58		WILLISTON	11	3	0.44	-0.10		CASPER	21	-1	0.74	0.16	
	TOPEKA	33	6	1.28	0.33		AKRON-CANTON	34	9	6.14	3.65		CHEYENNE	27	1	0.77	0.32	
	WICHITA	37	7	2.79	1.95		CINCINNATI	37	7	3.67	0.75		LANDER	12	-8	1.37	0.85	
KY	JACKSON	42	8	4.71	1.15		CLEVELAND	35										

Based on 1971-2000 normals

*** Not Available

National Agricultural Summary

February 6 – 12, 2017

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Temperatures were well above normal in the eastern half of U.S., with most of the Deep South recording temperatures more than 9°F above average for the week. However, from the Pacific Northwest to the northern High Plains,

temperatures were below normal. Most of the country recorded near-normal weekly precipitation, except for the Pacific Coast States. In northern California, Oregon, and Washington, some areas received weekly rainfall in excess of 8 inches.

Arizona: Planting of Barley and Durum wheat was nearing completion by week's end. Barley planting was estimated at 90 percent complete, compared with 92 percent last year. Durum wheat planting was estimated at 85 percent complete, compared with 87 percent last year. Alfalfa conditions were rated mostly good to excellent, depending on location, with harvesting taking place on almost three-quarters of the state's acreage. Central Arizona growers shipped anise, beets, bok choy, broccoli, cabbage (green and red), carrots, cauliflower, cilantro, collard greens, kale greens, kohlrabi, green onions, parsley, and Swiss chard. In western Arizona, growers shipped anise, arugula, bok choy, broccoli, cabbage (green and red), cauliflower, celery, Chinese cabbage, cilantro, endive, escarole, frisee, kale greens, lettuce (Boston, green leaf, iceberg, red leaf, romaine and other), parsley, radicchio, spinach, and Swiss chard. Pasture and range conditions were mostly good to fair. Soil moisture was adequate, and new forage was growing in the northwestern part of the state. The highest precipitation reported was 0.70 inch at Springerville and the lowest was 0.01 inch at Window Rock. The highest temperature was 90°F at Sahuarita. The lowest temperature was 23°F at Springerville. All weather stations reported above-normal temperatures, ranging from 4 to 14°F above normal.

California: On most days, a large portion of the state received widespread precipitation. The heaviest rain fell on the windward and southern slopes of the central/northern Sierra Nevada and northern mountains. Blue Canyon reported the largest precipitation of 14.2 inches. The immediate coast from San Francisco southward to Los Angeles received 2 to 3 inches. Additional snow fell in the mountains, heaviest in the Tahoe region, where 12 to 18 inches occurred. The northern Sierra Nevada experienced 8 to 12 inches, while the southern Sierras reported 3 to 6 inches. Despite the additional snow, warm weather resulted in an overall reduction of 4 to 8 inches in snowpack. High temperatures were in the 30s to 50s in the mountains, 50s to 60s in the valley and along the coast, and 60s to 80s in the desert. Low temperatures were in the 20s to 40s in the mountains, 30s to 50s in the desert, and 40s to 50s in the valley and along the coast. Growers continued to wait for fields to dry out sufficiently to resume planting winter grain and field crops. Already planted grains and field crops continued to mature at an excellent rate, reaping the benefit from all the recent rain. Pruning, tying, berm sanitation, and brush shredding started up again in the drier vineyards. Where field conditions permitted, the removal of older orchards and vineyards continued in preparation for replanting with new varieties. Standing water in vineyards and orchards caused concern for the health of the trees and vines. Early varieties of nectarines and peaches began to bloom in Fresno County. Navel orange harvest continued as weather permitted. Second treatment spraying for citrus fungal diseases was drawing to a close. Tangerines continued to be harvested. Some late dormant sprays were applied. Almond buds were swelling and a few early blossoms were reported in the southern San Joaquin Valley. In Fresno County, the carrot harvest was ongoing when the weather permitted. Weed control was ongoing for tomatoes. Garlic and onion plantings had emerged and showed good growth. Broccoli was growing steadily. In Imperial County, harvest continued for broccoli, cauliflower, Brussels sprouts, and lettuce. Fields were planted with melon and sweet corn as weather permitted. Non-irrigated pasture and rangeland continued to improve due to the winter's precipitation and rising temperatures. Range was reported to be in excellent to good condition. Sheep grazed idle fields and dormant alfalfa fields. Supplemental feeding of livestock was on the

decline as range conditions improved. Bee hives were staged in preparation for the pending bloom season, though muddy conditions forced many hives to be left on drier ground outside almond orchards.

Florida: There were 6.6 days suitable for fieldwork. Precipitation ranged from no rain in some locations, including Belle Glade (Palm Beach County), Fort Lauderdale (Broward County), and Homestead (Miami-Dade County), to 2.07 inches in Carrabelle (Franklin County). Average temperatures ranged from 60.7°F in DeFuniak Springs (Walton County) to 73.2°F in Ft. Lauderdale (Broward County). Although there was some rainfall across much of the state, warm, dry conditions remained prevalent. High temperatures in the citrus region were above average, reaching the low to mid 80s in all counties on multiple days during the week. Nighttime temperatures were in the 40s and 50s. Rain fell primarily in the northern and western areas of the citrus region. According to the U.S. Drought Monitor last updated February 7, abnormally dry conditions continued throughout the citrus-growing region. Honey and Royal tangerines were picked for the fresh market, but were not up to maximum harvest levels yet. Valencia orange harvest for the fresh market was slowly increasing. Field run on Valencia oranges had not yet started in noticeable quantities. White and red grapefruit harvest continued at a normal pace. Growers who had previously spot picked grapefruit were cleaning off the trees for a final harvest. Bloom was widespread across the citrus region. Some areas were already in full bloom, while other areas were showing a moderate and scattered bloom. Ditches and canals were low and in need of more rainfall. Growers continued to battle greening by replacing dead and dying trees. Other grove activity included spraying, hedging, fertilizing, and general grove maintenance. Irrigation was becoming very frequent due to prolonged dry conditions. Plastic has been laid in Jackson and Dixie Counties in preparation for melon and tomato plantings. Broccoli and cabbage harvesting activities continued in Flagler, Putnam, and Orange Counties. Unseasonably high temperatures were causing cool-weather crops like lettuce to bolt prematurely in Palm Beach County. Crops coming to market included bitter melon, boniato, celery, eggplant, green beans, malanga, pepper, radishes, squash, sweet corn, tomato, zucchini, and other tropical fruits. Pasture quality continued its seasonal decline throughout much of the state. Persistently dry conditions were keeping pastures brown, and producers continued with supplemental feeding. The warm weather in Jefferson County helped winter grazing to catch up after a late start. Cattle remained in mostly fair to good condition.

Texas: Warm, dry weather prevailed in many areas of Texas. The majority of the state received little to no rainfall, with East Texas recording 0.10 inch. Winter wheat was in need of moisture in parts of the Low and High Plains. Some producers on the Northern Plains began irrigating wheat. Oats progressed in South Texas. Fieldwork in preparation for cotton planting continued in parts of the Blacklands. Corn crop preparations continued in parts of North East Texas, South Central Texas, and the Upper Coast. Cool-season vegetable planting was active in North East Texas and the Lower Valley. Onions in North East Texas and South Texas progressed. In the Lower Valley, harvest of sugarcane, citrus, and vegetables continued. Supplemental feeding was active across the state. Livestock were in good condition. Pastures in the northern part of the state improved, while conditions continued to decline in southern areas.

February 9 ENSO Update

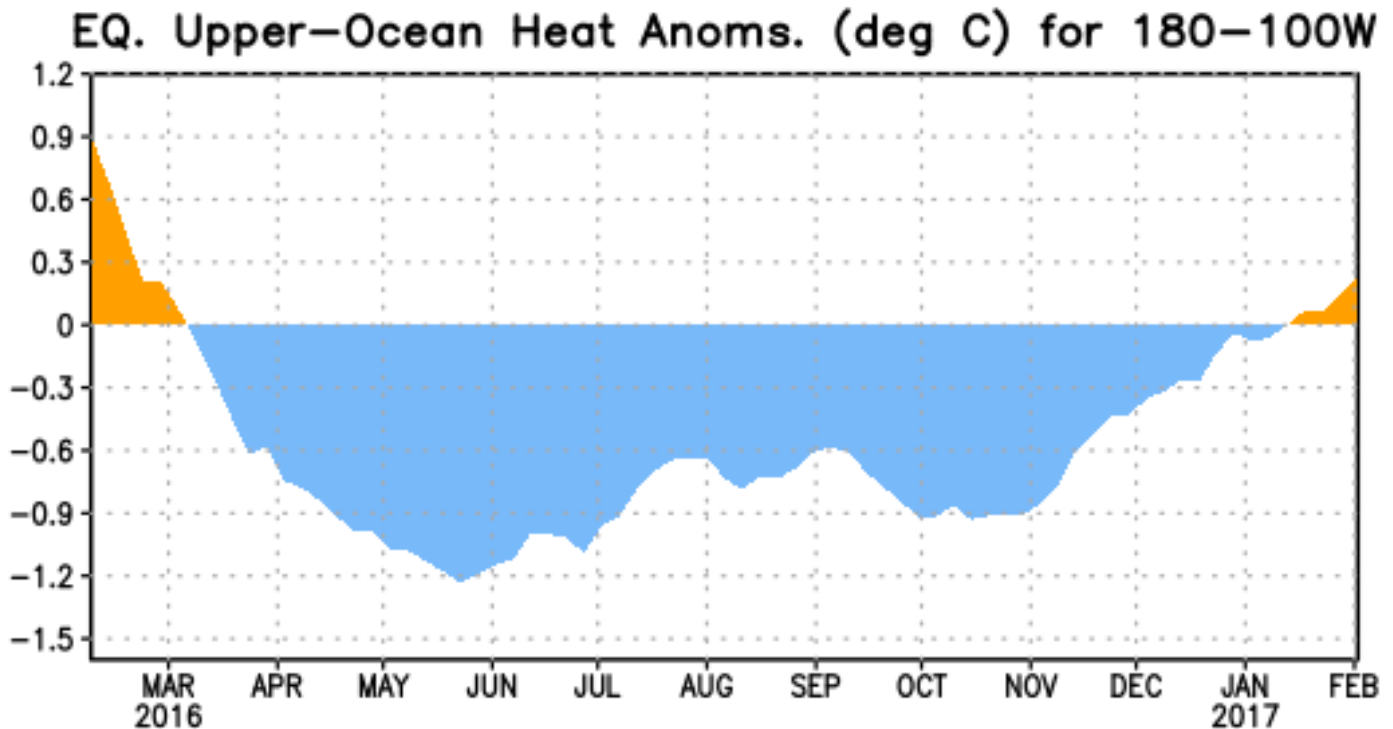


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

ENSO Alert System Status: **Final La Niña Advisory**

Synopsis: ENSO-neutral conditions have returned and are favored to continue through at least the Northern Hemisphere spring 2017.

La Niña conditions are no longer present, with slightly below-average sea surface temperatures (SSTs) observed across the central equatorial Pacific and above-average SSTs increasing in the eastern Pacific. The latest weekly Niño index values were -0.3°C in the westernmost Niño-4 and Niño-3.4 regions, and +1.5°C in the easternmost Niño-1+2 region. The upper-ocean heat content anomaly increased during January and was slightly positive when averaged across the eastern Pacific (Fig. 1), a reflection of above-average temperatures at depth. Atmospheric convection remained suppressed over the central tropical Pacific and enhanced over Indonesia. The low-level easterly winds were slightly enhanced over the western tropical Pacific, and upper-level westerly winds were near average. Overall, the ocean and atmosphere system is consistent with ENSO-neutral conditions.

Most models predict the continuation of ENSO-neutral (3-month average Niño-3.4 index between -0.5°C and 0.5°C) through the Northern Hemisphere summer. However, a few dynamical model forecasts, including the NCEP CFSv2, anticipate an onset of El Niño as soon as the Northern Hemisphere spring (March-May 2017). Because of typically high uncertainty in forecasts made at this time of the year for

the upcoming spring and summer, and the lingering La Niña-like tropical convection patterns, the forecaster consensus favors ENSO-neutral during the spring with a ~60% chance. Thereafter, there are increasing odds for El Niño toward the second half of 2017 (~50% chance in September-November). In summary, ENSO-neutral conditions have returned and are favored to continue through at least the Northern Hemisphere spring 2017 (click [CPC/IRI consensus forecast](#) for the chance of each outcome for each 3-month period).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site ([El Niño/La Niña Current Conditions and Expert Discussions](#)). Forecasts are also updated monthly in the [Forecast Forum](#) of CPC's Climate Diagnostics Bulletin. Additional perspectives and analysis are also available in an [ENSO blog](#). The next ENSO Diagnostics Discussion is scheduled for **9 March 2017**. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.ensu-update@noaa.gov.

International Weather and Crop Summary

February 5-11, 2017

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

HIGHLIGHTS

EUROPE: Warm, wet weather favored vegetative winter grains in the south, while cold, mostly dry conditions in northern Europe kept winter crops dormant.

WESTERN FSU: Dormant winter wheat remained sufficiently insulated by snow during this week's bitter cold.

MIDDLE EAST: Warmer weather returned, eroding the protective snowpack in northern winter wheat areas.

NORTHWESTERN AFRICA: After last week's respite, the resumption of widespread showers maintained adequate to abundant moisture supplies for vegetative winter grains.

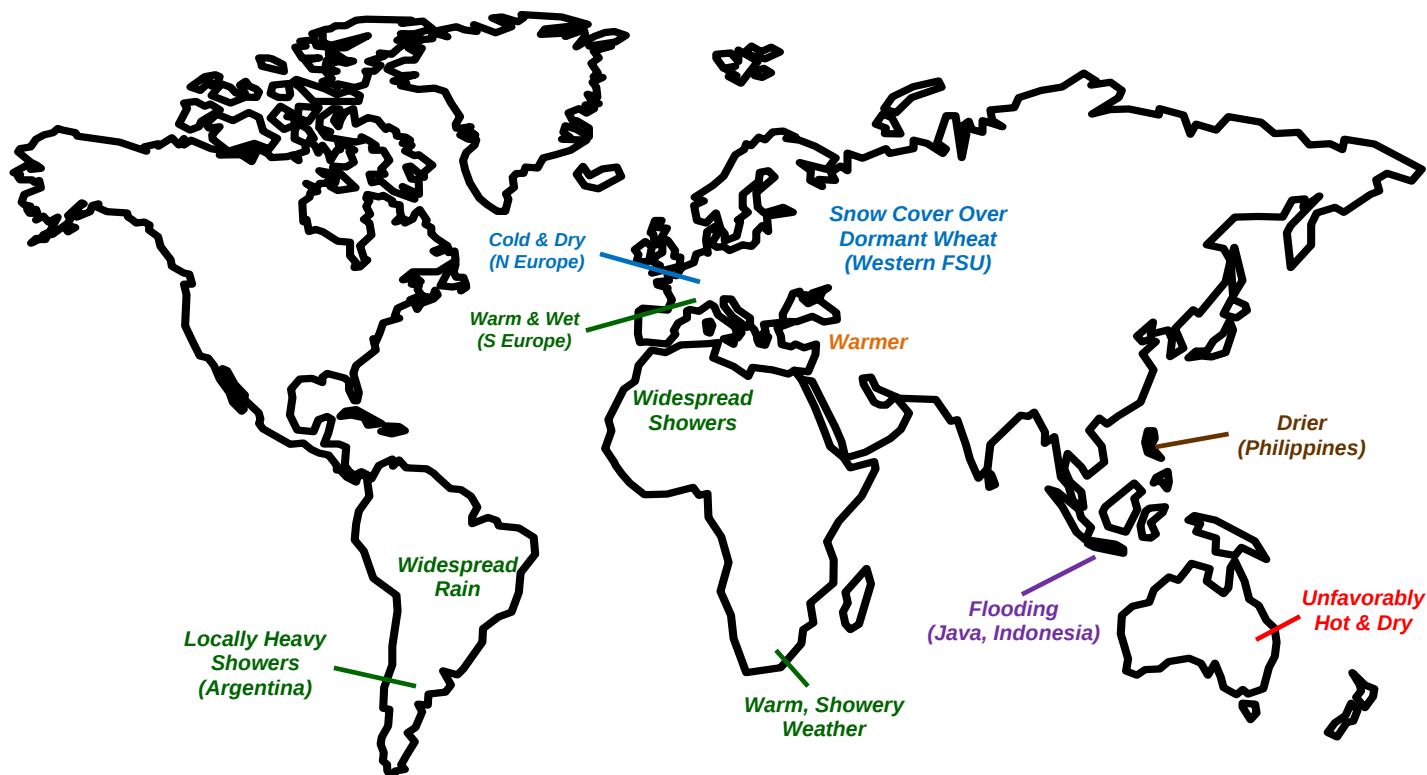
SOUTHEAST ASIA: Somewhat drier conditions prevailed in northern sections of the region, while flooding occurred in parts of Java, Indonesia.

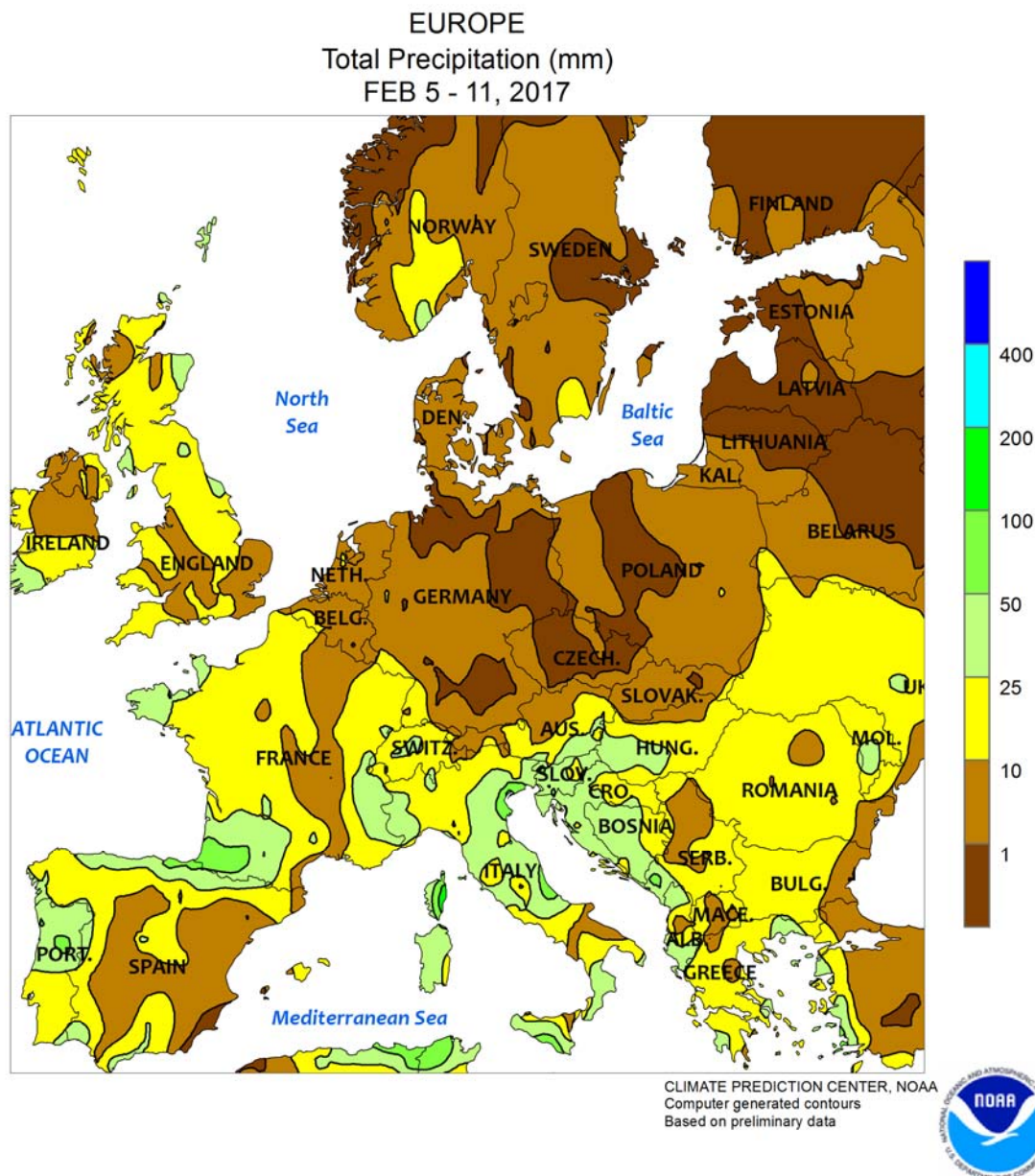
AUSTRALIA: Unfavorably hot, dry weather likely reduced the yield prospects of some summer crops.

SOUTH AFRICA: Warm, showery weather maintained favorable corn prospects in key production areas.

ARGENTINA: Locally heavy rain sustained adequate to excessive levels of moisture for summer grains, oilseeds, and cotton.

BRAZIL: Rain intensified in previously-dry farming areas in the south and northeast.



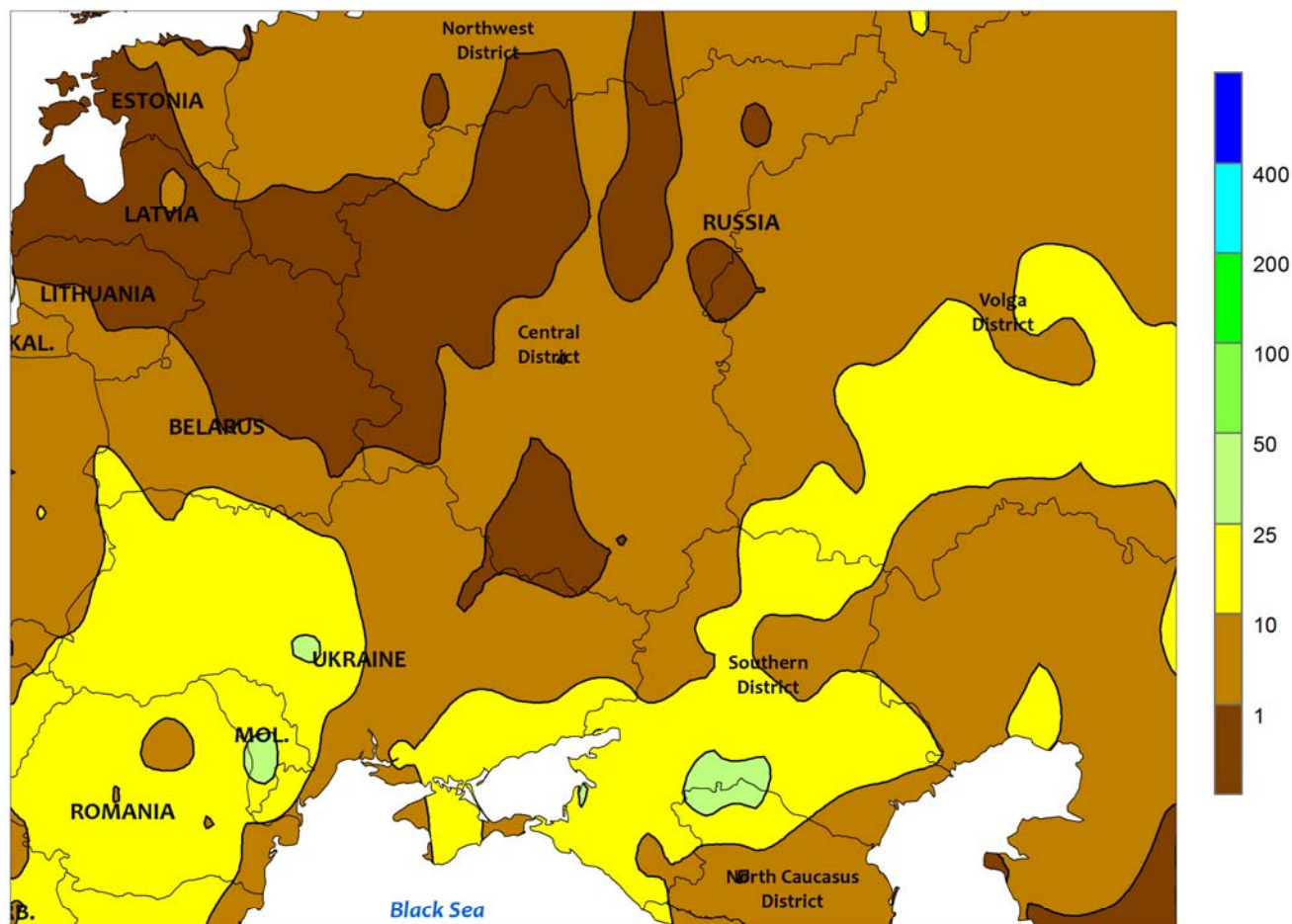


EUROPE

Warm, wet weather in southern Europe contrasted with dry, increasingly cold conditions in the north. A strong area of high pressure over Scandinavia maintained dry, chilly weather (1-5°C below normal) from Germany and the Low Countries into Poland and the Baltic States. While much of the northern Europe snowpack has melted, there were no incursions of bitter cold during the past week; consequently, dormant wheat and rapeseed continued to overwinter in satisfactory condition. Meanwhile, a series of Atlantic

storms marched east before being deflected south across the Mediterranean Sea, triggering widespread moderate to heavy rain (10-70 mm) across much of western and southern Europe. The showers in England and France improved moisture reserves for dormant winter crops following a drier-than-normal autumn. Farther south, the rain was beneficial for vegetative winter wheat and barley in Spain and Italy, while snow in the mountains improved spring runoff prospects for irrigated summer crops.

WESTERN FSU
Total Precipitation (mm)
FEB 5 - 11, 2017



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

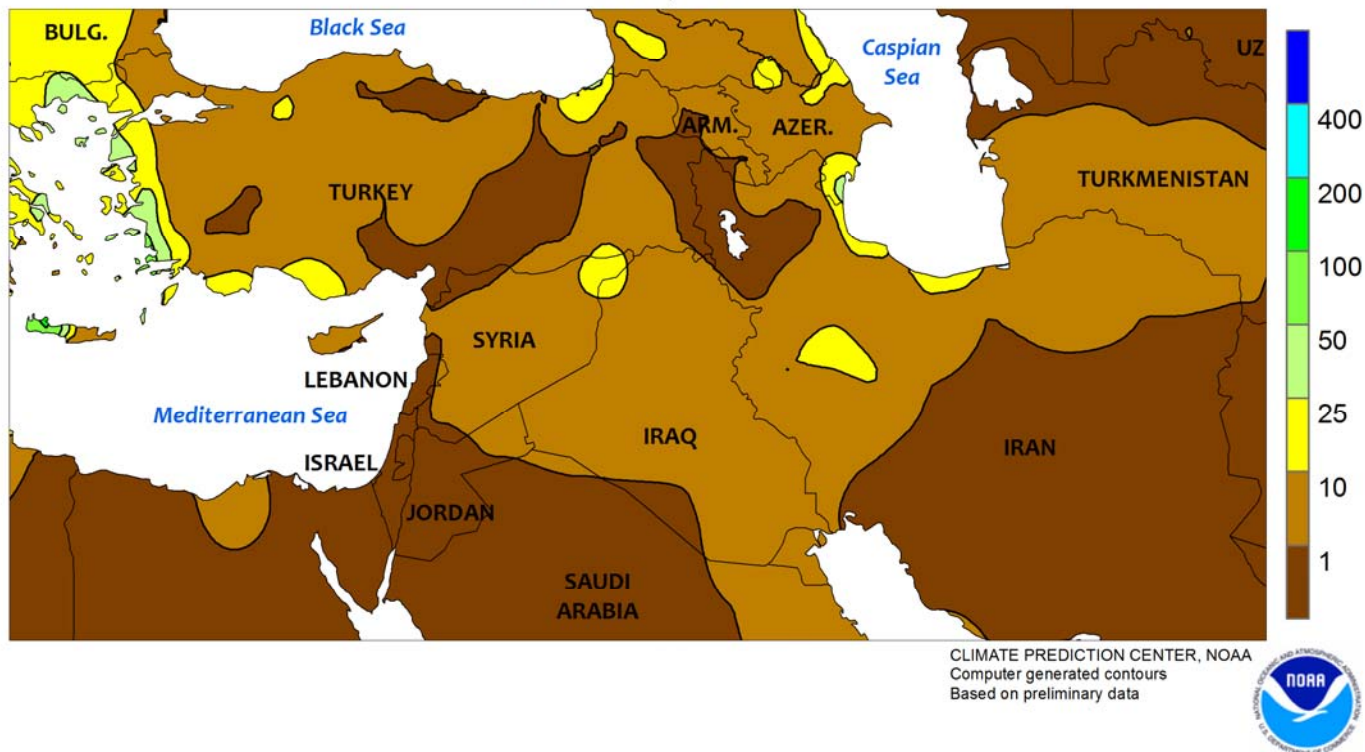


WESTERN FSU

Winter wheat remained adequately protected from bitter cold by snow cover over most of the region. For a second consecutive week, minimum temperatures as low as -30°C across central portions of Ukraine and Russia had no detrimental impact on dormant winter wheat due

to a moderate to deep snowpack (10-60 cm). In southwestern Russia, a fresh snowfall (5-15 cm) protected winter wheat from nighttime readings as low as -20°C . Overall, wheat continued to overwinter in good condition in Ukraine and Russia.

MIDDLE EAST
Total Precipitation (mm)
FEB 5 - 11, 2017

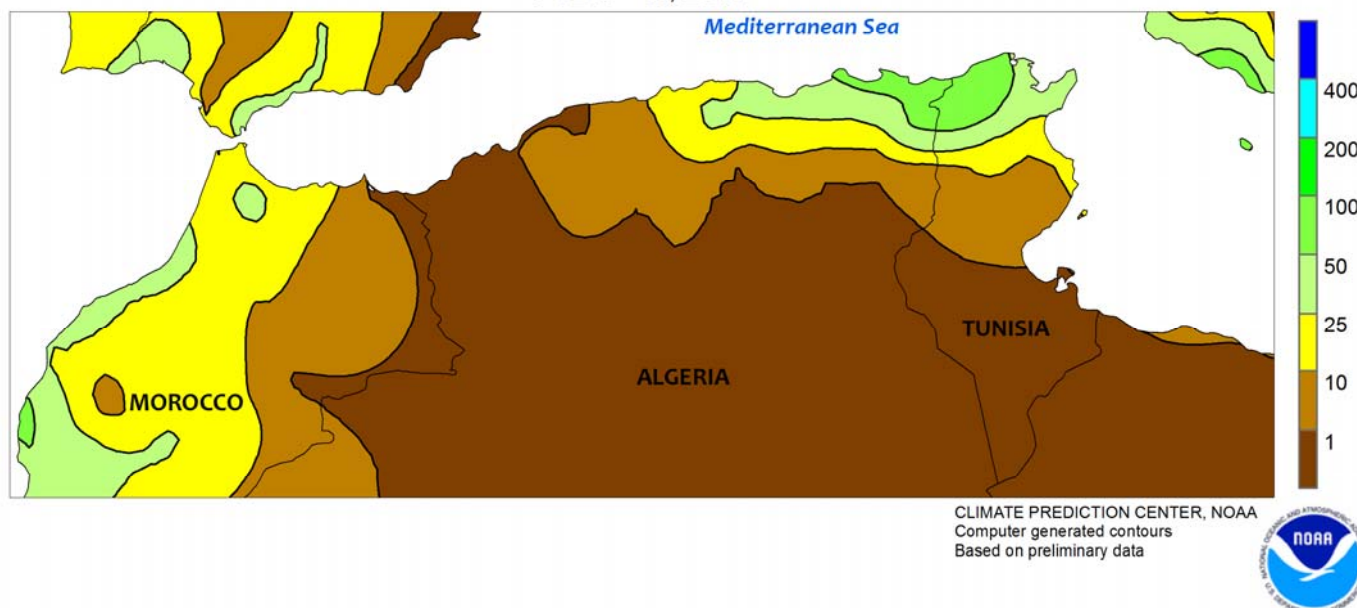


MIDDLE EAST

Warm, mostly dry weather prevailed, though heavy rain and mountain snow was overspreading southern and western portions of Iran at the end of the period. A weakening Mediterranean disturbance was responsible for a trace to 15 mm of rain and mountain snow from central and southern Turkey into northern Iran; however, most areas reported 2 mm or less. Nevertheless, moisture supplies remained favorable for vegetative (south) to dormant (north) winter grains. An exception was the moderate to heavy rain (10-80 mm, locally

more) which fell in western Turkey, though the country's primary winter crop areas lie farther east. Temperatures averaged 2 to 5°C above normal across central and northern growing areas, eroding the protective snow cover in central Turkey and northwestern Iran. After the relatively quiet week, a potent winter storm was bringing heavy rain and mountain snow to western and southern Iran as of February 13 (*more information regarding this storm system will be made available in next week's Bulletin*).

NORTHWESTERN AFRICA
Total Precipitation (mm)
FEB 5 - 11, 2017

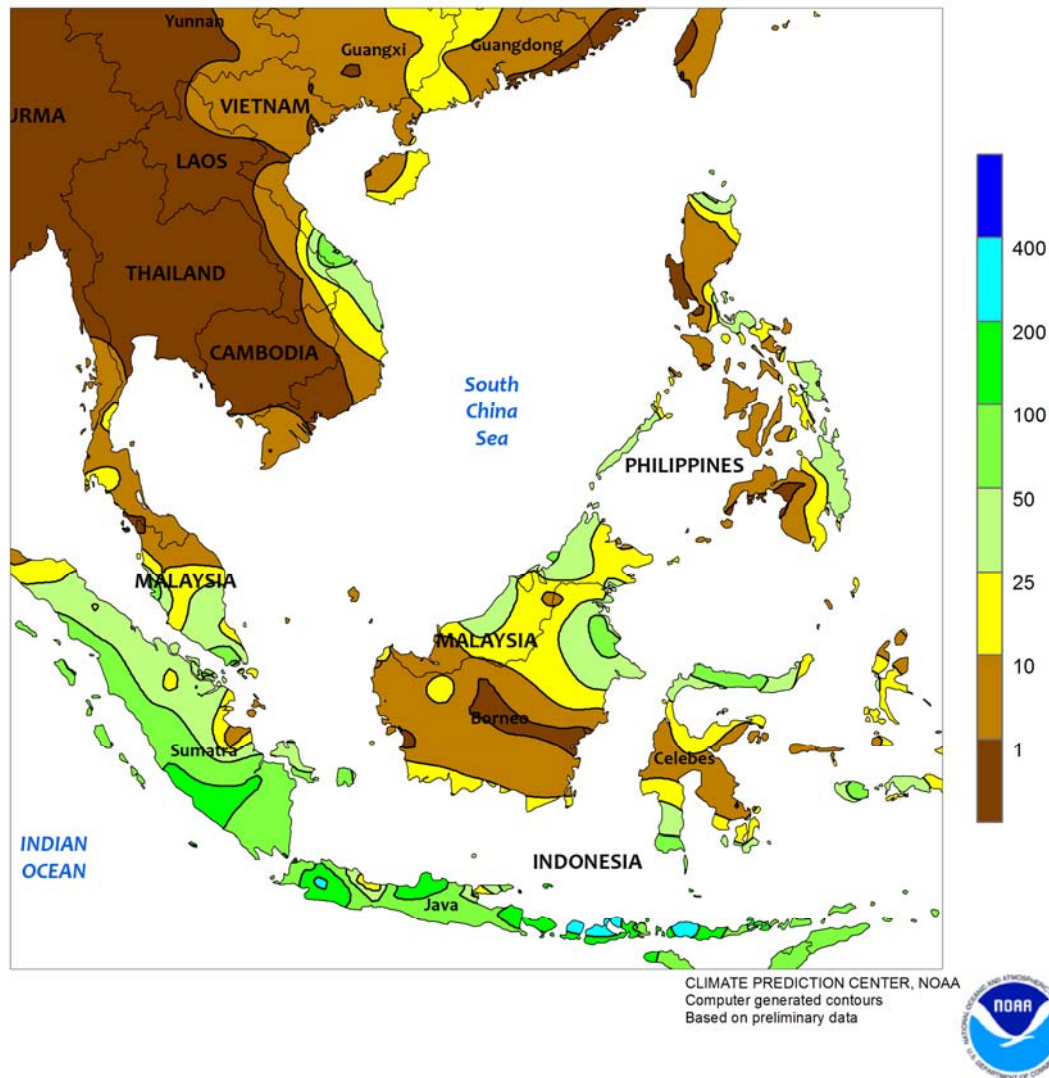


NORTHWESTERN AFRICA

A pair of storms bookended the week, producing widespread rain over many of the region's primary winter grain areas. Early in the period, a storm system in the central Mediterranean Sea produced 10 to 100 mm of rain across northeastern Algeria and northern Tunisia, maintaining adequate to abundant soil moisture for vegetative winter grains. The storm mostly

bypassed north-central Algeria, which was a welcomed break for producers following January's excessive rainfall (locally more than 400 mm). By week's end, an Atlantic storm system and its associated cold front triggered widespread showers (10-60 mm) in Morocco, maintaining good to excellent yield prospects for vegetative winter wheat and barley.

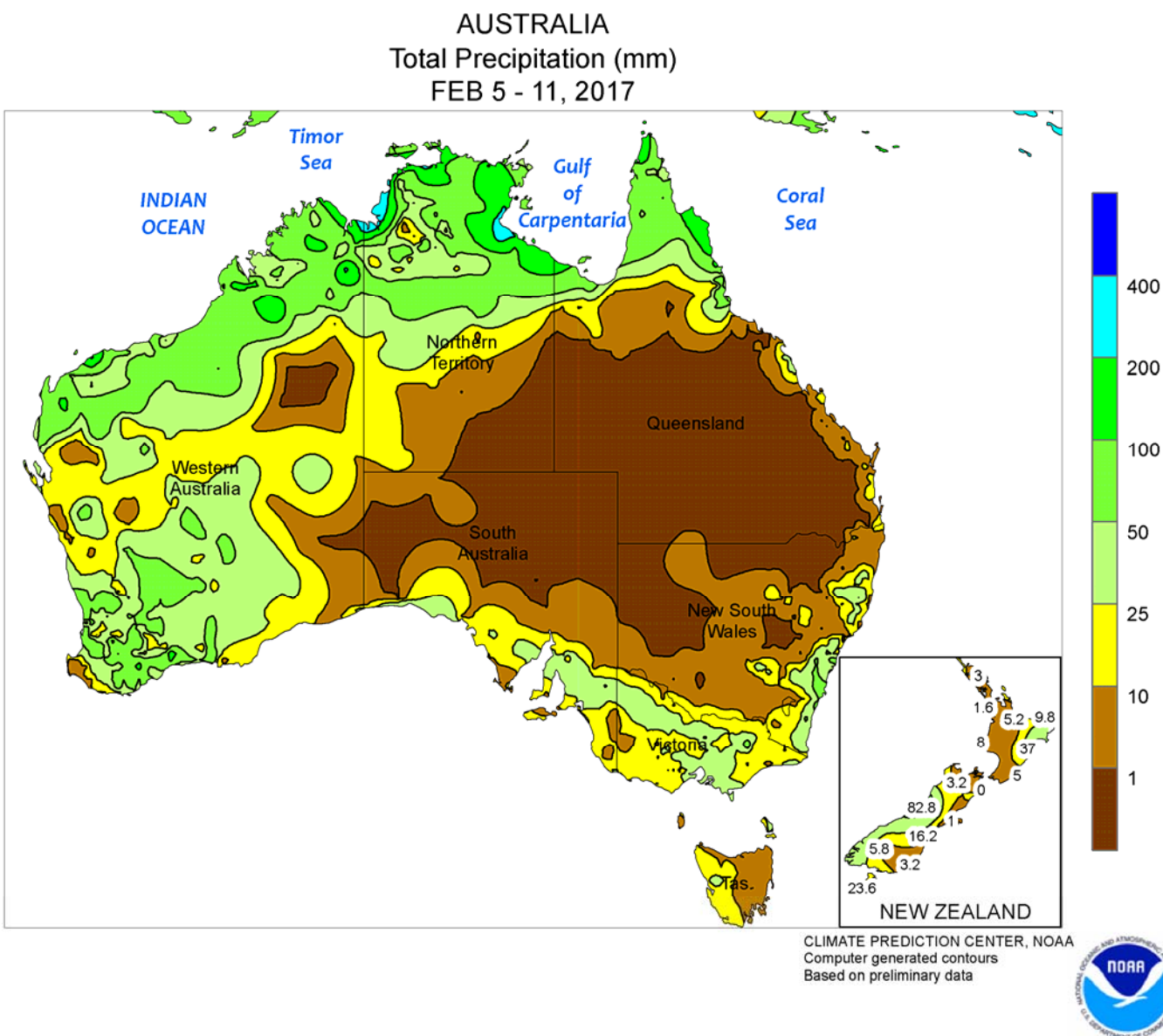
SOUTHEAST ASIA
Total Precipitation (mm)
FEB 5 - 11, 2017



SOUTHEAST ASIA

Showers continued throughout the region, albeit lighter in some areas. In the Philippines, 25 to over 50 mm of rain was reported along the eastern half of the country, maintaining adequate to locally excessive soil moisture for rice and corn in latter stages of development. Meanwhile, drier weather (less than 25 mm) in eastern Luzon eased some of the excessive wetness that has occurred over the last several

weeks. To the south, showers across Malaysia and Indonesia brought over 50 mm to oil palm, although portions of the Malaysian peninsula and Kalimantan, Indonesia, experienced drier conditions. In Java, Indonesia, localized downpours (200-350 mm) caused flooding and damage to maturing rice and corn, while crops in the remainder of Java benefited from more seasonable amounts (50-100 mm).

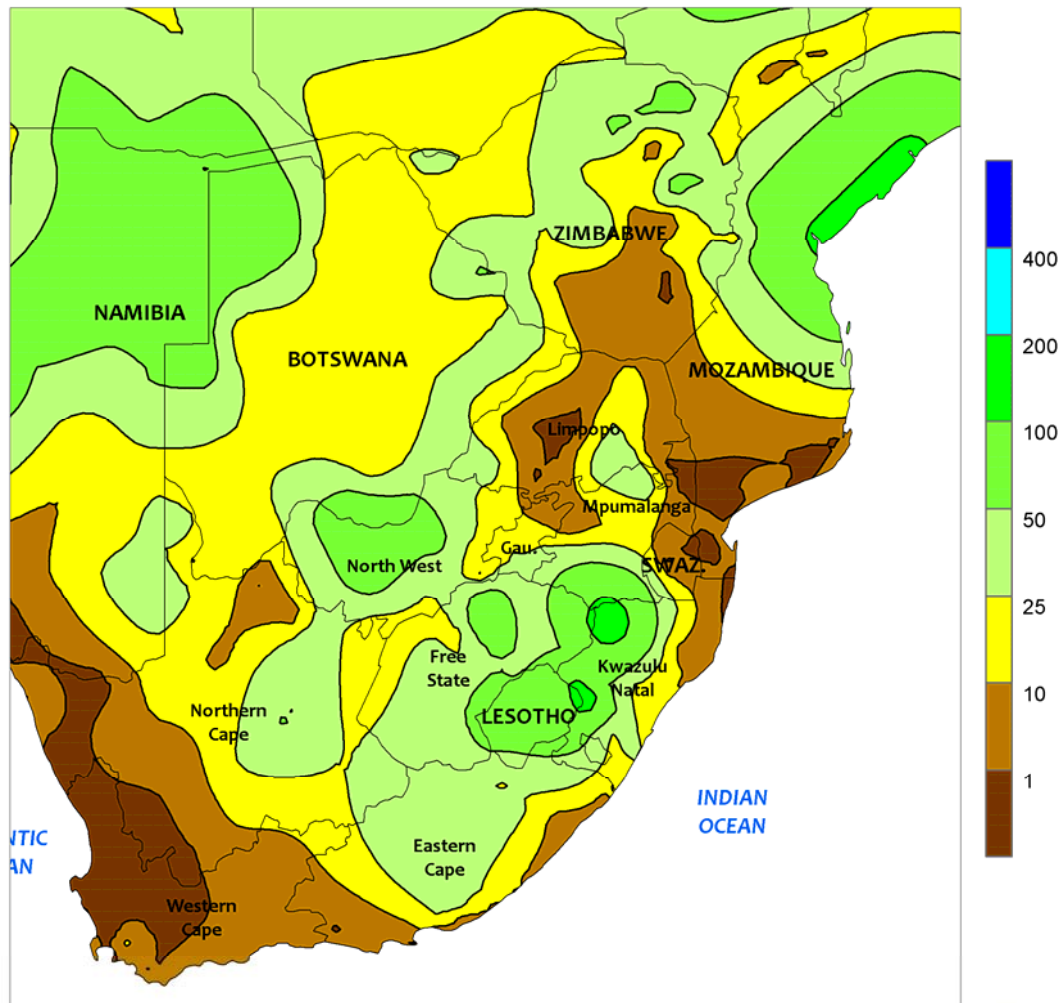


AUSTRALIA

Hot, mostly dry weather covered southern Queensland and northern New South Wales, likely reducing the yield prospects of some summer crops. The weather was most unfavorable for dryland cotton and sorghum, stressing immature crops while accelerating the pace of development. The hot, dry weather impacted irrigated crops as well, increasing the need for supplemental irrigation. Despite these negative impacts, a small subset of crops likely benefited from the heat and dryness; the hot, dry weather aided maturation of crops which had been sown early in the growing season. Temperatures averaged 3 to 6°C above normal in eastern Australia. In major

summer crop producing areas, daily maximum temperatures were consistently in the upper 30s and lower 40s degrees C in the west and in the lower to middle 30s in the east. Elsewhere in Australia, widespread showers (5-25 mm, locally more) fell across South Australia, Victoria, and southeastern New South Wales, while heavy rain (50-100 mm, locally near 200 mm) in Western Australia caused local flooding. Although the rain was unfavorable for fieldwork, harvesting of the 2016/17 wheat, barley, and canola crops has mostly concluded. Planting of winter grains and oilseeds typically begins in April and May each year.

SOUTH AFRICA
Total Precipitation (mm)
FEB 5 - 11, 2017



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

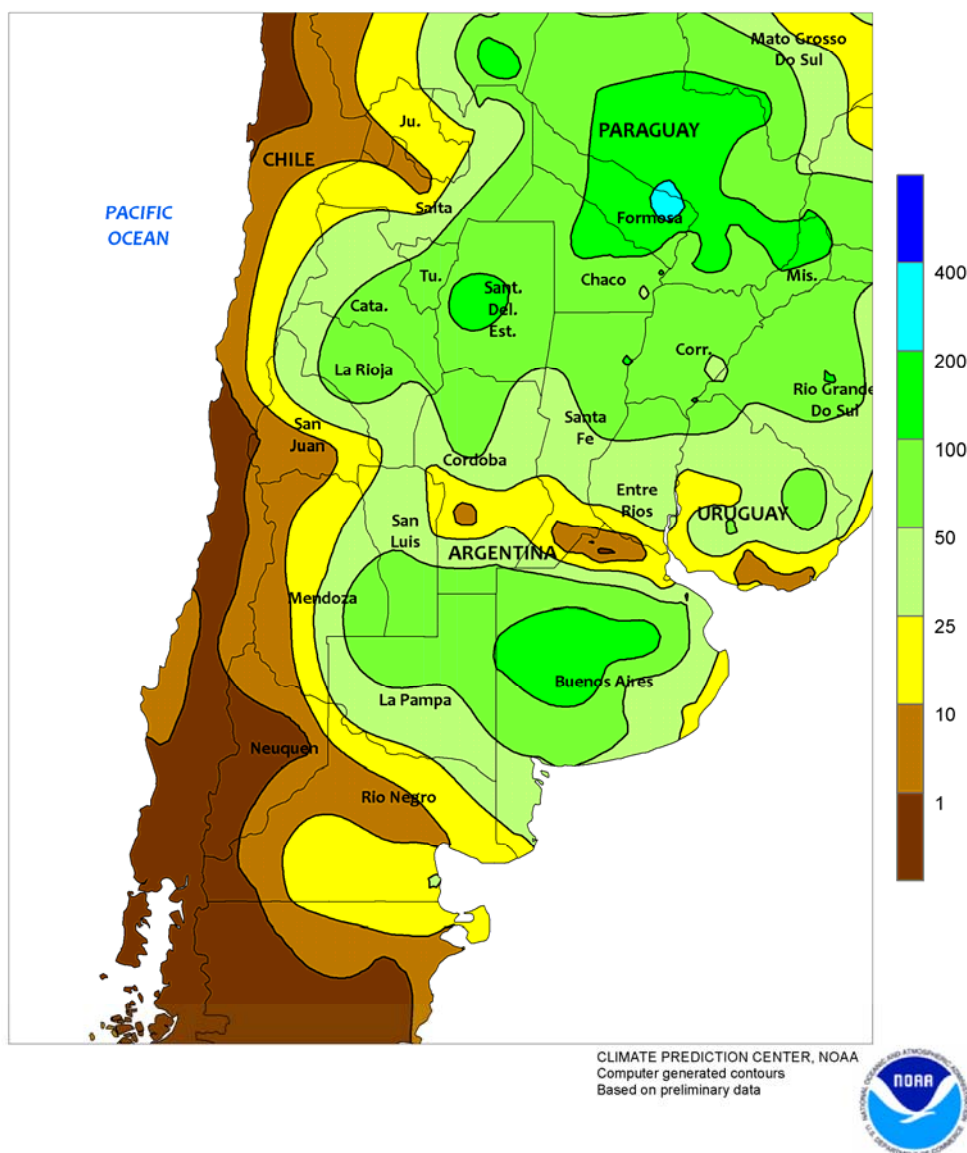


SOUTH AFRICA

Warm, showery weather maintained overall favorable conditions for summer crops advancing through reproduction across the corn belt. Most locations from North West and Free State to Mpumalanga recorded at least 10 mm, with pockets of heavy rain (greater than 50 mm) concentrated over commercial white corn areas in North West and central Free State. Moderate to heavy rain (25-50 mm, locally in excess of 100 mm) also fell in previously-dry summer crop areas in northwestern KwaZulu-Natal and neighboring locations in Free State and Mpumalanga, boosting moisture for corn and other reproductive to filling summer crops following several weeks of relative dryness. Weekly average temperatures were near to above normal in

eastern sections of the corn belt (in and around Gauteng and Mpumalanga) and up to 2°C below normal in far western and northern production areas, with daytime highs mostly reaching the upper 20s and lower 30s (degrees C). Somewhat lighter rain (10-50 mm) fell in rain-fed sugarcane areas of southern KwaZulu-Natal, as drier, warmer conditions (daytime highs reaching the middle and upper 30s) fostered rapid development of rain-fed sugarcane. In the Cape Provinces, scattered showers (5-25 mm or more, locally approaching 50 mm) continued over irrigated corn and cotton areas of the Orange River Valley as seasonable warmth and dryness advanced development of tree and vine crops in Western Cape.

ARGENTINA
Total Precipitation (mm)
FEB 5 - 11, 2017

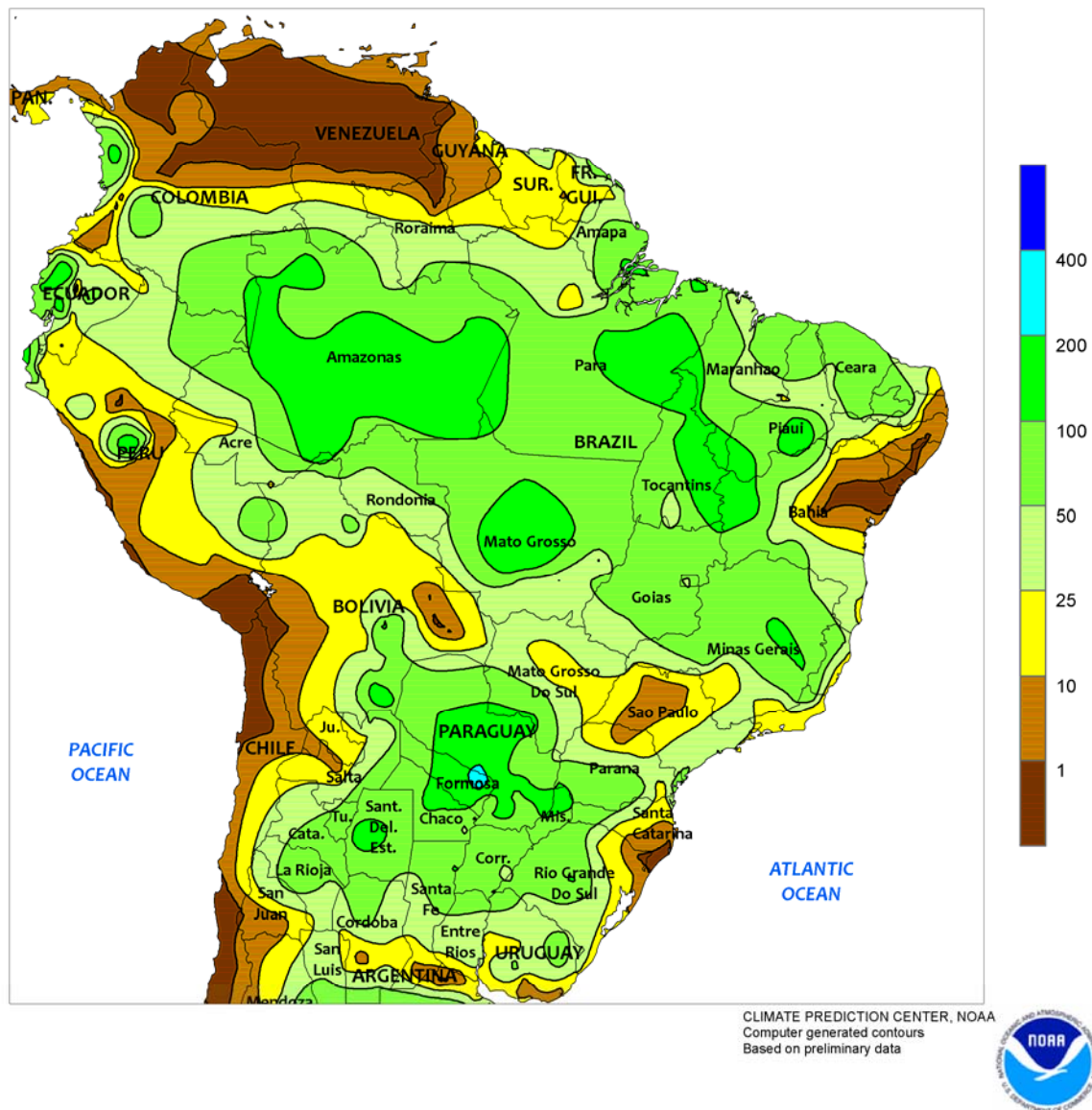


ARGENTINA

Showers overspread the region, maintaining adequate to locally excessive levels of moisture for summer grains, oilseeds, and cotton. In central Argentina, the heaviest rainfall (50-180 mm) was concentrated over Buenos Aires, eastern La Pampa, and southern Cordoba. Other locations received lighter amounts, though most areas recorded at least 25 mm, including previously-flooded locations in the vicinity of southern Santa Fe. According to reports emanating from Argentina, lingering wetness remained a problem in parts of Santa Fe for the treatment of pests and diseases. Weekly average temperatures were 1 to 2°C below normal; daytime highs reached the upper 20s and lower 30s (degrees C) on several days as the weather

warmed from early-week highs in the upper 10s to lower 20s. Farther north, moderate to heavy rain (10-50 mm or more, with local amounts in excess of 100 mm) provided timely moisture for summer crops following several weeks of drier-than-normal weather. As in central Argentina, weekly average temperatures were as much as 2°C below normal, though temperatures occasionally reached into the upper 30s in the traditionally warmer northwestern agricultural areas (notably Santiago del Ester, Salta, and much of Chaco and Formosa). According to the government of Argentina, sunflowers were 35 percent harvested as of February 9, similar to last year's pace, with most progress reported in the more northerly production areas.

BRAZIL
Total Precipitation (mm)
FEB 5 - 11, 2017



BRAZIL

Rainfall intensified over recently dry sections of southern and northern Brazil, increasing moisture for development of immature summer row crops. Amounts totaled 25 to 70 mm over Rio Grande do Sul, with similar readings in Santa Catarina and southern Parana. Locally heavier amounts extended westward into Paraguay. According to the government of Rio Grande do Sul, even though corn was 35 percent harvested as of February 9, about 40 percent of the crop was in stages ranging from vegetative to filling and benefited from the rain. Soybeans are farther behind in development, with nearly 90 percent of the crop still vegetative to filling. To the north, drier conditions prevailed over a broad area centered over Sao Paulo, though moisture levels were likely favorable for summer crop development due to recent weeks of above-normal rainfall. Above-normal temperatures (daytime highs reaching the middle 30s degrees

C) exacerbated the impacts of the sunny weather on evaporation rates. In contrast, heavy rain (50-100 mm or more) returned to the northeastern interior (western Bahia, Tocantins, and farming areas in southern sections of Piaui and Maranhao), increasing moisture for immature soybeans and cotton. Meanwhile, seasonably heavy favorable rainfall (25-50 mm or more, locally exceeding 100 mm) maintained crop summer prospects in the Center-West Region; according to the government of Mato Grosso, soybeans were about 46 percent harvested as of February 10, 20 points ahead of last year. Consequently, corn planting in Mato Grosso — Brazil's largest producer of second-crop corn — was proceeding ahead of last year's pace (47 percent versus 21 percent last year), sustaining high yield prospects. Cotton planting in Mato Grosso, also a leading producer, slightly ahead of last year's pace of 93 percent.

8 Feb 2017
19:00 UTC

GOES West Visible
February 8, 2017
11:00 am PST



An impressive Pacific storm train returned to northern and central California and the Northwest in early February, adding another 8 inches of liquid to the Sierra Nevada snowpack—and boosting the season-to-date accumulation to 38 inches—by the 11th.

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