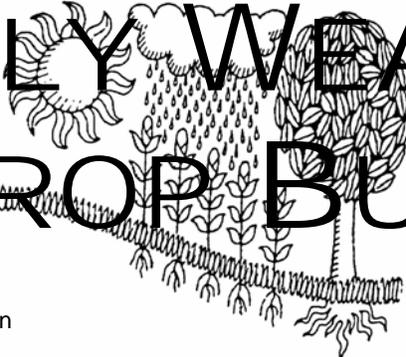
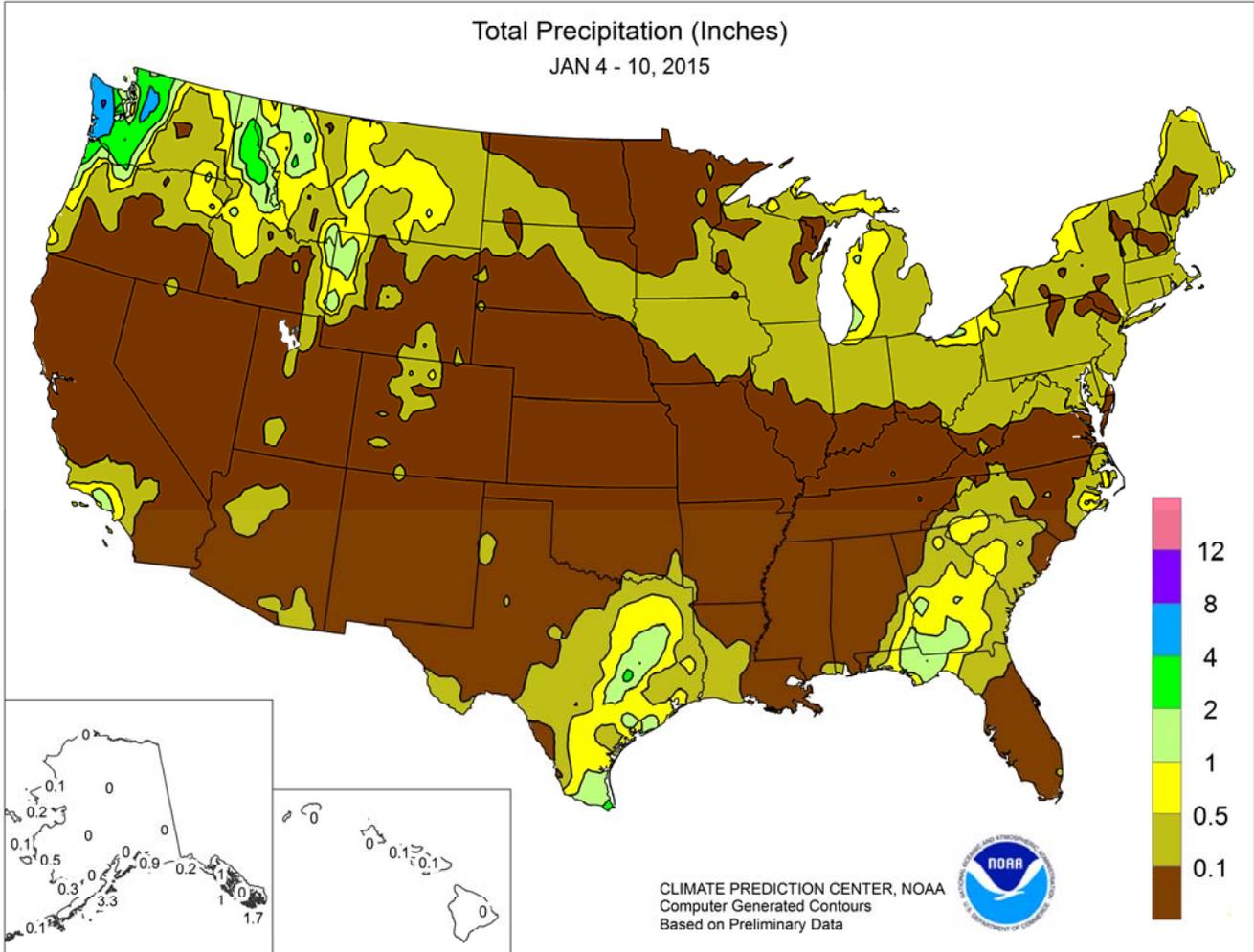


# WEEKLY WEATHER AND CROP BULLETIN



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 January 4 – 10, 2015

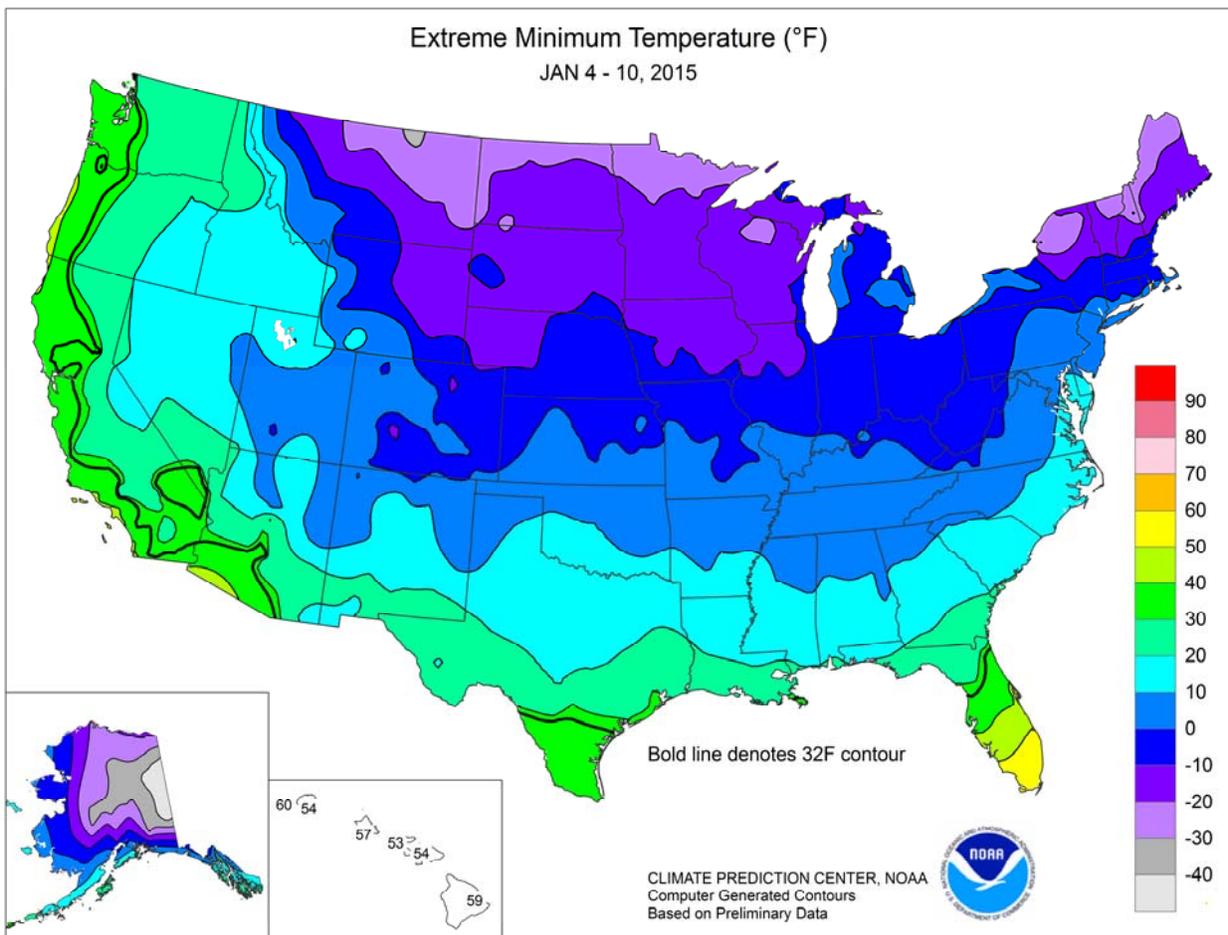
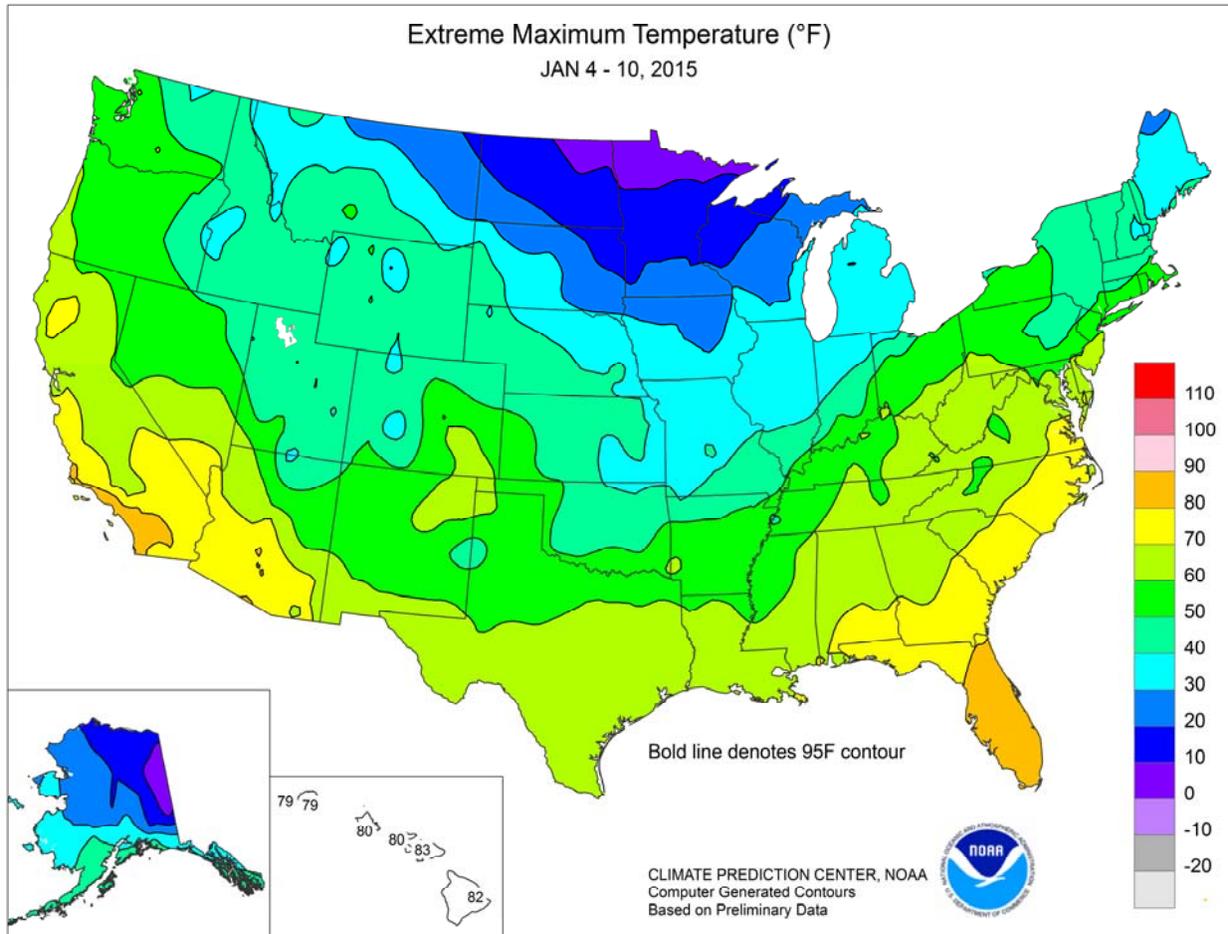
*Highlights provided by USDA/WAOB*

Precipitation was mostly light nationwide, with significant totals confined to the **Pacific Northwest** and **northern Rockies**. **West of the Cascades**, early-week downpours resulted in local flooding and mudslides. Farther east, **Midwestern** precipitation was light but led to travel disruptions due to snow showers, blowing snow, high winds, and local ground-blizzard conditions. Periods of snow also spread across the **Northeastern and Mid-Atlantic States**. In addition, snow squalls plagued areas downwind of the **Great Lakes**. At week's end, showers

*(Continued on page3 )*

### Contents

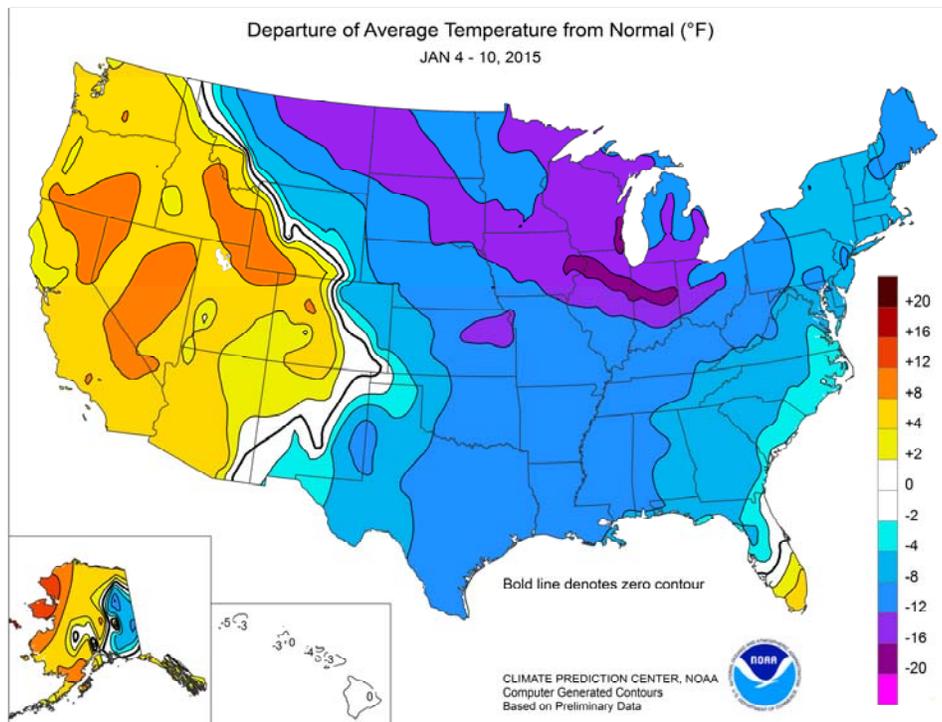
Extreme Maximum & Minimum Temperature Maps.....	2
Temperature Departure Map .....	3
January 6 Drought Monitor & Snow Cover Map .....	4
National Weather Data for Selected Cities .....	5
<b>December Weather and Crop Summary .....</b>	<b>8</b>
<b>December Precipitation &amp; Temperature Maps .....</b>	<b>12</b>
<b>December Weather Data for Selected Cities .....</b>	<b>15</b>
National Agricultural Summary .....	16
<b>January 8 ENSO Update .....</b>	<b>17</b>
International Weather and Crop Summary .....	18
Bulletin Information & <b>U.S. Crop Production Highlights.....</b>	<b>28</b>



(Continued from front cover)

developed across **southern California**, although precipitation did not reach the state's key watershed areas. Consequently, the water content of the high-elevation **Sierra Nevada** snowpack was only about 40 percent of the mid-January average. Elsewhere, precipitation was limited to the **western Gulf Coast region** and parts of the **Southeast**. The **Southeastern** precipitation mostly fell (and ended) on January 5, while the **Gulf Coast** rain (mixed with some freezing rain, sleet, and snow) developed at week's end. Along with the generally dry conditions, frigid weather prevailed from the **Plains to the East Coast**. As a result, weekly temperatures averaged at least 10°F below normal across large sections of the **Plains, mid-South, and Midwest**. In fact, the coldest weather of the season threatened unprotected winter wheat across the **lower Midwest**. Although snow helped to provide insulation in many areas, some soft red winter wheat in the **middle Mississippi and lower Ohio Valleys** was exposed to temperatures near 0°F—especially on January 8. Farther west, much of the **northern and central Plains'** hard red winter wheat had a protective snow cover at the height of the cold wave from January 4-8. At times, sub-zero temperatures were noted as far south as **Colorado and Kansas**. Although snow was not present across the **southern Plains**, temperatures stayed above 0°F. Winter agricultural areas of **southern Texas** and **peninsular Florida** escaped without a freeze. However, temperatures below 40°F occurred in **Florida's northern citrus belt** on January 8 and in **Deep South Texas** on January 10. In contrast, mild weather dominated the **West**, where temperatures averaged at least 10°F above normal in portions of the **Intermountain region and Great Basin**.

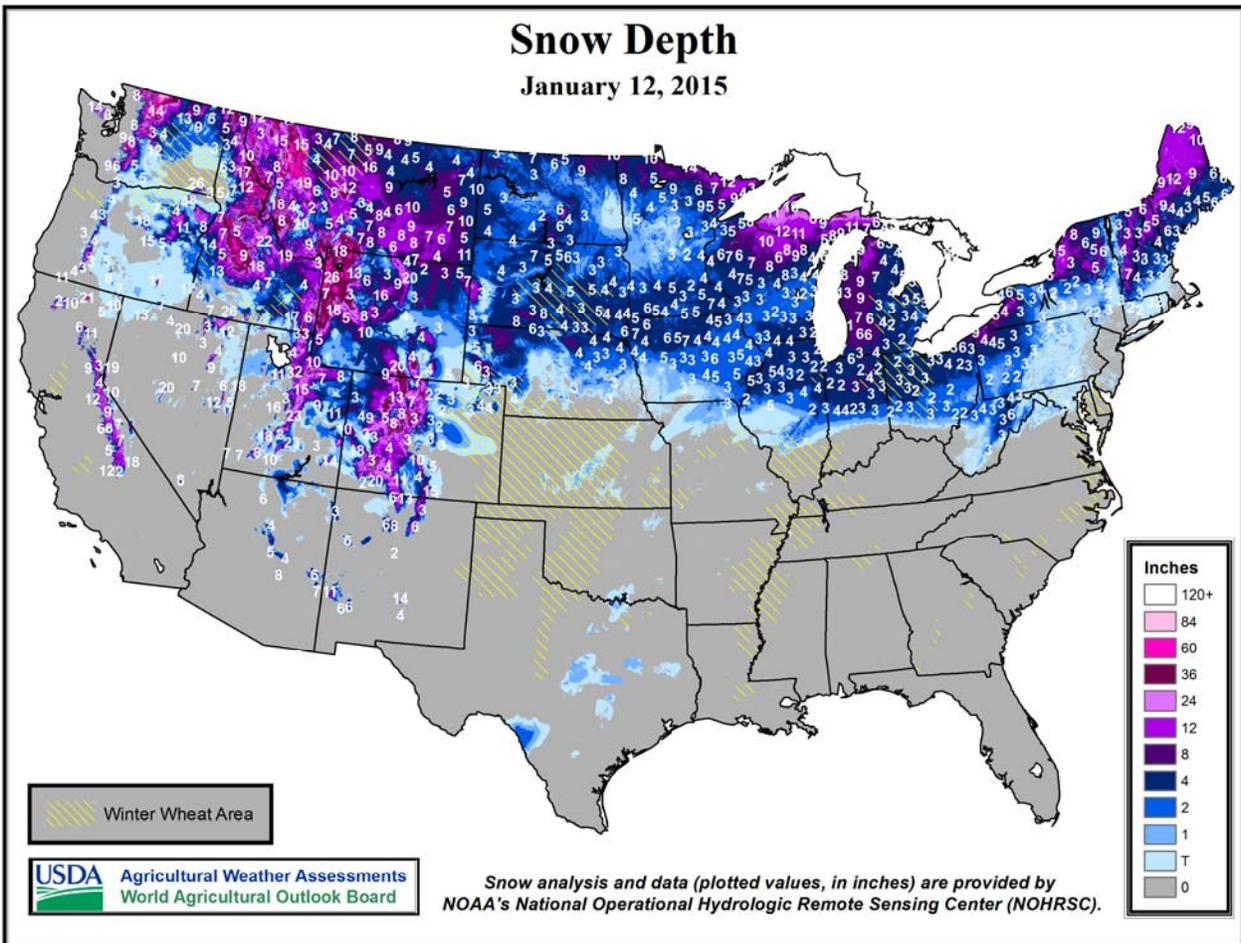
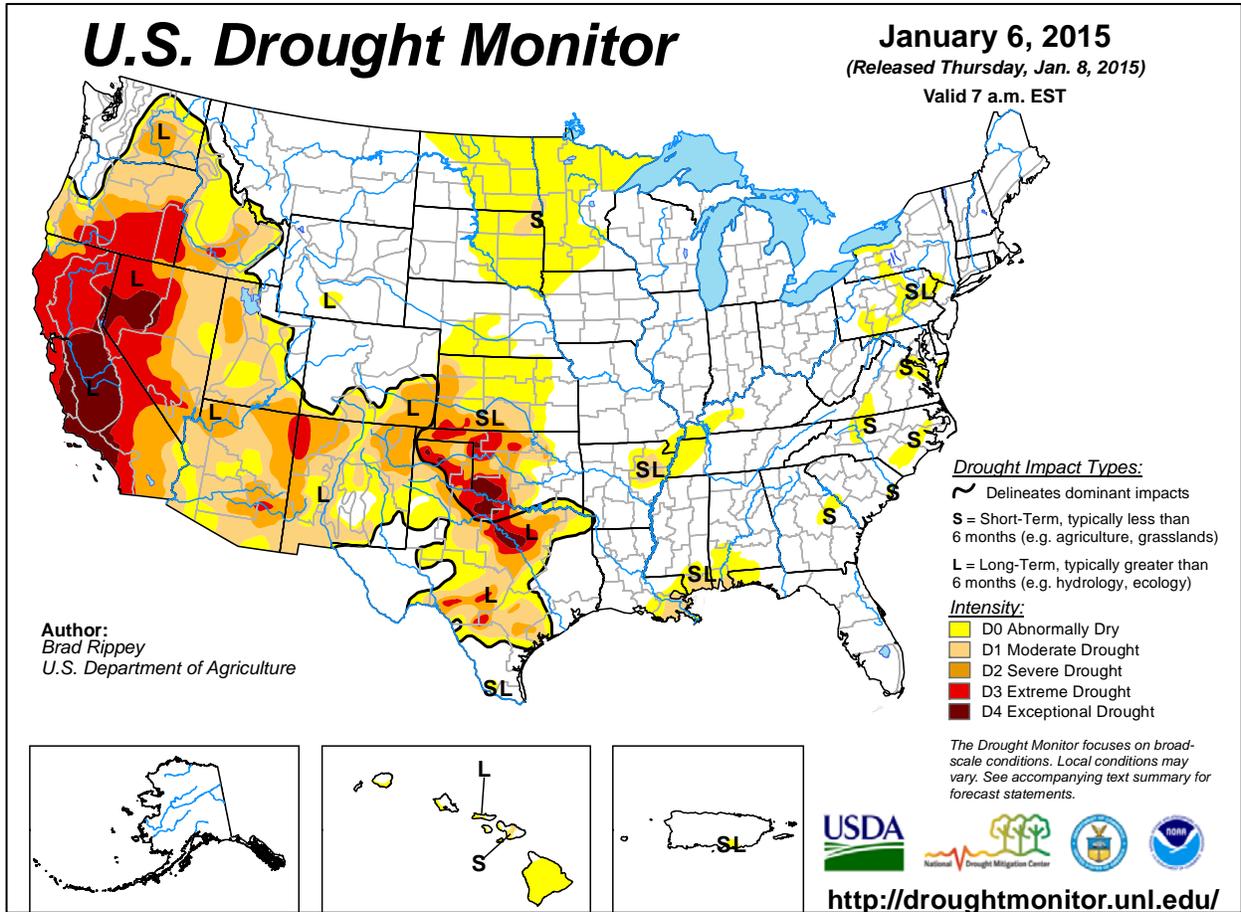
Torrential rain on January 4 caused local flooding and mudslides in **western Washington**, where daily-record precipitation totals included 4.99 inches in **Quillayute** and 4.58 inches in **Hoquiam**. January 1-10 rainfall topped 7 inches in both locations. **Astoria, OR**, also collected a daily-record total for January 4, when 3.22 inches fell. Farther inland, heavy snow blanketed the **northern Rockies** and environs. **Kalispell, MT**, netted 19.2 inches of snow on January 4-5. Snow also spread across the **northern Plains**, where daily-record totals for January 5 reached 6.7 inches in **Glasgow, MT**, and 5.0 inches in **Sioux Falls, SD**. At the same time, high winds swept across the **northern Intermountain West**. In **Wyoming**, wind gusts were clocked to 72 mph in **Rawlins** and 64 mph in **Cheyenne**. Meanwhile, precipitation lingered early in the week across the **Atlantic Coast States**, where daily-record totals for January 4 included 1.29 inches in **New Bern, NC**, and 0.87 inch (including 5.2 inches of snow) in **Caribou, ME**. By mid-week, one of the strongest high-pressure systems on record—based on central barometric pressure—moved from **Montana into the mid-South**. On January 7, all-time barometric pressure records were established in locations such as **Grand Island, NE** (31.21 inches, or 1056.9 millibars), and **Chanute, KS** (31.16 inches, 1055.1 millibars), erasing standards originally set on December 22, 1989. Elsewhere in **Kansas**, **Topeka** (31.13 inches, or 1054.3 millibars) edged a barometric pressure record originally set on December 9, 1898. Elsewhere on January 7, the pressure in **Great Falls, MT**, topped 31.01 inches (1050 millibars) for the second time this winter, having also done so on December 29-30, 2014. By January 8, blizzard conditions developed across portions of the **northern Plains and Midwest**. On that date, **Muskegon, MI**, received a daily-record snowfall of 8.0 inches and clocked a wind gust to 55 mph. During the first 10 days of January, **Muskegon's** snowfall totaled 29.6 inches. Elsewhere in the **north-central U.S.**, January 8



wind gusts reached 59 mph in **Sioux City, IA**, and **Bismarck, ND**. At week's end, rain developed in the **western Gulf Coast region**, where **Brownsville, TX** (2.70 inches), reported its second-wettest January day.

Fleeting warmth prevailed in the East on January 4, when daily-record highs included 86°F in **Vero Beach, FL**, and 70°F in **Georgetown, DE**. Cold conditions dominated the **central and eastern U.S.** for the remainder of the week. Despite the surge of frigid air into the **nation's mid-section**, relatively few record lows were set. By January 6, however, enough cold air reached the **Northeast** to set a daily-record low (-13°F) in **Bangor, ME**. The following day, **Watertown, NY** (-27°F), notched a record-setting low for January 7. Later, a strong push of cold air into the **Southeast** led to daily-record lows for January 8 in locations such as **Greensboro, NC** (6°F); **Anniston, AL** (10°F); **Greenwood, MS** (10°F); and **Pensacola, FL** (19°F). Chilly weather lingered in the **East** through week's end, when **Parkersburg, WV**, posted a daily-record low of -4°F on January 10. In contrast, a large number of daily-record highs were established in the **West**, especially during the early- to mid-week period. Record-setting highs for January 5 reached 61°F in **Yakima, WA**, and 58°F in **The Dalles, OR**. **Camarillo, CA**, registered consecutive daily-record highs (82 and 85°F, respectively) on January 5-6. Other daily-record highs on January 6 in **southern California** soared to 87°F in **Escondido** and 82°F in **Santa Barbara**. During another wave of records on January 7, highs surged to daily-record levels in **Phoenix, AZ** (81°F), and **Monterey, CA** (80°F).

Cold conditions developed across **eastern interior Alaska**, but mild weather continued farther west. In fact, **King Salmon** collected consecutive daily-record highs (48 and 45°F, respectively) on January 8-9. Elsewhere on the 9th, **Nome** also registered a daily-record high (35°F). Late-week precipitation accompanied the mild weather in **southwestern Alaska**, where **Bethel** netted a daily-record total (0.31 inch, in the form of rain, freezing rain, and snow) on January 9. Farther south, cool, mostly dry conditions prevailed across **Hawaii** in the wake of last week's cold frontal passage. From January 3-5, **Lihue, Kauai**, posted a trio of daily-record lows (56, 54, and 57°F). **Honolulu, Oahu**, noted a pair of daily records (58 and 57°F, respectively) on January 4-5. Neither **Lihue** nor **Honolulu** received measurable rain during the week. On the **Big Island**, **Hilo's** 0.02-inch total from January 1-10 was less than 1 percent of its normal value of 2.79 inches.



National Weather Data for Selected Cities

Weather Data for the Week Ending January 10, 2015

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			
																90 AND ABOVE	82 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	46	22	63	8	34	-9	0.65	-0.54	0.65	10.20	175	3.05	223	77	35	0	6	1	1
HUNTSVILLE	43	22	65	7	33	-7	0.14	-1.12	0.14	8.24	117	2.51	173	69	50	0	6	1	0
MOBILE	52	30	70	17	41	-9	0.60	-0.59	0.56	6.26	104	0.99	73	85	43	0	5	2	1
AK MONTGOMERY	52	27	71	14	40	-6	1.06	0.01	1.06	6.09	99	1.20	99	78	30	0	5	1	1
ANCHORAGE	24	14	35	2	19	3	0.02	-0.14	0.01	0.70	56	0.02	10	76	65	0	7	2	0
BARROW	4	-14	17	-20	-5	8	0.00	0.00	0.00	0.20	154	0.00	0	86	74	0	7	0	0
FAIRBANKS	-2	-15	22	-30	-8	1	0.00	-0.14	0.00	0.93	102	0.00	0	69	67	0	7	0	0
JUNEAU	32	25	35	13	28	2	1.05	-0.10	0.90	5.72	85	2.43	183	76	68	0	7	4	1
KODIAK	42	35	45	26	38	8	3.25	1.36	1.59	17.13	175	3.34	154	93	85	0	2	6	2
NOME	26	12	35	-4	19	13	0.17	-0.02	0.07	0.88	71	0.34	148	80	70	0	7	3	0
AZ FLAGSTAFF	51	18	58	7	35	6	0.13	-0.31	0.13	3.74	160	0.30	59	88	39	0	7	1	0
PHOENIX	73	47	81	35	60	7	0.00	-0.20	0.00	0.91	78	0.00	0	60	37	0	0	0	0
PRESCOTT	58	28	67	20	43	7	0.20	-0.11	0.20	2.13	129	0.20	54	79	33	0	6	1	0
TUCSON	71	43	79	31	57	6	0.25	0.01	0.25	2.43	184	0.26	90	61	34	0	1	1	0
AR FORT SMITH	40	17	55	9	29	-9	0.00	-0.53	0.00	3.89	97	1.58	255	70	30	0	7	0	0
LITTLE ROCK	40	20	55	10	30	-10	0.00	-0.82	0.00	5.45	96	2.29	241	71	30	0	7	0	0
CA BAKERSFIELD	64	40	69	31	52	6	0.00	-0.23	0.00	2.02	194	0.00	0	81	67	0	1	0	0
FRESNO	63	39	67	31	51	7	0.00	-0.43	0.00	2.29	125	0.00	0	90	75	0	1	0	0
LOS ANGELES	72	51	83	42	62	5	0.59	0.03	0.59	4.63	190	0.59	91	66	47	0	0	1	1
REDDING	64	35	71	32	50	5	0.00	-1.36	0.00	10.39	167	0.00	0	93	80	0	1	0	0
SACRAMENTO	62	38	67	33	50	5	0.00	-0.74	0.00	8.60	261	0.00	0	96	55	0	0	0	0
SAN DIEGO	72	51	80	45	62	5	0.00	-0.45	0.00	4.50	246	0.00	0	77	38	0	0	0	0
SAN FRANCISCO	60	46	63	41	53	4	0.00	-0.87	0.00	10.66	274	0.00	0	89	78	0	0	0	0
STOCKTON	61	36	65	31	48	3	0.01	-0.51	0.01	6.10	251	0.01	2	94	81	0	2	1	0
CO ALAMOSA	37	7	50	-7	22	8	0.00	-0.06	0.00	0.26	65	0.05	71	87	77	0	7	0	0
CO SPRINGS	47	17	61	3	32	4	0.02	-0.06	0.01	0.27	51	0.11	100	88	45	0	7	2	0
DENVER INTL	44	11	56	-10	28	0	0.00	-0.07	0.00	0.74	180	0.16	160	91	52	0	7	0	0
GRAND JUNCTION	40	16	48	5	28	3	0.00	-0.14	0.00	1.05	152	0.00	0	90	74	0	7	0	0
PUEBLO	46	16	61	5	31	2	0.01	-0.07	0.01	0.25	50	0.01	9	91	77	0	7	1	0
CT BRIDGEPORT	33	17	54	4	25	-6	0.48	-0.36	0.38	6.69	151	1.04	107	64	40	0	6	3	0
HARTFORD	30	9	48	0	20	-6	0.36	-0.49	0.25	5.36	117	0.81	83	68	50	0	7	3	0
DC WASHINGTON	40	24	67	12	32	-3	0.40	-0.34	0.20	4.41	113	0.91	106	58	29	0	6	2	0
DE WILMINGTON	34	18	62	8	26	-6	0.49	-0.31	0.33	4.07	94	1.06	115	73	37	0	6	3	0
FL DAYTONA BEACH	68	48	83	37	58	-1	0.00	-0.68	0.00	2.89	83	0.06	8	93	52	0	0	0	0
JACKSONVILLE	62	41	79	27	51	-2	0.27	-0.48	0.27	4.01	115	0.27	31	91	44	0	1	1	0
KEY WEST	78	69	82	62	74	4	0.21	-0.31	0.15	2.46	89	0.21	34	88	69	0	0	2	0
MIAMI	80	66	84	56	73	5	0.03	-0.36	0.02	1.36	52	0.04	9	90	56	0	0	2	0
ORLANDO	71	51	85	38	61	0	0.00	-0.52	0.00	1.59	55	0.00	0	90	56	0	0	0	0
PENSACOLA	55	34	71	19	44	-8	2.76	1.64	2.76	6.26	119	2.76	216	68	34	0	3	1	1
TALLAHASSEE	59	35	73	24	47	-5	1.62	0.44	1.62	10.45	192	1.67	124	72	38	0	2	1	1
TAMPA	69	51	80	37	60	-1	0.00	-0.47	0.00	1.57	55	0.00	0	85	49	0	0	0	0
WEST PALM BEACH	79	64	84	56	71	5	0.31	-0.42	0.31	2.30	58	0.54	64	87	63	0	0	1	0
GA ATHENS	49	24	65	11	36	-6	0.90	-0.08	0.90	6.53	135	1.84	163	72	42	0	6	1	1
ATLANTA	47	25	66	11	36	-6	1.63	0.62	1.63	8.33	167	2.82	243	66	41	0	5	1	1
AUGUSTA	53	26	72	15	40	-5	0.31	-0.63	0.31	4.60	109	0.39	36	81	38	0	6	1	0
COLUMBUS	52	27	70	13	40	-7	1.29	0.25	1.29	6.01	107	1.39	116	75	28	0	5	1	1
MACON	52	26	67	14	39	-6	0.39	-0.66	0.39	6.57	128	0.68	57	87	27	0	6	1	0
SAVANNAH	57	35	77	20	46	-3	0.50	-0.35	0.50	4.54	120	0.52	53	71	38	0	3	1	1
HI HILO	80	63	82	59	72	1	0.00	-2.04	0.00	6.10	48	0.00	0	70	60	0	0	0	0
HONOLULU	79	63	80	57	71	-2	0.00	-0.63	0.00	1.79	50	0.72	97	80	64	0	0	0	0
KAHULUI	79	59	83	54	69	-3	0.08	-0.76	0.08	4.91	121	0.68	70	80	67	0	0	1	0
LIHUE	77	61	79	54	69	-3	0.00	-1.09	0.00	2.27	38	0.87	69	75	63	0	0	0	0
ID BOISE	35	27	41	19	31	2	0.17	-0.13	0.14	3.51	202	0.17	47	96	88	0	7	2	0
LEWISTON	42	34	50	30	38	5	0.18	-0.05	0.16	2.06	155	0.22	79	96	87	0	2	2	0
POCATELLO	40	24	47	19	32	8	0.01	-0.24	0.01	0.78	56	0.01	3	93	84	0	6	1	0
IL CHICAGO/O'HARE	16	-3	33	-8	7	-15	0.35	-0.05	0.15	1.71	59	0.92	196	76	63	0	7	4	0
MOLINE	17	-6	33	-12	6	-15	0.55	0.17	0.39	1.55	59	0.83	189	76	63	0	7	4	0
PEORIA	20	0	35	-8	10	-13	0.38	0.03	0.32	2.25	80	1.02	243	77	55	0	7	3	0
ROCKFORD	15	-6	32	-11	4	-15	0.52	0.21	0.27	1.73	71	0.80	216	75	63	0	7	4	0
SPRINGFIELD	24	3	35	-6	14	-12	0.13	-0.28	0.12	2.60	86	0.65	135	81	53	0	7	2	0
IN EVANSVILLE	32	13	52	3	22	-9	0.07	-0.56	0.07	5.58	130	2.15	291	66	49	0	7	1	0
FORT WAYNE	20	1	37	-8	11	-13	0.35	-0.13	0.12	3.14	94	1.42	254	84	64	0	7	5	0
INDIANAPOLIS	22	1	44	-7	12	-15	0.22	-0.34	0.16	3.56	97	1.01	155	84	59	0	7	3	0
SOUTH BEND	20	1	34	-9	10	-14	0.51	-0.03	0.12	2.78	75	1.31	208	83	73	0	7	6	0
IA BURLINGTON	20	-2	33	-10	9	-14	0.26	-0.05	0.13	1.26	51	0.60	162	85	57	0	7	2	0
CEDAR RAPIDS	15	-9	31	-15	3	-15	0.03	-0.19	0.03	0.68	39	0.03	12	90	63	0	7	1	0
DES MOINES	18	-2	33	-8	8	-13	0.43	0.21	0.34	1.47	92	0.43	165	74	58	0	7	3	0
DUBUQUE	13	-9	30	-15	2	-15	0.36												

Weather Data for the Week Ending January 10, 2015

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	
KY WICHITA	30	7	38	0	19	-11	0.00	-0.23	0.00	1.60	98	0.31	111	64	49	0	7	0	0	
KY JACKSON	35	14	61	-1	25	-9	0.17	-0.64	0.15	3.36	64	0.87	93	72	40	0	6	2	0	
KY LEXINGTON	31	10	59	-1	21	-11	0.26	-0.54	0.26	4.05	82	0.75	81	76	54	0	7	1	0	
KY LOUISVILLE	33	12	62	1	23	-10	0.07	-0.67	0.07	3.95	87	0.38	44	67	40	0	7	1	0	
LA PADUCAH	33	12	52	3	23	-10	0.00	-0.73	0.00	3.98	76	1.09	128	79	43	0	7	0	0	
LA BATON ROUGE	51	31	63	20	41	-9	0.02	-1.28	0.02	9.25	137	3.58	240	82	38	0	5	1	0	
LA LAKE CHARLES	50	33	62	25	41	-10	0.29	-0.93	0.16	5.04	84	3.01	215	88	48	0	3	2	0	
LA NEW ORLEANS	52	36	65	25	44	-9	0.16	-0.98	0.16	5.25	82	1.29	98	75	46	0	1	1	0	
LA SHREVEPORT	46	27	61	18	36	-10	0.04	-0.95	0.04	8.13	143	4.38	381	76	35	0	7	1	0	
ME CARIBOU	13	-8	33	-22	3	-7	0.90	0.19	0.80	6.88	171	1.00	120	80	57	0	7	4	1	
ME PORTLAND	27	7	41	-9	17	-6	0.43	-0.51	0.38	7.21	136	0.94	87	73	46	0	7	2	0	
MD BALTIMORE	35	18	62	6	26	-7	0.44	-0.36	0.22	4.60	108	1.02	111	66	46	0	6	2	0	
MA BOSTON	31	15	52	-1	23	-7	0.50	-0.35	0.47	7.78	165	1.22	123	74	43	0	6	3	0	
MA WORCESTER	28	9	47	-6	19	-5	0.50	-0.43	0.38	6.02	124	1.12	105	79	44	0	7	3	0	
MI ALPENA	16	2	32	-2	9	-10	0.26	-0.15	0.18	2.15	93	0.46	96	82	57	0	7	6	0	
MI GRAND RAPIDS	18	5	33	0	12	-11	0.57	0.12	0.18	2.66	82	1.09	206	85	68	0	7	6	0	
MI HOUGHTON LAKE	13	-1	30	-5	6	-13	0.34	-0.02	0.20	2.25	104	0.82	195	82	68	0	7	3	0	
MI LANSING	17	4	32	-1	11	-11	0.26	-0.08	0.11	2.33	90	0.77	188	84	66	0	7	5	0	
MI MUSKEGON	21	7	33	4	14	-11	0.65	0.14	0.26	2.73	85	1.01	171	78	68	0	7	6	0	
MI TRAVERSE CITY	18	6	33	2	12	-10	0.27	-0.38	0.19	2.16	63	0.34	45	87	65	0	7	3	0	
MN DULUTH	3	-12	13	-18	-4	-13	0.15	-0.05	0.15	1.45	124	0.19	83	70	55	0	7	1	0	
MN INT'L FALLS	-1	-19	6	-28	-10	-12	0.07	-0.08	0.06	1.71	194	0.86	478	77	59	0	7	2	0	
MN MINNEAPOLIS	9	-7	19	-11	1	-12	0.23	0.01	0.15	1.09	87	0.23	88	75	59	0	7	2	0	
MN ROCHESTER	8	-9	20	-14	-1	-13	0.34	0.15	0.18	1.37	110	0.35	159	80	67	0	7	3	0	
MN ST. CLOUD	6	-9	14	-11	-1	-10	0.12	-0.03	0.08	0.87	100	0.12	67	77	56	0	7	2	0	
MS JACKSON	48	25	61	13	36	-9	0.00	-1.26	0.00	6.28	93	2.35	163	73	37	0	6	0	0	
MS MERIDIAN	49	25	64	12	37	-9	0.20	-1.08	0.20	13.56	200	4.88	334	82	39	0	6	1	0	
MS TUPELO	43	19	62	8	31	-9	0.03	-1.22	0.03	7.80	103	2.72	189	75	51	0	7	1	0	
MO COLUMBIA	29	8	37	0	19	-9	0.03	-0.33	0.02	2.65	91	0.47	109	75	42	0	7	2	0	
MO KANSAS CITY	26	5	38	-3	16	-11	0.05	-0.21	0.03	1.93	99	0.10	32	73	46	0	7	2	0	
MO SAINT LOUIS	31	11	40	3	21	-9	0.04	-0.43	0.02	3.42	100	0.70	127	65	49	0	7	3	0	
MO SPRINGFIELD	33	10	38	2	22	-10	0.00	-0.44	0.00	2.39	65	0.62	119	72	44	0	7	0	0	
MT BILLINGS	26	4	42	-7	15	-9	0.51	0.34	0.23	1.50	170	0.83	395	84	68	0	7	4	0	
MT BUTTE	33	14	47	2	23	6	0.01	-0.10	0.01	0.61	91	0.05	36	90	68	0	7	1	0	
MT CUT BANK	19	-4	37	-19	8	-11	0.01	-0.07	0.01	0.36	82	0.04	36	87	70	0	7	1	0	
MT GLASGOW	9	-12	21	-19	-2	-13	0.33	0.25	0.16	0.56	117	0.45	409	78	67	0	7	4	0	
MT GREAT FALLS	26	-2	37	-18	12	-10	0.68	0.51	0.35	1.97	226	0.87	435	91	72	0	7	7	0	
MT HAVRE	11	-10	28	-22	0	-15	0.77	0.66	0.43	1.41	217	1.07	764	81	75	0	7	5	0	
MT MISSOULA	29	19	37	12	24	1	0.79	0.54	0.48	2.15	148	0.89	297	92	79	0	7	3	0	
NE GRAND ISLAND	24	2	39	-4	13	-9	0.00	-0.11	0.00	0.79	99	0.03	21	74	58	0	7	0	0	
NE LINCOLN	24	3	42	-3	13	-10	0.01	-0.16	0.01	1.26	119	0.04	20	70	55	0	7	1	0	
NE NORFOLK	19	-1	34	-5	9	-11	0.05	-0.06	0.05	1.28	162	0.08	57	76	62	0	7	1	0	
NE NORTH PLATTE	26	1	45	-11	14	-9	0.01	-0.07	0.01	1.09	214	0.05	45	81	53	0	7	1	0	
NE OMAHA	21	2	38	-2	12	-10	0.04	-0.13	0.02	1.72	154	0.04	20	75	63	0	7	2	0	
NE SCOTTSBLUFF	29	2	45	-12	16	-8	0.00	-0.11	0.00	1.57	224	0.10	71	83	70	0	7	0	0	
NE VALENTINE	24	-3	38	-15	10	-11	0.03	-0.03	0.03	0.96	240	0.06	86	75	59	0	7	1	0	
NV ELY	54	22	59	11	38	13	0.00	-0.15	0.00	0.73	107	0.00	0	89	62	0	7	0	0	
NV LAS VEGAS	65	43	73	33	54	8	0.00	-0.11	0.00	0.30	56	0.00	0	50	35	0	0	0	0	
NV RENO	55	27	58	24	41	8	0.00	-0.20	0.00	0.93	83	0.00	0	86	68	0	6	0	0	
NV WINNEMUCCA	51	21	57	13	36	7	0.00	-0.19	0.00	1.16	112	0.00	0	88	71	0	7	0	0	
NH CONCORD	26	4	40	-9	15	-6	0.65	-0.01	0.50	6.52	175	1.36	179	77	46	0	7	3	1	
NJ NEWARK	32	17	56	6	25	-7	0.24	-0.64	0.15	6.06	132	1.15	113	70	43	0	6	3	0	
NM ALBUQUERQUE	46	25	56	17	35	0	0.00	-0.11	0.00	1.18	187	0.04	29	76	46	0	7	0	0	
NY ALBANY	28	8	45	-6	18	-5	0.27	-0.28	0.17	6.26	189	0.89	139	78	45	0	6	3	0	
NY BINGHAMTON	22	8	50	-4	15	-8	0.23	-0.32	0.08	4.34	118	1.04	160	79	57	0	6	4	0	
NY BUFFALO	24	9	55	2	17	-8	0.82	0.08	0.52	3.55	76	1.40	163	82	54	0	7	6	1	
NY ROCHESTER	26	11	57	3	18	-7	0.28	-0.24	0.12	3.10	93	0.79	130	72	54	0	7	5	0	
NY SYRACUSE	25	8	55	-8	17	-7	0.08	-0.50	0.03	4.11	108	1.09	163	84	56	0	7	4	0	
NC ASHEVILLE	41	19	60	4	30	-6	1.06	0.21	1.06	4.31	99	1.91	197	72	44	0	6	1	1	
NC CHARLOTTE	47	24	65	8	36	-6	0.25	-0.61	0.25	3.20	77	0.63	64	66	27	0	6	1	0	
NC GREENSBORO	44	23	63	6	33	-5	0.22	-0.54	0.22	2.75	70	0.54	61	66	30	0	6	1	0	
NC HATTERAS	50	35	70	18	42	-5	0.01	-1.30	0.01	3.29	54	0.84	56	86	53	0	3	1	0	
NC RALEIGH	47	25	69	11	36	-4	0.29	-0.56	0.29	5.41	135	0.45	46	65	34	0	6	1	0	
NC WILMINGTON	55	31	76	16	43	-3	0.16	-0.82	0.16	5.41	110	0.43	38	80	35	0	5	1	0	
ND BISMARCK	6	-11	19	-19	-2	-12	0.17	0.09	0.14	0.30	55	0.19	173	75	61	0	7	2	0	
ND DICKINSON	9	-9	21	-16	0	-14	0.03	-0.03	0.03	0.10	24	0.03	43	74	58	0	7	1	0	
ND FARGO	6	-8	12	-13	-1	-8	0.08	-0.09	0.08	0.33	43	0.08	40	72	55	0	7	1	0	
ND GRAND FORKS	2	-13	10	-21	-6	-12	0.06	-0.08	0.06	0.45	63	0.23	135	78	58	0	7	1	0	
ND JAMESTOWN	3	-9	14	-15	-3	-12	0.04	-0.07	0.02	0.11	19	0.08	57	76	59	0	7	2	0	
ND WILLISTON	7	-14	19	-19	-3	-11	0.13	0.02	0.11	0.23	32	0.20	143	76	65	0	7	2	0	
OH AKRON-CANTON	24	6	58	-4	15	-11	0.61	0.04	0.30	4.05	111	1.74	260	76	61	0	7	6	0	
OH CINCINNATI	29	9	61	-2	19	-11	0.28	-0.39	0.27	4.78	118	1.18	151	69	52	0	7	2	0	
OH CLEVELAND	24	7	57	-3	15	-12	1.13	0.58	0.96	3.88	102	1.93	297	79	57	0	7	6	1	
OH COLUMBUS	26	6	58	-6	16	-13	0.37	-0.19	0.21	4.53	127	1.83	282	78	57	0	7	4	0	
OH DAYTON	25	4	58	-7	15	-12	0.51	-0.08	0.23	4.84	128	2.05	297	81	57	0	7	3	0	
OH MANSFIELD	23	4	57	-7	13	-12	0.72	0.11	0.37	3.63	92	1.77	253	88	59	0	7	6	0	

Based on 1971-2000 normals

\*\*\* Not Available

Weather Data for the Week Ending January 10, 2015

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 01	PCT. NORMAL SINCE JAN 01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP
																		01 INCH OR MORE	50 INCH OR MORE	
OK TOLEDO	20	3	37	-5	12	-13	0.45	0.01	0.21	2.40	76	1.31	252	80	64	0	7	5	0	
OK YOUNGSTOWN	23	6	58	-4	15	-11	0.49	-0.04	0.17	3.85	108	1.53	247	80	56	0	7	6	0	
OK OKLAHOMA CITY	39	18	48	11	29	-7	0.00	-0.34	0.00	1.11	48	0.41	100	63	28	0	7	0	0	
OR TULSA	36	14	42	7	25	-11	0.00	-0.37	0.00	2.35	82	0.38	86	68	38	0	7	0	0	
OR ASTORIA	53	40	57	34	47	5	4.39	2.24	2.74	15.24	118	4.67	189	94	87	0	0	3	2	
OR BURNS	41	26	49	18	33	9	0.00	-0.28	0.00	2.29	140	0.00	0	92	80	0	7	0	0	
OR EUGENE	48	37	55	34	42	3	0.04	-1.65	0.03	7.11	70	0.04	2	96	90	0	0	2	0	
OR MEDFORD	50	33	56	31	41	3	0.00	-0.55	0.00	2.31	65	0.00	0	99	83	0	4	0	0	
OR PENDLETON	43	32	54	26	37	4	0.18	-0.12	0.17	2.98	162	0.18	50	92	83	0	4	2	0	
OR PORTLAND	49	38	57	34	44	5	0.39	-0.75	0.23	6.44	92	0.39	30	98	86	0	0	3	0	
OR SALEM	48	38	56	33	43	3	0.14	-1.14	0.08	7.01	88	0.14	9	95	89	0	0	2	0	
PA ALLENTOWN	29	13	50	2	21	-7	0.24	-0.54	0.13	4.56	106	0.91	101	66	47	0	6	4	0	
PA ERIE	25	10	59	2	18	-10	1.06	0.45	0.58	4.26	96	1.81	251	76	58	0	7	7	1	
PA MIDDLETOWN	30	15	49	7	22	-7	0.35	-0.26	0.17	4.17	106	0.91	130	71	42	0	6	3	0	
PA PHILADELPHIA	34	20	58	9	27	-6	0.46	-0.33	0.33	4.49	106	1.22	134	65	42	0	6	3	0	
PA PITTSBURGH	27	9	61	-1	18	-10	0.24	-0.35	0.16	3.43	97	0.80	116	80	52	0	7	3	0	
PA WILKES-BARRE	27	13	49	2	20	-7	0.21	-0.31	0.12	3.47	110	0.69	115	71	46	0	6	3	0	
PA WILLIAMSPORT	28	13	48	3	20	-6	0.25	-0.33	0.13	3.42	94	0.82	121	68	47	0	6	4	0	
RI PROVIDENCE	33	13	56	0	23	-6	0.45	-0.52	0.36	7.30	139	1.05	95	78	52	0	6	3	0	
SC BEAUFORT	58	36	77	20	47	-2	0.64	-0.25	0.64	4.32	105	0.65	64	75	34	0	2	1	1	
SC CHARLESTON	57	34	74	18	46	-2	0.40	-0.50	0.40	3.80	89	0.40	38	76	32	0	3	1	0	
SC COLUMBIA	53	28	73	17	40	-4	0.48	-0.52	0.48	4.56	101	0.66	58	76	37	0	5	1	0	
SC GREENVILLE	47	23	61	9	35	-6	0.71	-0.27	0.71	5.54	111	1.91	171	73	34	0	6	1	1	
SD ABERDEEN	9	-12	20	-18	-2	-13	0.02	-0.09	0.02	0.27	52	0.02	14	72	62	0	7	1	0	
SD HURON	9	-8	22	-14	1	-13	0.24	0.16	0.21	0.94	188	0.24	218	77	63	0	7	2	0	
SD RAPID CITY	25	1	44	-7	13	-9	0.12	0.04	0.05	0.55	108	0.13	118	82	64	0	7	3	0	
SD SIOUX FALLS	11	-7	25	-12	2	-12	0.40	0.30	0.39	1.75	273	0.42	350	78	66	0	7	2	0	
TN BRISTOL	40	18	66	3	29	-5	0.42	-0.34	0.42	3.56	83	0.53	60	78	38	0	6	1	0	
TN CHATTANOOGA	43	23	62	9	33	-6	0.68	-0.48	0.68	6.47	105	2.07	156	67	41	0	6	1	1	
TN KNOXVILLE	40	20	64	6	30	-7	0.27	-0.77	0.27	5.22	92	0.99	83	74	40	0	6	1	0	
TN MEMPHIS	40	19	54	9	29	-11	0.00	-0.96	0.00	3.39	50	0.79	71	68	37	0	7	0	0	
TN NASHVILLE	38	16	63	4	27	-10	0.04	-0.87	0.04	3.91	70	0.70	67	70	37	0	7	1	0	
TX ABILENE	42	25	57	16	34	-9	0.01	-0.23	0.01	0.99	63	0.47	162	72	47	0	6	1	0	
TX AMARILLO	44	20	55	9	32	-3	0.00	-0.16	0.00	0.49	60	0.36	180	85	45	0	7	0	0	
TX AUSTIN	48	29	68	21	38	-12	0.39	-0.08	0.37	3.69	123	1.58	282	73	53	0	6	2	0	
TX BEAUMONT	51	35	66	27	43	-9	0.42	-0.89	0.25	4.68	69	1.54	102	90	46	0	2	2	0	
TX BROWNSVILLE	57	44	70	37	51	-8	2.89	2.65	2.70	4.62	332	3.19	1139	88	73	0	0	2	1	
TX CORPUS CHRISTI	54	38	67	35	46	-10	0.65	0.29	0.57	1.89	87	0.85	202	89	70	0	0	2	1	
TX DEL RIO	52	34	65	31	43	-8	0.20	0.10	0.20	0.49	56	0.24	185	80	53	0	2	1	0	
TX EL PASO	53	28	63	22	41	-3	0.00	-0.11	0.00	0.13	14	0.01	7	74	39	0	6	0	0	
TX FORT WORTH	43	25	58	16	34	-10	0.05	-0.45	0.05	2.47	78	1.34	231	71	35	0	7	1	0	
TX GALVESTON	51	38	58	31	45	-11	0.47	-0.41	0.43	4.56	100	0.69	68	91	60	0	1	2	0	
TX HOUSTON	51	35	65	28	43	-9	0.15	-0.68	0.08	7.16	154	1.56	163	85	52	0	2	3	0	
TX LUBBOCK	43	23	56	17	33	-5	0.00	-0.09	0.00	0.87	110	0.48	400	85	55	0	7	0	0	
TX MIDLAND	43	26	58	20	35	-8	0.08	-0.03	0.08	1.19	151	0.97	693	85	55	0	7	1	0	
TX SAN ANGELO	47	26	67	19	37	-7	0.04	-0.13	0.04	0.84	74	0.48	240	83	49	0	6	1	0	
TX SAN ANTONIO	51	33	67	28	42	-8	0.39	0.01	0.34	2.44	102	1.20	273	76	42	0	2	2	0	
TX VICTORIA	53	35	68	30	44	-9	0.28	-0.27	0.15	2.59	83	0.38	59	88	67	0	2	2	0	
TX WACO	44	26	61	18	35	-11	0.33	-0.13	0.30	1.67	51	1.13	209	75	50	0	7	2	0	
TX WICHITA FALLS	40	21	52	14	31	-9	0.00	-0.28	0.00	1.70	85	0.75	227	69	42	0	7	0	0	
UT SALT LAKE CITY	43	26	48	20	34	5	0.07	-0.22	0.07	1.47	94	0.07	21	90	68	0	7	1	0	
VT BURLINGTON	26	7	46	-11	17	-2	0.06	-0.41	0.04	4.19	151	0.34	62	69	44	0	7	3	0	
VA LYNCHBURG	38	19	59	3	29	-6	0.14	-0.64	0.14	3.41	83	0.29	33	60	34	0	6	1	0	
VA NORFOLK	48	28	75	14	38	-2	0.06	-0.79	0.06	3.83	96	0.13	13	65	33	0	4	1	0	
VA RICHMOND	44	25	70	12	35	-2	0.05	-0.76	0.05	3.28	81	0.14	15	62	30	0	6	1	0	
VA ROANOKE	40	21	64	5	30	-6	0.11	-0.56	0.11	2.84	78	0.30	38	56	40	0	6	1	0	
WA WASH/DULLES	34	16	60	3	25	-7	0.56	-0.13	0.28	4.38	113	1.12	140	70	48	0	6	2	0	
WA OLYMPIA	49	40	55	33	44	7	3.74	2.09	1.95	9.77	100	3.77	199	98	92	0	0	3	2	
WA QUILLAYUTE	55	41	60	34	48	8	6.67	3.64	4.61	21.28	118	7.07	203	98	92	0	0	5	2	
WA SEATTLE-TACOMA	49	41	54	35	45	5	0.94	-0.19	0.37	5.79	84	1.00	77	95	89	0	0	3	0	
WA SPOKANE	36	29	43	23	32	6	0.42	0.01	0.38	2.45	90	0.48	100	96	84	0	6	3	0	
WA YAKIMA	44	29	61	25	37	9	0.00	-0.28	0.00	0.92	54	0.00	0	88	79	0	6	0	0	
WV BECKLEY	33	12	61	-5	22	-9	0.42	-0.29	0.35	3.55	91	0.56	68	70	51	0	6	2	0	
WV CHARLESTON	36	16	65	3	26	-8	0.32	-0.37	0.29	3.75	91	0.90	113	73	39	0	6	2	0	
WV ELKINS	33	10	63	-5	22	-7	0.91	0.16	0.61	4.83	112	1.22	140	87	44	0	6	3	1	
WV HUNTINGTON	34	15	62	1	24	-9	0.36	-0.36	0.16	4.12	98	0.81	98	73	44	0	6	5	0	
WI EAU CLAIRE	7	-11	16	-17	-2	-14	0.01	-0.19	0.01	0.69	54	0.01	4	78	53	0	7	1	0	
WI GREEN BAY	11	-6	30	-12	2	-14	0.20	-0.05	0.15	2.02	118	0.34	113	76	57	0	7	2	0	
WI LA CROSSE	14	-6	30	-10	4	-12	0.27	0.05	0.10	1.44	97	0.34	131	79	50	0	7	3	0	
WI MADISON	14	-5	30	-8	4	-14	0.35	0.10	0.13	1.43	73	0.40	133	76	60	0	7	4	0	
WI MILWAUKEE	15	-3	34	-7	6	-15	0.47	0.08	0.18	1.71	64	0.68	151	71	58	0	7	4	0	
WY CASPER	35	1	44	-19	18	-4	0.05	-0.06	0.05	1.52	200	0.27	193	79	64	0	7	1	0	
WY CHEYENNE	42	11	50	-3	27	1	0.00	-0.08	0.00	0.67	118	0.00	0	80	55	0	7	0	0	
WY LANDER	27	7	51	-5	17	-3	0.00	-0.11	0.00	1.82	243	0.00	0	92	67	0	7	0	0	
WY SHERIDAN	29	1	48	-12	15	-6	0.10	-0.07	0.05	1.03	117	0.29	145	80	70	0	7	5	0	

Based on 1971-2000 normals

\*\*\* Not Available

# December Weather and Crop Summary

## Weather

*Weather summary provided by USDA/WAOB*

**Highlights:** Limited drought relief came to California in the form of several periods of heavy precipitation, highlighted by a potent, moisture-laden storm on December 11-12. Although the rain improved topsoil moisture, benefited winter grains, and helped to revive rangeland and pastures, significant effects from the 3-year drought persisted. For example, California's reservoirs got a slight boost from runoff, but collectively remained at near-record low levels. And, since most of California's storms were "warm" systems, high-elevation snowpack remained below one-half of average for this time of year.

Precipitation also spread into other areas of the West. Like California, however, snowpack in the Pacific Northwest languished due to warm conditions, despite an abundance of storms. Fewer storms reached the Southwest, where significantly below-average snowpack was also a concern.

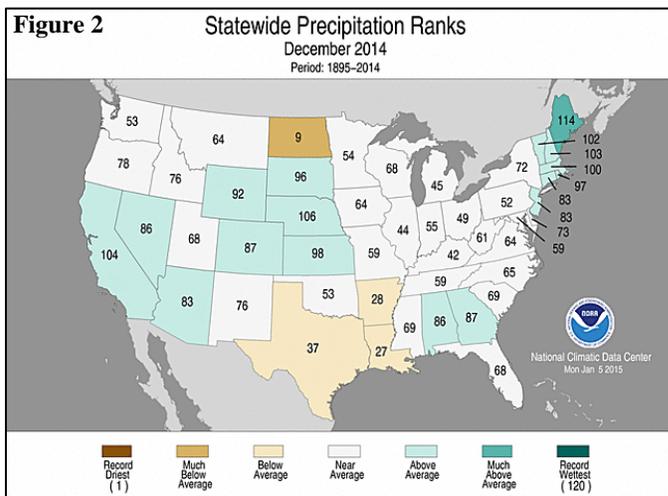
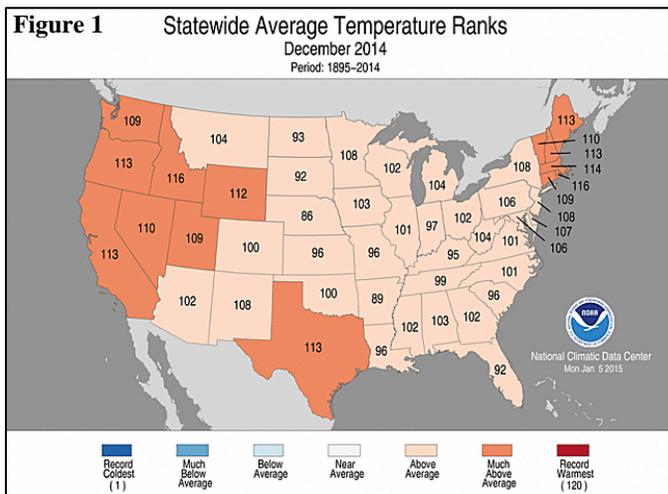
Farther east, a very cold November was followed by a mostly mild December. Thawing, muddy fields led to delays in final corn harvest efforts in the Great Lakes region. Most other fieldwork across the South, East, and Midwest was eventually curtailed, as increasingly wet conditions developed as the month progressed. Just prior to the holidays, a sprawling storm system produced wet snow across the northern Plains and Midwest, along with torrential rainfall and locally severe thunderstorms in the Southeast.

Elsewhere, mid- to late-month precipitation (rain and snow) provided a little bit of beneficial moisture across winter wheat areas of the central and southern Plains. Heading into the overwintering period, wheat-related concerns included lingering drought (on the southern Plains); the effects of November's cold wave (on the central High Plains); and issues related to late planting and poor crop establishment (in the southern and eastern Corn Belt). From November 23 to the end of December, the portion of the winter wheat rated in good to excellent condition fell from 69 to 57 percent in Nebraska; 61 to 49 percent in Kansas; and 56 to 24 percent in Illinois.

**Historical Perspective:** According to preliminary information provided by the National Climatic Data Center, the contiguous U.S. experienced its second-warmest, 51st-wettest December during the 120-year period of record. The average temperature of 37.2°F was nearly 4.5°F above the 20th century mean, and marked the nation's warmest December since 1939. Above-average temperatures were noted in every state (figure 1), and temperatures were among the ten highest December values on record in Texas, four New England States (ME, MA, NH, and RI), and four Western States (CA, ID, OR, and WY). The "coolest" state, Nebraska, experienced its 35th-warmest December.

Meanwhile, state precipitation rankings ranged from the ninth-driest December in North Dakota to the seventh-wettest December in Maine (figure 2). General wetness across New England, the Southeast, central portions of the Rockies and Plains, and an area

stretching from California to Arizona contrasted with the aforementioned dry conditions in North Dakota, as well as parts of the south-central U.S. For the nation as a whole, the average precipitation of 2.51 inches was 107 percent of normal.



**Summary:** November's cold weather lingered into the first few days of the new month, beginning on December 1 with daily-record lows in locations such as Jamestown, ND (-24°F); Bozeman, MT (-23°F); and Marquette, MI (-11°F). Cold conditions also returned to the Northwest, where record-setting lows for December 2 dipped to 19°F in Olympia, WA, and 23°F in Portland, OR. Farther south, however, numerous daily-record highs accompanied and trailed a warm Pacific storm. By December 4, daily-record highs included 69°F in Sacramento, CA, and 59°F in Salt Lake City, UT. Both locations also posted daily records (68 and 58°F, respectively) on December 6. Other record-setting highs in California for December 6 included 70°F in Fresno and 67°F in San Francisco (SFO Airport). By December 5, warmth reached the Northwest, where Quillayute, WA, collected a daily-record high (57°F)—shortly after notching consecutive daily-record lows (19 and 25°F, respectively) on December 1-2. Elsewhere, warmth in the Southeast led to a handful of daily-record highs, including readings of 75°F (on

December 1) in Danville, VA, and 81°F (on December 3) in Tallahassee, FL.

In early December, heavy rain spread ashore along the Pacific Coast. In southern Oregon, North Bend netted a daily-record rainfall of 2.83 inches on December 1. The following day, record-setting amounts in southern California climbed to 2.14 inches in Santa Barbara, 1.49 inches in Sandberg, and 1.12 inches in Los Angeles (LAX Airport). By December 3, daily-record totals in California's Central Valley included 2.20 inches in Sacramento and 1.39 inches in Redding. San Francisco (SFO Airport) collected 3.48 inches on December 2-3. Later, significant precipitation developed across the mid-South and environs. On December 5, daily-record amounts totaled 1.35 inches in St. Louis, MO, and 1.27 inches in Chanute, KS. Showers also arrived in the East, where record-setting totals for December 6 reached locations such as New York's LaGuardia Airport (1.29 inches) and Dayton, OH (0.71 inch).

Pacific storminess intensified prior to mid-month, while the northeastern U.S. dealt with rain and snow. Quillayute, WA, received 7.73 inches of rain—more than half of its monthly sum—from December 8-11. Meanwhile, heavy precipitation developed across the Northeast on December 9, when record-setting totals reached 3.04 inches at JFK Airport, NY; 2.90 inches in Boston, MA; and 2.74 inches in Providence, RI. JFK Airport ultimately set a December precipitation record with 7.04 inches, surpassing its 1986 mark of 6.73 inches. December 9-11 precipitation totaled 2.58 inches in Albany, NY, including 11.3 inches of snow. Daily-record snowfall amounts for December 10 climbed to 11.8 inches in Syracuse, NY, and 9.4 inches in Burlington, VT. December 9-11 snowfall totaled more than a foot in Syracuse (14.4 inches) and Burlington (15.0 inches). On December 11, the focus for heavy precipitation shifted to northern California, where daily-record totals surged to 4.06 inches in Mt. Shasta City, 2.88 inches in Red Bluff, and 2.39 inches in Sacramento. High winds in California preceding and accompanying the December 11 rain gusted to 63 mph in Redding and 55 mph in Red Bluff and Bakersfield. In the central Sierra Nevada, winds above 100 mph were common, with gusts approaching 150 mph. By December 12, heavy rain moved across southern California, where daily-record amounts totaled 2.40 inches in Camarillo, 1.57 inches in Paso Robles, 1.12 inches in Bakersfield, and 1.05 inches in San Diego.

During the Western storm onslaught, record-setting warmth dominated the Pacific Northwest and eventually spread to most other parts of the country. From December 7-11, Hoquiam, WA, posted five consecutive daily-record highs (56, 56, 59, 60, and 60°F). Seattle, WA, noted four daily-record highs during the same 5-day period, including a reading of 66°F on December 10. As warmth spread farther inland, Walla Walla, WA, collected consecutive daily-record highs (71 and 68°F, respectively) on December 10-11. Record-breaking highs for December 11 climbed to 64°F in Pendleton, OR; 64°F in Winnemucca, NV; and 63°F in Boise, ID. By December 12, daily-record highs included 64°F in Cheyenne, WY, and 63°F in Salt Lake City, UT. Later, warmth also reached the Plains. In South Dakota, Rapid City logged consecutive daily-record highs of 71°F on December 11-12. Other daily-record highs for December 12 soared to 72°F in Chadron, NE, and 63°F in Great Falls, MT. Elsewhere in Montana, Livingston (64°F on December 12) achieved a monthly record high, previously established with maxima of 62°F on December 26, 1980, and December 1, 1995. In Wyoming, Casper

set a December record with highs of 50°F or greater on 11 consecutive days (December 3-13); the previous record of 10 days had been set in 1939. Farther east, Dickinson, ND, collected consecutive daily-record highs (61 and 60°F, respectively) on December 12-13. In Nebraska, monthly standards were set on December 13 for the highest minimum temperature on record in locations such as Grand Island (low of 47°F) and Norfolk (46°F). Warmth lingered through mid-month across the central U.S., where Omaha, NE, noted a daily-record high (59°F on December 14). Omaha also tied a monthly record with a December 14 low temperature of 52°F (previously, 52°F on December 22, 1877). Elsewhere on the 14th, monthly high minimum temperature records were also set or tied in locations such as Lincoln, NE (53°F), and St. Cloud, MN (42°F). Soon after, however, Valentine, NE, netted a daily-record snowfall (3.5 inches) on December 15, following 7 consecutive highs (from December 7-13) of 50°F or greater.

In mid-December, a snow storm crossed the northern Intermountain West, as well as portions of the Plains and upper Midwest. In Wyoming, December 14-15 snowfall totaled 9.3 inches in Casper and 5.6 inches in Lander. Sioux Falls, SD, received a daily-record precipitation total (0.79 inch on December 15), along with 2 inches of snow. Minneapolis-St. Paul, MN, received a 0.8-inch snowfall on December 16, a day after tallying a daily-record high of 51°F. Meanwhile, portions of the central Plains received rain, followed by snow. Goodland, KS, collected a daily-record precipitation total of 0.87 inch on December 14 and received 1.2 inches of snow on December 17-18. Elsewhere, December 17-18 snowfall included 2.7 inches in Wichita, KS, and 2.6 inches in Kansas City, MO. Later, heavy precipitation in northern New England led to a daily-record total of 0.83 inch on December 18, along with 8.3 inches of snow, in Caribou, ME. In California, periods of precipitation lingered through December 20, but disappointingly dry weather returned for the remainder of the month. Some of California's final daily-record totals included 0.93 inch in Stockton (on December 15) and 0.99 inch in Sacramento (on December 17). Through December 20, month-to-date rainfall surpassed the ten-inch mark in California cities such as San Francisco (10.60 inches) and Redding (10.21 inches). Final monthly totals in those two locations reached 10.66 and 10.39 inches, respectively—265 percent of normal in San Francisco and 166 percent in Redding. In the mountains, however, the California Department of Water Resources pegged the average water content of the high-elevation Sierra Nevada snowpack at 5 inches by year's end, just under half of normal for late December. Farther east, however, wetter weather developed across the South during the second half of the month. In the Gulf Coast region, daily-record totals for December 19 reached 3.06 inches in Houston, Texas, and 2.41 inches in Baton Rouge, Louisiana. Precipitation also hammered the Northwest, just clipping northwestern California, resulting in record-setting amounts for December 20 in Crescent City, CA (2.84 inches); Hoquiam, WA (1.88 inches); Burns, OR (0.77 inch); Boise, ID (0.71 inch); and Winnemucca, NV (0.66 inch). In contrast, 23-day (November 27 – December 19) dry spells ended with some light rain on December 20 in Georgia locations such as Alma (0.04 inch) and St. Simons Island (0.01 inch).

Nearly all of the U.S. experienced warmer-than-normal December weather, on average, but cold conditions returned late in the month. Still, consecutive daily-record highs were reported on December 21-22 in locations such as Yakima, WA (59 and 56°F),

Montague, CA (60 and 58°F); and Klamath Falls, OR (53°F on both days). Other Western daily-record highs included 81°F (on December 22) in Santa Barbara, CA; 75°F (on December 22) in Las Vegas, NV; and 65°F (on December 21) in Medford, OR. In advance of colder Western weather, a wind gust to 92 mph was reported on southern California's Whitaker Peak on December 21. Whitaker Peak clocked another high gust, to 84 mph, on the morning of December 25. Notable warmth lingered for a few more days in the East. By December 24, daily-record highs climbed to 87°F in Vero Beach, FL; 70°F in Salisbury, MD; and 69°F in Georgetown, DE. Warmth lasted into Christmas morning along the northern Atlantic Coast, resulting in consecutive daily-record highs (64 and 63°F, respectively) on December 24-25 in Providence, RI. After Christmas, markedly colder air settled into the northwestern and north-central U.S., resulting in a daily-record low (-19°F on December 27) in Laramie, WY. In California's Central Valley, Hanford reported its first two freezes of the season (32 and 30°F, respectively) on December 26-27.

Widespread precipitation preceded and accompanied the transition to colder weather. On December 21, a heavy precipitation event across the Intermountain West led to record-setting totals in Alta, UT (2.10 inches), and Boise, ID (0.76 inch). Rain and snow showers also dotted the central and eastern U.S., resulting in daily-record totals for December 22 in locations such as Elizabeth City, NC (1.15 inches), and Mobridge, SD (0.34 inch, including 2.5 inches of snow). In Sioux City, IA, a 0.69-inch sum on December 22-23 propelled the year-to-date precipitation total to 41.14 inches. Previously, the highest annual precipitation in Sioux City had been 41.10 inches in 1903. (Sioux City ended the year with 41.36 inches.) Much heavier rain developed across the Southeast on December 23. In fact, the 23rd was the wettest December day on record in Tallahassee, FL, where 7.44 inches fell (previously, 5.34 inches on December 2, 2009). Elsewhere in the Southeast, record-setting totals for December 23 reached 3.81 inches in Meridian, MS; 2.54 inches in Alma, GA; and 2.37 inches in Tuscaloosa, AL. Several tornadoes struck the South on December 23, resulting in five fatalities across Mississippi's Marion and Jones Counties. It was the nation's deadliest tornado outbreak since April 27-28, 2014, when 34 people perished across the Plains, Midwest, and Southeast. Heavy rain continued through December 24 in the Atlantic Coast States, where daily-record amounts included 2.83 inches in Augusta, GA, and 1.78 inches in Florence, SC.

Late-month snow first began to fall across the northern Plains and the Northwest, eventually spreading to other regions. In Montana, Great Falls received daily-record snowfall totals (5.0 and 7.5 inches, respectively) on December 24 and 28. December 25 became the snowiest Christmas Day on record in Wyoming locations such as Lander (9.6 inches) and Cheyenne (6.8 inches). On the High Plains, December 25-26 snowfall totals included 10.6 inches in Scottsbluff, NE; 7.7 inches in Cheyenne, WY; and 5.1 inches in Denver, CO. Around the same time, a wave of precipitation spread across the South and East. Daily-record rainfall amounts for December 27 totaled 1.87 inches in Hattiesburg, MS, and 1.76 inches in Tuscaloosa, AL. Meanwhile on the southern Plains, daily-record snowfall

amounts for the 27th reached 3.5 inches in Oklahoma City, OK, and 2.0 inches in Wichita Falls, TX. However, much rarer snow developed across the Desert Southwest on New Year's Eve. In Needles, CA, where 0.3 inch fell on December 31, snow had not fallen since February 2, 1985. Needles had never before received measurable snow in December, and had not seen a greater amount since January 25, 1949, when 2.0 inches fell. Similarly, an inch of snow fell on New Year's Eve in Bullhead City, AZ, marking the first accumulation in that area since January 11, 1949. Laughlin, NV, and Lake Havasu City, AZ, reported a trace of snow on December 31 and January 1; snow had not been observed in Laughlin since February 26, 1987, and in Lake Havasu City since January 24-25, 1949. Meanwhile, Flagstaff, Arizona, reported a 17.3-inch snowfall on December 31 – January 1. Earlier, snow had also blanketed the northern and central Plains in advance of an Arctic blast. Daily-record snowfall totals included 1.8 inches (on December 28) in Rapid City, SD, and 2.3 inches (on December 29) in Pueblo, CO. Snow squalls developed in the vicinity of the Great Lakes, where Sault Sainte Marie, MI, received 11.3 inches on December 29-30. Even with some late-month snow, records for the least-snowy December were broken in South Bend, IN (0.2 inch; previously, 0.5 inch in 1912), and Muskegon, MI (1.4 inches; previously, 1.8 inches in 2011). Similarly, records for the least-snowy December were tied—with only a trace falling—in locations such as Chicago, IL, and Winnemucca, NV. In Huntington, WV, not a single flake of snow was observed in December for only the third time on record, along with 1931 and 1990.

Toward year's end, warmth intensified across the Southeast. In Georgia, daily-record highs for December 28 reached 80°F in Alma and Savannah. Daily records were also set in Florida locations such as Orlando (84°F on December 29) and Miami (83°F on December 30). Farther west, however, Thermal, CA, collected consecutive daily-record lows (25 and 24°F, respectively) on December 29-30. On December 29, Las Vegas, NV, reported a low of 30°F—its latest first freeze on record (previously, December 20, 2012). Las Vegas' longest freeze-free period (December 13, 2013 – December 28, 2014) ended at 381 days; the previous record had been 378 days from December 8, 2011 – December 19, 2012. December 30-31 featured consecutive daily-record lows in Big Piney, WY (-31 and -35°F), and Pueblo, CO (-16 and -17°F). Extremely cold weather on the High Plains led to record-setting lows for December 30 in locations such as Alliance, NE (-28°F), and Cheyenne, WY (-22°F). Elsewhere in Wyoming on December 30, Laramie logged a daily-record low of -31°F, while temperatures plunged to -40°F or lower in parts of Sublette County. On the 30th, an unofficial low temperature of -48°F was reported in Daniel, WY. In the Northwest, high pressure accompanying the cold weather led to all-time barometric pressure records on December 30 in Seattle, WA (30.87 inches, or 1045.5 millibars), and Astoria, OR (30.80 inches, or 1042.9 millibars). Astoria's record had survived since December 14, 1996, when the pressure reached 30.74 inches (1041.0 millibars).

Consistently extreme weather in 2014 led to several new standards for annual average temperature. For example, 2014

was the warmest year on record in dozens of Western cities, including Phoenix, AZ (77.1°F; previously 76.9°F in 1989); Las Vegas, NV (72.0°F; previously, 71.2°F in 2012); and Bakersfield, CA (69.5°F; previously, 67.9°F in 1977 and 1978). Fresno, CA (69.1°F, or 4.7°F above normal), experienced its warmest year on record for the third consecutive year, following 2012 (66.8°F) and 2013 (66.9°F). Meanwhile, a few 19th century records for the coolest year on record were broken across the mid-South and Midwest. With an annual average temperature of 58.7°F, Conway, AR, erased an annual record (59.9°F) set in 1890. Similarly, Dubuque, IA (43.7°F) edged its 1875 standard of 43.8°F.

Mild, early-winter conditions dominated Alaska, boosting monthly temperatures at least 10°F above normal across much of the mainland. Record-setting high temperatures were noted at times, starting on December 1 in Cold Bay (45°F) and St. Paul Island (42°F). Later, daily-record highs for December 7 soared to 55°F on Annette Island and 47°F in King Salmon. By December 14-15, consecutive daily-record highs were posted in locations such as Port Alexander (48 and 49°F) and Klawock (52°F both days). Other mid-month, daily-record highs included 52°F (on December 15) in Petersburg and 45°F (on December 20) in Yakutat. Late in the month, colder air overspread western Alaska. Bethel posted its latest observance of the season's first sub-zero reading with a low of -1°F on December 21. Previously, Bethel's latest occurrence of winter's first sub-zero temperature had been December 20, 1938. At month's end, however, mild weather again led to record-setting high temperatures. On December 29-30, King Salmon posted consecutive daily-record highs (48 and 49°F, respectively). Bethel's temperature remained above 32°F on 3 consecutive days from December 28-30. With a monthly average temperature of 8.0°F (12.1°F above normal), Fairbanks completed its second-warmest December behind 10.2°F in 1914. Periods of precipitation accompanied the mild weather. For example, Fairbanks netted a daily-record precipitation total of 0.39 inch—including 4.7 inches of snow—on December 2. Several weeks later, a holiday snow storm blanketed parts of interior Alaska, where December 25-26 totals included 9.7 inches in Bettles and 5.2 inches in Fairbanks. Relative to normal, precipitation tended to be heavier across interior and southwestern Alaska, but lighter across the southeastern part of the state. Nearly half (6.52 inches) of Kodiak's 13.79-inch monthly total fell on December 28-30.

Despite the passage of a strong cold front late in the month, dry conditions remained a concern in parts of Hawaii. In advance of the front, on December 20, Kahului, Maui, posted a daily record-tying high of 87°F. By December 23, daily-record rainfall totals included 2.14 inches in Kahului and 1.50 inches in Hilo, on the Big Island. Some of the heaviest rain fell on Kauai, where 72-hour totals from December 21-24 reached 29.07 inches at Kilohana and 18.20 inches at Kokee. On the Big Island, a blizzard warning was issued on December 24 for elevations above 11,500 feet. Toward the end of December, however, dry weather returned nearly statewide. Consequently, December rainfall totals were significantly below normal in Hawaiian locations such as Honolulu, Oahu

(1.07 inches, or 33 percent of normal), and Lihue, Kauai (1.40 inches, or 27 percent).

## Fieldwork

*Fieldwork summary provided by USDA/NASS*

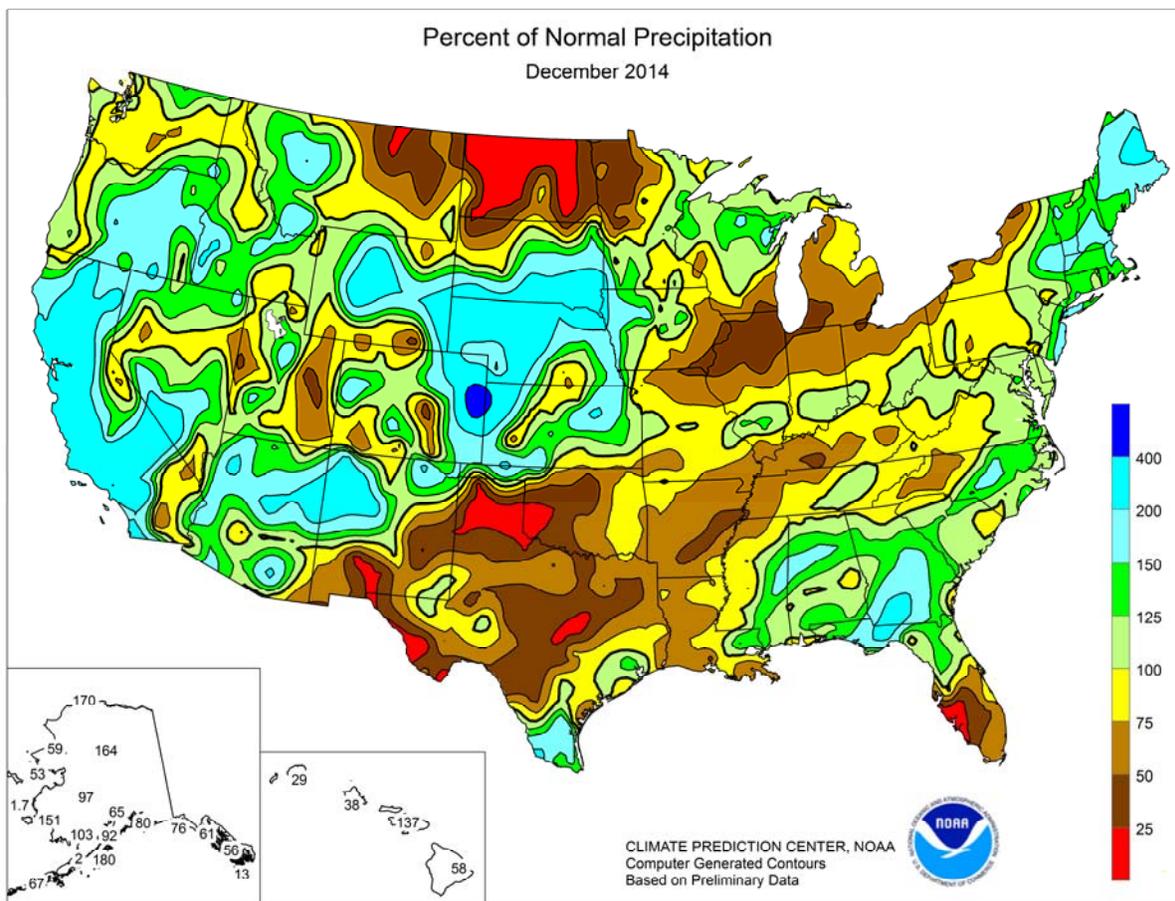
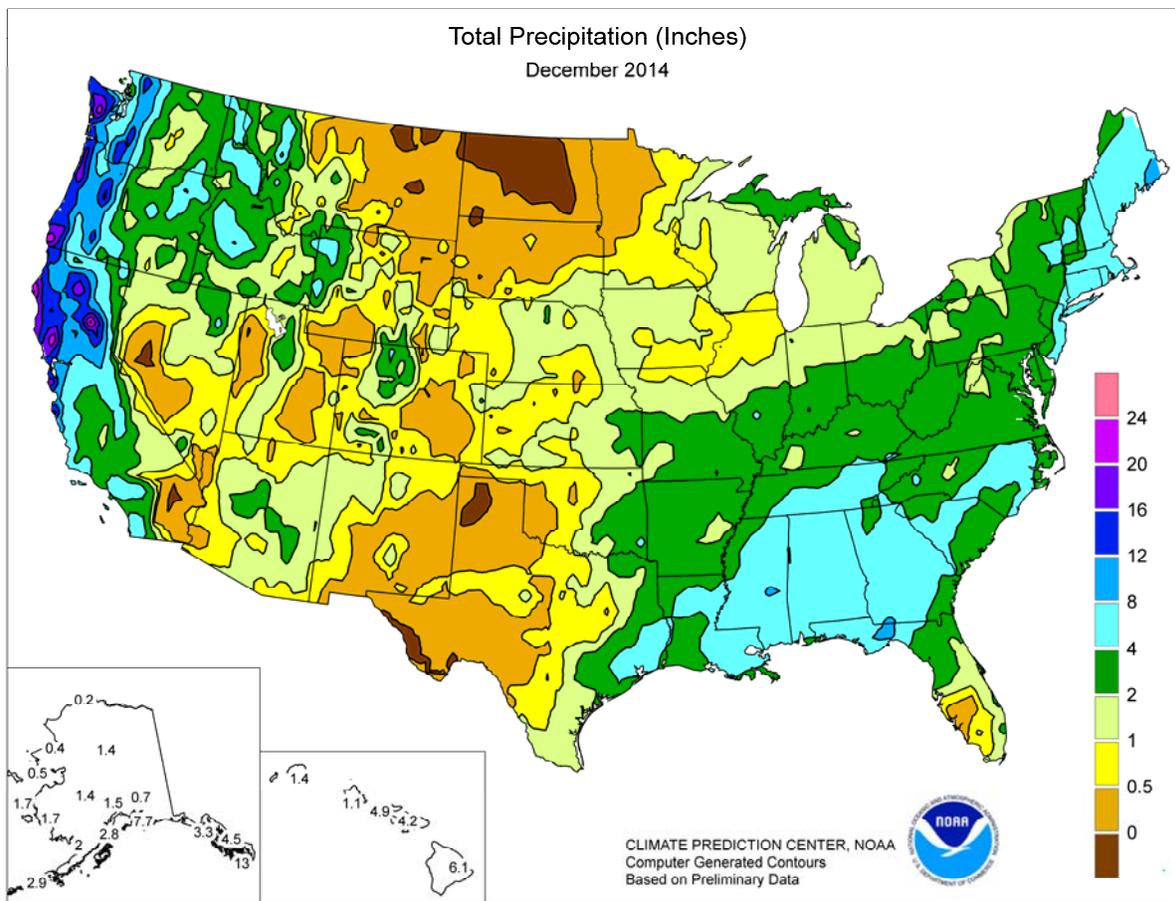
Virtually all of the U.S. recorded above-normal temperatures in December. Some small pockets recorded average temperatures more than 9°F above normal in the northern Rocky Mountains and the northern Plains. Precipitation was generally within 2 inches of normal across the nation. The most notable exception occurred in northern California, where some locations recorded more than 16 inches of precipitation for the month. Storms early in the month battered parts of California with winds in excess of 100 miles per hour, while higher elevations received several feet of snow. Despite historically dry conditions, the storms still resulted in flooding and mudslides.

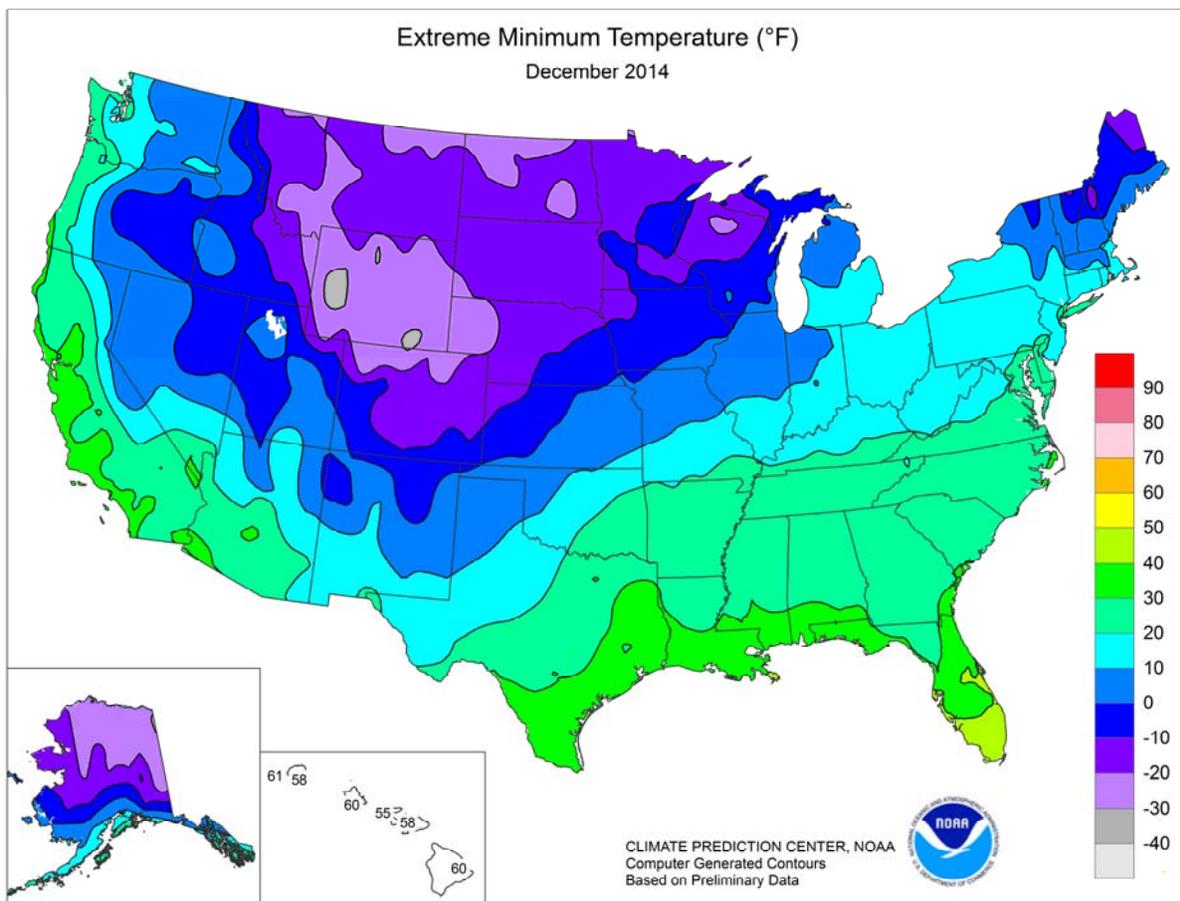
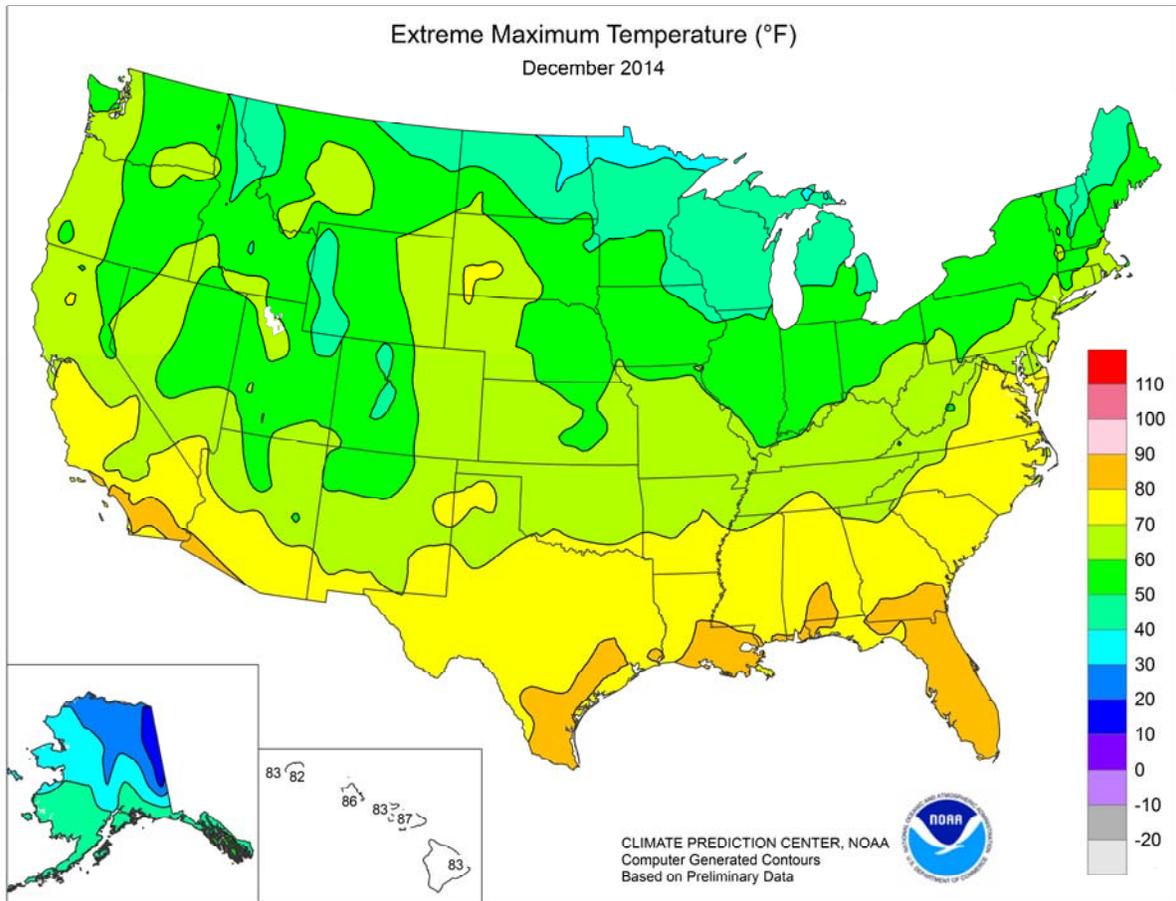
Harvest delays caused corn producers in Wisconsin to continue fieldwork into the month of December. On December 7, corn was 86 percent harvested in the state, making 2014 the fourth-latest corn harvest in the past 30 years, ahead of 1985, 1992, and 2009. As of December 14, corn was 91 percent harvested, but fieldwork stalled as thawing soils created muddy conditions, and humidity drove already high grain moisture even higher. Some producers will continue to put effort into harvesting the last of the standing corn and soybeans, but reports indicate that some fields will be left standing through the winter months.

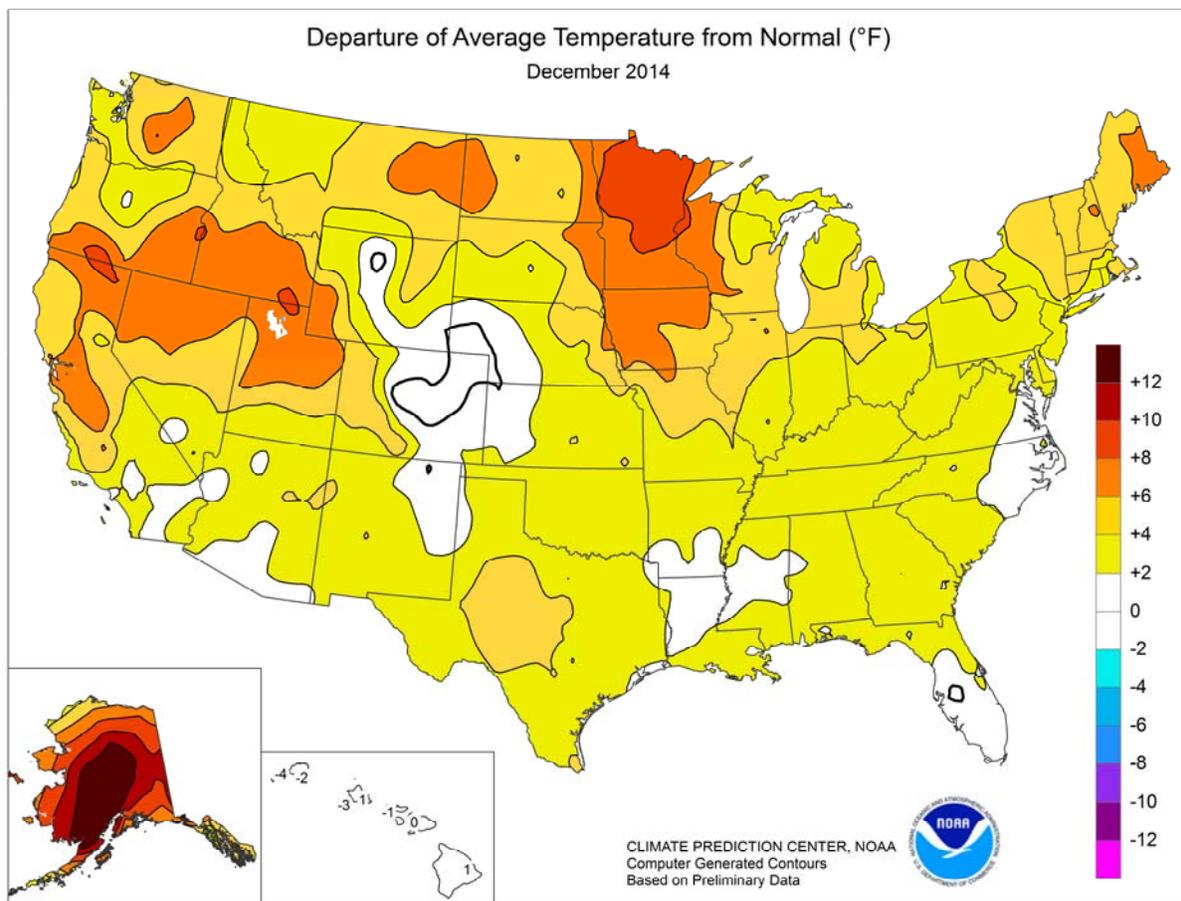
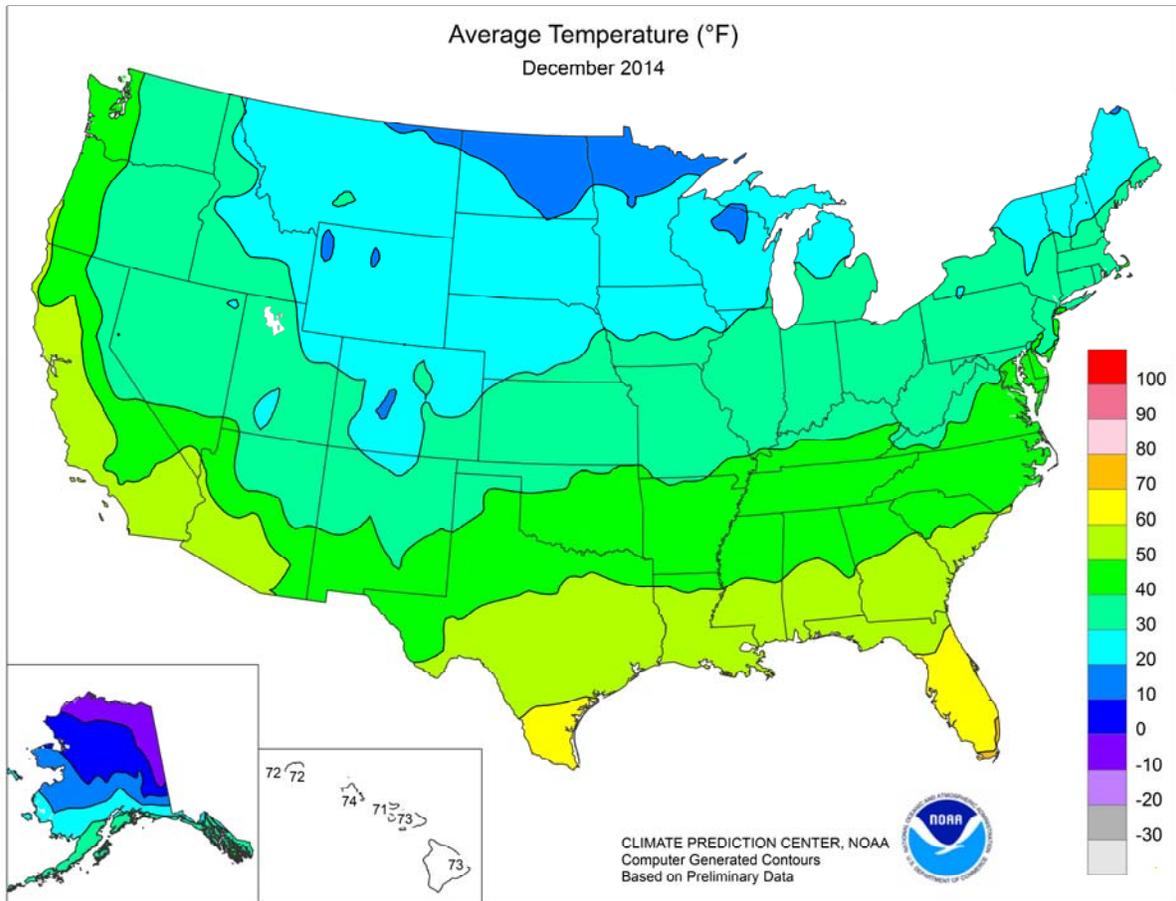
In Kansas, winter wheat conditions were rated at 49 percent in the good to excellent categories at the end of December, down from 61 percent on November 23. The decrease in condition was attributed to the lack of snow cover in the state to protect wheat from cold winter weather. Areas with greater snow cover reported higher winter wheat ratings, including Montana (65 percent good to excellent at the end of December), Colorado (62 percent), and Nebraska (57 percent).

Pasture and range conditions worsened in several parts of the nation. In Missouri, pasture conditions at the end of the month were rated 32 percent in the good to excellent categories, down 16 percentage points from November 23. Oklahoma producers reported 30 percent of pasture in the good to excellent categories, down 9 percentage points from November 23. In Montana, pasture conditions were rated 35 percent good to excellent, down 7 percentage points from November 30.

In Florida, citrus production benefited from adequate precipitation and above-average temperatures during December. The beginning of the month saw the harvest of early-variety oranges, grapefruit and tangerines. Producers reported overall good quality in fresh fruit, but fruit size was very small compared to a normal year. By the end of December, most processing plants had opened for the season. Navel orange harvest and white and colored grapefruit harvest was slightly lagging last season but overall running at a good pace.







National Weather Data for Selected Cities

December 2014

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	49	3	7.15	2.68	LEXINGTON	38	2	3.30	-0.73	COLUMBUS	36	3	2.70	-0.23
HUNTSVILLE	47	4	5.73	0.14	LONDON-CORBIN	41	3	3.81	-0.50	DAYTON	35	4	2.79	-0.29
MOBILE	55	3	5.27	0.61	LOUISVILLE	41	3	3.57	-0.12	MANSFIELD	34	4	1.86	-1.40
MONTGOMERY	52	3	4.89	-0.08	PADUCAH	41	4	2.89	-1.49	TOLEDO	33	4	1.09	-1.55
AK ANCHORAGE	28	11	0.68	-0.37	LA BATON ROUGE	56	4	5.67	0.41	YOUNGSTOWN	35	5	2.32	-0.64
BARROW	-7	4	0.20	0.08	LAKE CHARLES	56	3	2.03	-2.57	OK OKLAHOMA CITY	43	3	0.70	-1.19
COLD BAY	34	3	2.92	-1.41	NEW ORLEANS	59	4	3.96	-1.11	TULSA	42	2	1.97	-0.46
FAIRBANKS	8	14	0.93	0.19	SHREVEPORT	51	3	3.75	-0.80	OR ASTORIA	47	4	10.57	0.17
JUNEAU	33	4	3.29	-2.12	ME BANGOR	29	5	5.23	1.90	BURNS	32	7	2.29	0.99
KING SALMON	31	14	1.96	0.57	CARIBOU	22	6	5.88	2.69	EUGENE	44	4	7.07	-1.22
KODIAK	38	7	13.79	6.15	PORTLAND	34	6	6.27	2.03	MEDFORD	46	8	2.31	-0.59
NOME	15	7	0.54	-0.47	MD BALTIMORE	40	3	3.58	0.23	PENDLETON	36	2	2.80	1.32
AZ FLAGSTAFF	33	3	3.44	1.61	MA BOSTON	38	3	6.56	2.83	PORTLAND	44	4	6.05	0.34
PHOENIX	58	4	0.91	-0.01	WORCESTER	33	4	4.90	1.10	SALEM	45	5	6.87	0.41
TUCSON	54	2	2.17	1.14	MI ALPENA	28	4	1.69	-0.14	PA ALLENTOWN	37	5	3.65	0.26
AR FORT SMITH	44	3	2.31	-1.08	DETROIT	33	3	1.41	-1.10	ERIE	36	3	2.45	-1.28
LITTLE ROCK	45	2	3.16	-1.55	FLINT	33	6	1.64	-0.54	MIDDLETOWN	36	2	3.26	0.02
CA BAKERSFIELD	54	7	2.02	1.26	GRAND RAPIDS	32	4	1.57	-1.13	PHILADELPHIA	41	4	3.27	-0.04
EUREKA	52	4	9.75	3.40	HOUGHTON LAKE	27	3	1.43	-0.32	PITTSBURGH	35	2	2.63	-0.23
FRESNO	52	7	2.29	0.95	LANSING	31	4	1.56	-0.61	WILKES-BARRE	35	4	2.78	0.23
LOS ANGELES	58	0	4.04	2.25	MUSKEGON	33	4	1.72	-0.92	WILLIAMSPORT	36	5	2.60	-0.34
REDDING	51	6	10.39	5.72	TRAVERSE CITY	30	4	1.82	-0.84	PR SAN JUAN	79	1	5.50	0.93
SACRAMENTO	54	8	8.60	6.15	MN DULUTH	22	8	1.26	0.32	RI PROVIDENCE	38	4	6.25	2.11
SAN DIEGO	61	3	4.50	3.19	INT'L FALLS	18	10	0.85	0.15	SC CHARLESTON	53	2	3.40	0.16
SAN FRANCISCO	57	8	10.66	7.77	MINNEAPOLIS	24	5	0.86	-0.14	COLUMBIA	50	3	3.90	0.52
STOCKTON	53	8	6.09	4.27	ROCHESTER	24	7	1.02	0.00	FLORENCE	50	3	3.20	-0.27
CO ALAMOSA	23	6	0.21	-0.12	ST. CLOUD	24	10	0.75	0.06	GREENVILLE	48	4	3.63	-0.23
CO SPRINGS	32	3	0.16	-0.26	MS JACKSON	51	3	3.93	-1.41	MYRTLE BEACH	51	2	3.22	-0.23
DENVER	31	2	0.58	0.27	MERIDIAN	50	1	8.68	3.37	SD ABERDEEN	22	6	0.25	-0.13
GRAND JUNCTION	32	4	1.05	0.53	TUPELO	47	4	5.08	-1.04	HURON	23	4	0.70	0.31
PUEBLO	30	0	0.24	-0.15	MO COLUMBIA	37	5	2.18	-0.29	RAPID CITY	28	3	0.42	0.02
CT BRIDGEPORT	39	4	5.65	2.18	JOPLIN	40	3	1.84	-1.12	SIOUX FALLS	24	6	1.33	0.81
HARTFORD	35	4	4.55	0.95	KANSAS CITY	34	3	1.83	0.19	TN BRISTOL	41	4	3.03	-0.36
DC WASHINGTON	44	4	3.50	0.45	SPRINGFIELD	38	2	1.77	-1.40	CHATTANOOGA	46	4	4.40	-0.41
DE WILMINGTON	40	4	3.01	-0.39	ST JOSEPH	34	3	0.96	-0.48	JACKSON	44	2	3.80	-2.28
FL DAYTONA BEACH	64	3	2.83	0.12	ST LOUIS	39	5	2.72	-0.14	KNOXVILLE	43	2	4.23	-0.26
FT LAUDERDALE	71	2	2.19	-0.46	MT BILLINGS	30	4	0.67	0.00	MEMPHIS	46	3	2.60	-3.08
FT MYERS	68	2	0.05	-1.53	BUTTE	23	5	0.56	0.03	NASHVILLE	43	3	3.21	-1.33
JACKSONVILLE	58	3	3.74	1.10	GLASGOW	22	6	0.11	-0.26	TX ABILENE	50	5	0.52	-0.75
KEY WEST	73	1	2.25	0.11	GREAT FALLS	28	4	1.10	0.43	AMARILLO	40	3	0.13	-0.48
MELBOURNE	66	3	1.62	-0.69	HELENA	26	5	0.81	0.35	AUSTIN	53	1	2.11	-0.33
MIAMI	71	1	1.32	-0.86	KALISPELL	25	2	2.35	0.70	BEAUMONT	57	3	3.14	-2.11
ORLANDO	65	2	1.59	-0.72	MILES CITY	26	5	0.18	-0.27	BROWNSVILLE	66	5	1.43	0.32
PENSACOLA	56	2	3.50	-0.47	MISSOULA	26	3	1.26	0.11	COLLEGE STATION	55	3	2.57	-0.66
ST PETERSBURG	65	1	0.85	-1.75	NE GRAND ISLAND	29	3	0.76	0.10	CORPUS CHRISTI	62	4	1.04	-0.71
TALLAHASSEE	57	3	8.78	4.68	HASTINGS	30	3	0.54	-0.19	DALLAS/FT WORTH	50	3	1.13	-1.44
TAMPA	65	2	1.57	-0.73	LINCOLN	31	5	1.22	0.36	DEL RIO	56	4	0.25	-0.50
WEST PALM BEACH	70	2	1.76	-1.38	MCCOOK	30	1	1.29	0.76	EL PASO	49	4	0.12	-0.65
GA ATHENS	49	4	4.69	0.98	NORFOLK	28	4	1.20	0.55	GALVESTON	59	1	3.87	0.34
ATLANTA	50	5	5.51	1.69	NORTH PLATTE	27	1	1.04	0.64	HOUSTON	57	3	5.60	1.91
AUGUSTA	50	3	4.21	1.07	OMAHA/EPPLEY	31	5	1.68	0.76	LUBBOCK	44	4	0.39	-0.28
COLUMBUS	52	3	4.62	0.22	SCOTTSBLUFF	26	0	1.47	0.91	MIDLAND	49	4	0.22	-0.43
MACON	51	3	5.89	1.96	VALENTINE	26	2	0.90	0.57	SAN ANGELO	52	6	0.36	-0.58
SAVANNAH	56	5	4.02	1.21	NV ELKO	33	7	1.09	0.16	SAN ANTONIO	57	5	1.24	-0.72
HI HILO	73	1	6.10	-4.40	ELY	31	5	0.73	0.23	VICTORIA	59	4	2.21	-0.26
HONOLULU	74	-1	1.07	-1.78	LAS VEGAS	51	4	0.30	-0.10	WACO	51	3	0.54	-2.22
KAHULUI	73	0	4.23	1.15	RENO	40	6	0.93	0.05	WICHITA FALLS	46	3	0.95	-0.73
LIHUE	72	-1	1.40	-3.38	WINNEMUCCA	36	6	1.16	0.35	UT SALT LAKE CITY	37	7	1.40	0.17
ID BOISE	37	6	3.34	1.96	NH CONCORD	31	5	5.16	2.20	VT BURLINGTON	30	5	3.85	1.63
LEWISTON	38	4	1.84	0.79	NJ ATLANTIC CITY	40	3	5.53	2.38	VA LYNCHBURG	40	2	3.12	-0.11
POCATELLO	32	7	0.77	-0.33	NEWARK	40	4	4.91	1.34	NORFOLK	46	2	3.70	0.67
IL CHICAGO/O'HARE	32	5	0.79	-1.64	NM ALBUQUERQUE	40	4	1.14	0.65	RICHMOND	44	4	3.14	0.02
MOLINE	31	5	0.72	-1.48	NY ALBANY	33	5	5.37	2.70	ROANOKE	42	3	2.54	-0.32
PEORIA	33	5	1.23	-1.17	BINGHAMTON	30	3	3.30	0.27	WASH/DULLES	38	2	3.26	0.19
ROCKFORD	31	7	0.93	-1.13	BUFFALO	33	3	2.15	-1.65	WA OLYMPIA	41	3	6.00	-1.89
SPRINGFIELD	35	5	1.95	-0.59	ROCHESTER	34	5	2.31	-0.42	QUILLAYUTE	45	4	14.21	-0.29
EVANSVILLE	40	4	3.43	-0.11	SYRACUSE	32	3	3.02	-0.10	SEATTLE-TACOMA	46	5	4.79	-0.83
FORT WAYNE	33	4	1.72	-1.05	NC ASHEVILLE	44	5	2.40	-0.99	SPOKANE	33	6	1.97	-0.28
INDIANAPOLIS	33	1	2.55	-0.48	CHARLOTTE	46	2	2.57	-0.61	YAKIMA	36	7	0.92	-0.46
SOUTH BEND	33	4	1.47	-1.62	GREENSBORO	44	3	2.21	-0.85	WV BECKLEY	37	2	2.99	-0.10
IA BURLINGTON	33	5	0.66	-1.44	HATTERAS	50	0	2.45	-2.11	CHARLESTON	40	2	2.85	-0.47
CEDAR RAPIDS	29	5	0.65	-0.83	RALEIGH	45	2	4.96	1.92	ELKINS	37	4	3.61	0.17
DES MOINES	32	7	1.04	-0.29	WILMINGTON	50	1	4.98	1.20	HUNTINGTON	39	2	3.31	-0.06
DUBUQUE	28	6	0.93	-0.76	ND BISMARCK	20	5	0.11	-0.33	WI EAU CLAIRE	23	5	0.68	-0.35
SIoux CITY	28	6	1.40	0.74	DICKINSON	25	7	0.07	-0.27	GREEN BAY	26	5	1.68	0.27
WATERLOO	28	6	1.64	0.53	FARGO	21	8	0.25	-0.32	LA CROSSE	28	6	1.10	-0.13
KS CONCORDIA	33	3	0.74	-0.12	GRAND FORKS	18	7	0.22	-0.33	MADISON	28	5	1.03	-0.63
DODGE CITY	35	2	1.00	0.23	JAMESTOWN	18	4	0.03	-0.41	MILWAUKEE	31	5	1.03	-1.19
GOODLAND	31	1	1.46	1.06	MINOT	19	4	0.07	-0.56	WAUSAU	22	3	1.40	0.07
HILL CITY	33	2	0.52	0.05	WILLISTON	20	7	0.03	-0.54	WY CASPER	29	5	1.25	0.63
TOPEKA	37	6	2.27	0.85	OH AKRON-CANTON	35	4	2.31	-0.67	CHEYENNE	29	2	0.67	0.21
WICHITA	38	4	1.29	-0.06	CINCINNATI	37	2	3.60	0.32	LANDER	23	2	1.82	1.21
KY JACKSON	40	2	2.49	-1.78	CLEVELAND	35	4	1.95	-1.19	SHERIDAN	25	3	0.74	0.06

# National Agricultural Summary

January 5 - 11, 2015

Weekly National Agricultural Summary provided by USDA/NASS

## HIGHLIGHTS

**Dry conditions were prevalent across most of the U.S. Exceptions to this trend were noted along the Missouri River Valley and in parts of Texas. Temperatures were below normal in most areas east of the Rocky Mountains. The most extreme temperatures were**

**recorded in the Great Lakes region, with some areas more than 15°F below normal for the week. Most areas west of the Rockies were warm and generally dry, with some locations recording temperatures more than 10°F above normal.**

In **Arizona**, alfalfa conditions were mostly fair to excellent, depending on location. Harvesting occurred on two-thirds of the alfalfa acreage across the state. Sheep continued to graze on various alfalfa fields in many areas. Range and pasture conditions were adequate for this time of year. Soil moisture levels were good and have been maintained by recent storms. Rangeland conditions varied widely from very poor to good, depending on location. Central Arizona growers shipped broccoli, Bok Choy, Chinese cabbage, red and green cabbage, cilantro, collard greens, kale greens, mustard, parsley, turnip top greens, and spinach. Western Arizona growers shipped anise, arugula, broccoli, Bok Choy, cauliflower, cilantro, celery, Chinese cabbage, red and green cabbage, curry, endive, escarole, kale greens, and various lettuce, including Boston, iceberg, romaine, green and red leaf lettuce, parsley, and spinach.

Field preparation and planting of winter wheat for grain and silage continued in **California**. Wheat, oats, and other winter forage crops have germinated and were growing well. Fields continued to be cultivated for spring planting. Some alfalfa fields were removed. The wheat crop was rated as 80 percent good to excellent. Pasture and rangeland condition was 40 percent good to excellent. Pruning and shredding in tree fruit and grape vineyards continued. Dormant sprays and herbicides were applied. The export of stored table grapes was mostly complete. Kiwifruit, Navel oranges, Mandarins, lemons, grapefruit, and limes continued to be packed and exported for domestic and foreign markets. The recent cold weather caused very minimal damage in a few isolated cold spots. Stored almonds were processed and exported. Pruning and shredding of walnut and pistachio orchards was underway. Pre-emergence herbicide was applied on nut trees, and the ground was fumigated for replanting. In San Mateo, fields were pretty clear with the exception of a smattering of Brussels sprouts, Swiss chard, and a few other winter crops. In Fresno County, winter green vegetables were in different stages of development, with all requiring irrigation and fertilizer due to the lack of rain. Organic broccoli was harvested and organic tomato beds were cleaned. In Tulare County, the planting of spring spinach and broccoli began,

while fields were prepared for spring plantings of other vegetables. Beef cattle had to be fed with supplements, as rangeland was in need of more rain for growth. Cattle have been relocated to foothill and valley pastures. Rangeland feed conditions improved with recent rains. In preparation for almond pollination in the spring, bees were brought into several central counties. Sheep and cattle grazed on rangeland, alfalfa fields, retired farmland areas, and small grain fields.

In **Florida**, seasonal field preparation in the Panhandle continued. Flagler, Putnam, and Bradford County farmers continued harvesting cabbage and cold weather crops. Potato planting continued in Flagler and Putnam Counties. In southwestern Florida, foggy mornings were causing disease problems in vegetables. Vegetables coming to market in southwest Florida were collards, cucumbers, eggplant, mustard, peppers, squash, tomatoes, and a variety of specialty items. Crops harvested in Miami-Dade County were green beans, pole beans, yellow squash, zucchini, tomatoes, peppers, eggplant, sweet corn, boniato, malanga, and avocado. In the Panhandle, cold weather hurt winter grazing. Cattlemen were feeding hay. In Charlotte, Collier, Glades, Hendry, and Lee Counties, pasture quality was aided by warm weather, but livestock producers provided supplemental feed to cattle as necessary. Statewide, cattle condition was mostly good, while pasture condition was fair to good. Citrus processing plants were up and running at full capacity. Harvesting for early and midseason oranges included both Hamlin and Pineapple oranges. Weekly totals were slightly less than last season, due to the small-size fruit and lagging maturity levels. Navel orange harvest was slowing as the season was coming closer to an end. Colored and white grapefruit harvest was overall running at a good pace and will continue for several more weeks. Honey tangerine harvest had started but was being harvested in small amounts. Grove activity included spraying, irrigation on several days, and mowing in preparation for harvest. Combating greening was a constant struggle for citrus growers. Re-entry times after spraying was between 2 and 10 days, slowing down survey progress at times.

## January 8 ENSO Update

### EQ. Upper-Ocean Heat Anoms. (deg C) for 180-100W

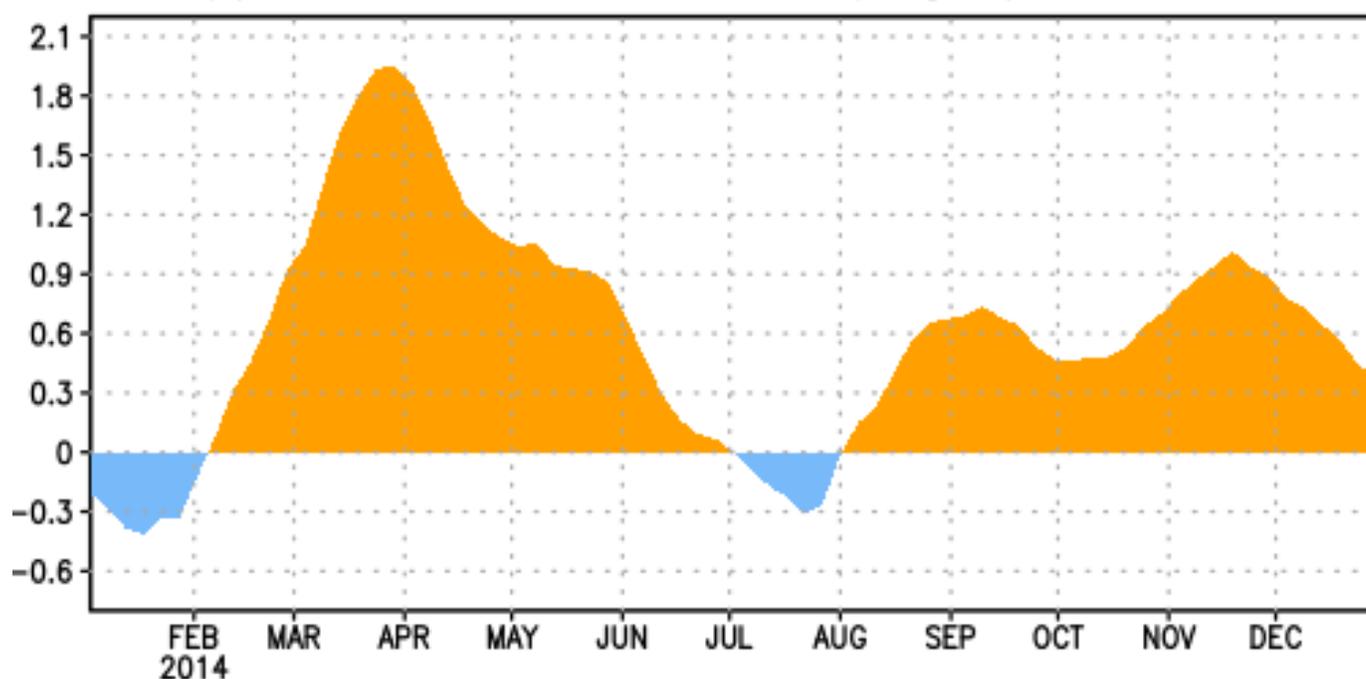


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

## ENSO Alert System Status: **El Niño Watch**

**Synopsis:** There is an approximately 50-60% chance of El Niño conditions during the next two months, with ENSO-neutral favored thereafter.

During December 2014, positive sea surface temperature (SST) anomalies decreased across the central and east-central equatorial Pacific. At the end of the month, the weekly Niño indices ranged from +0.8°C in the Niño-4 region, to +0.5°C in the Niño-3.4 region, to 0.0°C in the Niño-1+2 region. The positive subsurface heat content anomalies (averaged between 180°-100°W) also decreased during December (Fig. 1) in response to an upwelling equatorial oceanic Kelvin wave. Although the surface and sub-surface temperature anomalies were consistent with El Niño, the overall atmospheric circulation continued to show only limited coupling with the anomalously warm water. The equatorial low-level winds were largely near average during the month, while upper-level easterly anomalies continued in the central and eastern tropical Pacific. The Southern Oscillation Index (SOI) remained slightly negative, but the Equatorial SOI remained near zero. Also, rainfall remained below-average near the Date Line and was above-average over Indonesia. Overall, the combined atmospheric and oceanic state remains ENSO-neutral.

Similar to last month, most models predict the SST anomalies to remain at weak El Niño levels (3-month values of the Niño-

3.4 index between 0.5°C and 0.9°C) during December-February 2014-15, and lasting into the Northern Hemisphere spring 2015. If El Niño were to emerge, the forecaster consensus favors a weak event that ends in early Northern Hemisphere spring. In summary, there is an approximately 50-60% chance of El Niño conditions during the next two months, with ENSO-neutral favored thereafter (click [CPC/IRI consensus forecast](#) for the chance of each outcome).

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 5 February 2015. 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](mailto:ncep.list.ensu-update@noaa.gov).

## International Weather and Crop Summary

January 4-10, 2015

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

### HIGHLIGHTS

**EUROPE:** Wet, warmer weather melted protective snow cover from Germany into Poland and the northern Balkans but increased moisture reserves for dormant winter crops.

**WESTERN FSU:** Winter grains were protected from bitter cold by a moderate to deep snowpack, though crops in northern Ukraine may have been exposed to potential burnback.

**MIDDLE EAST:** Widespread, locally heavy rain and snow further boosted moisture supplies for winter wheat and barley over western and central portions of the region.

**NORTHWESTERN AFRICA:** Dry, warm weather accelerated winter grain growth from Morocco into Tunisia.

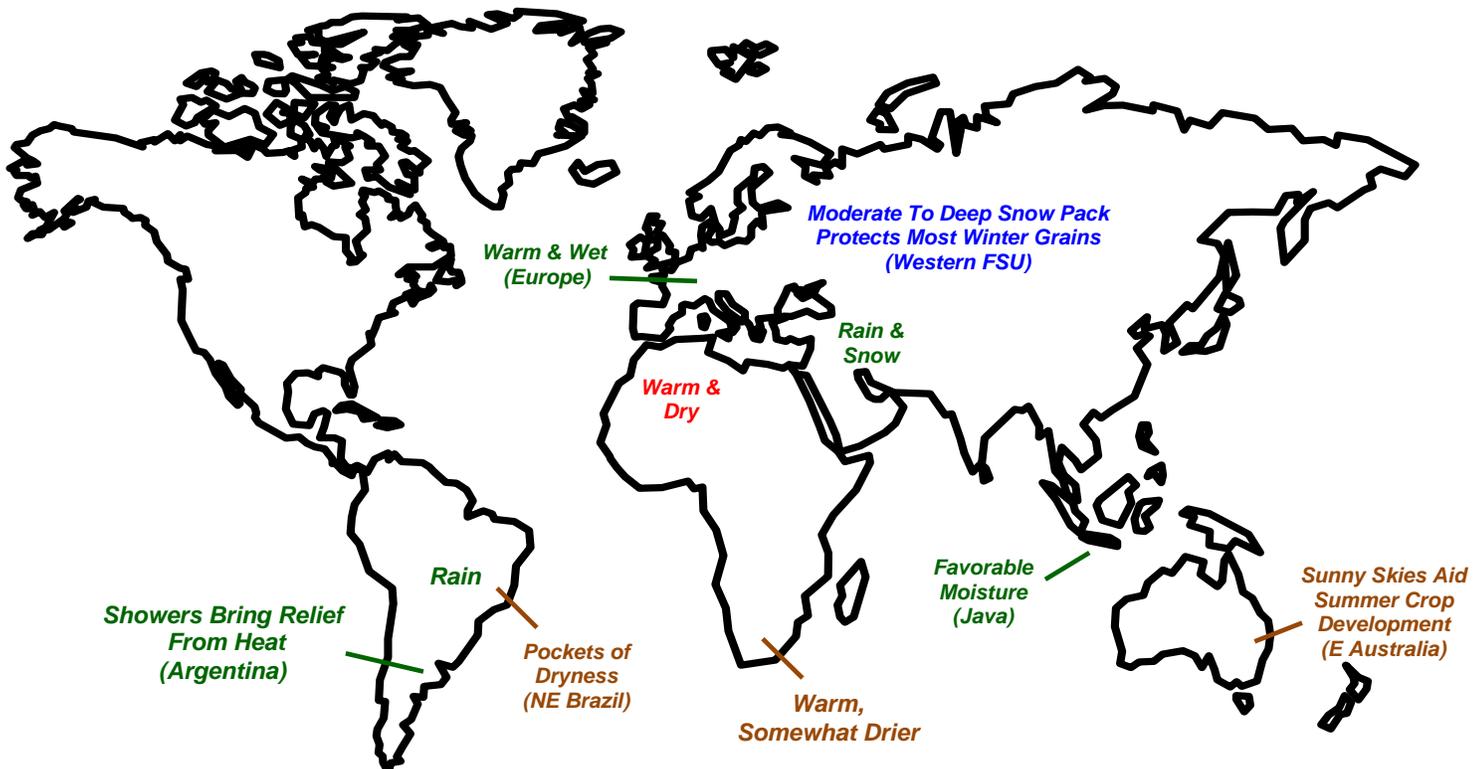
**SOUTHEAST ASIA:** Moisture conditions remained favorable for rice in Java, Indonesia, despite somewhat drier weather.

**AUSTRALIA:** Sunny skies and generally adequate moisture supplies favored summer crop development.

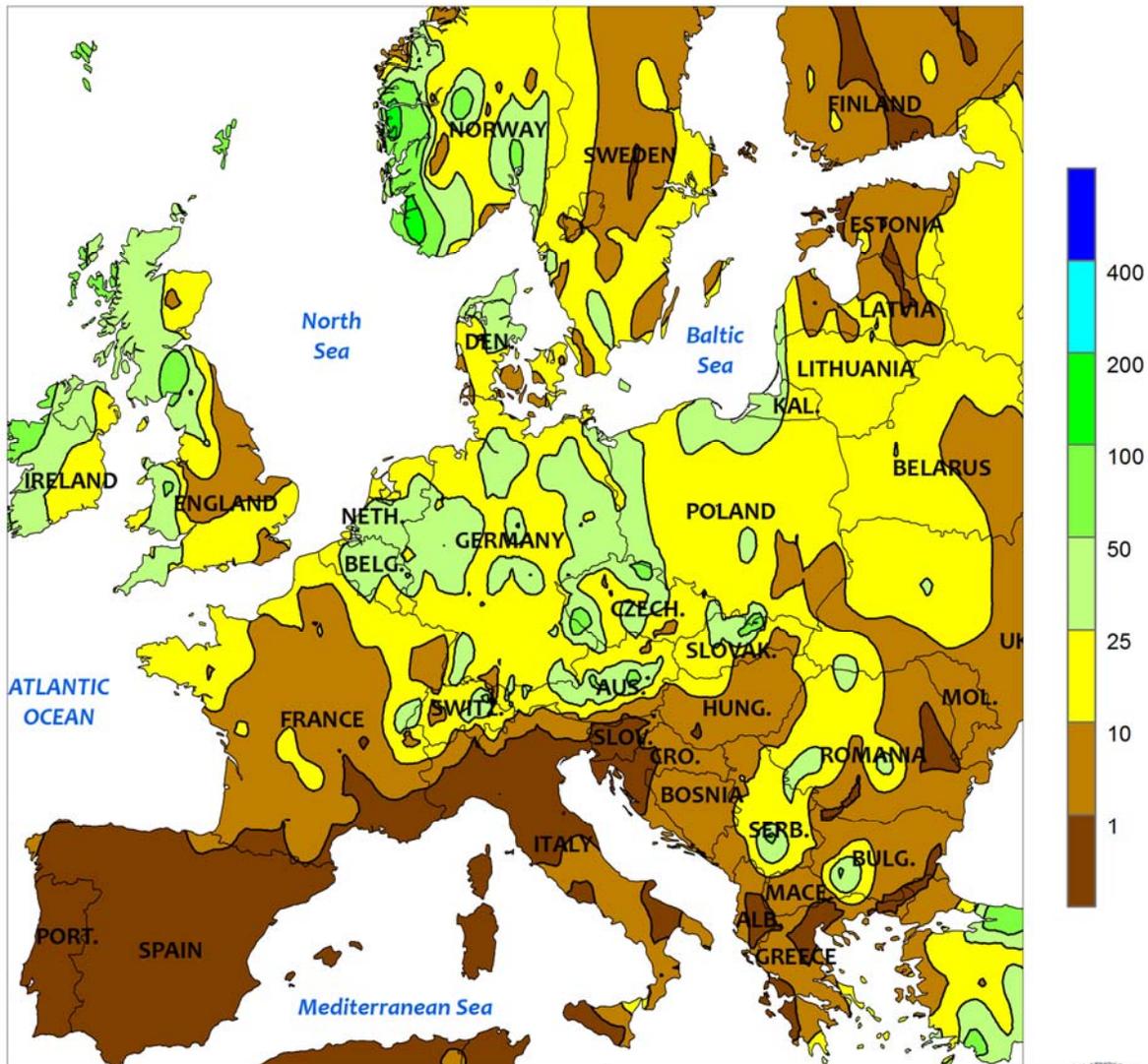
**SOUTH AFRICA:** Rainfall tapered off across the region, accompanied by above-normal temperatures.

**ARGENTINA:** Showers ended a brief period of stressful heat in central Argentina's corn and soybean areas.

**BRAZIL:** Beneficial rain overspread central and southern soybean and corn areas, but pockets of untimely dryness lingered in the northeastern interior.



EUROPE  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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

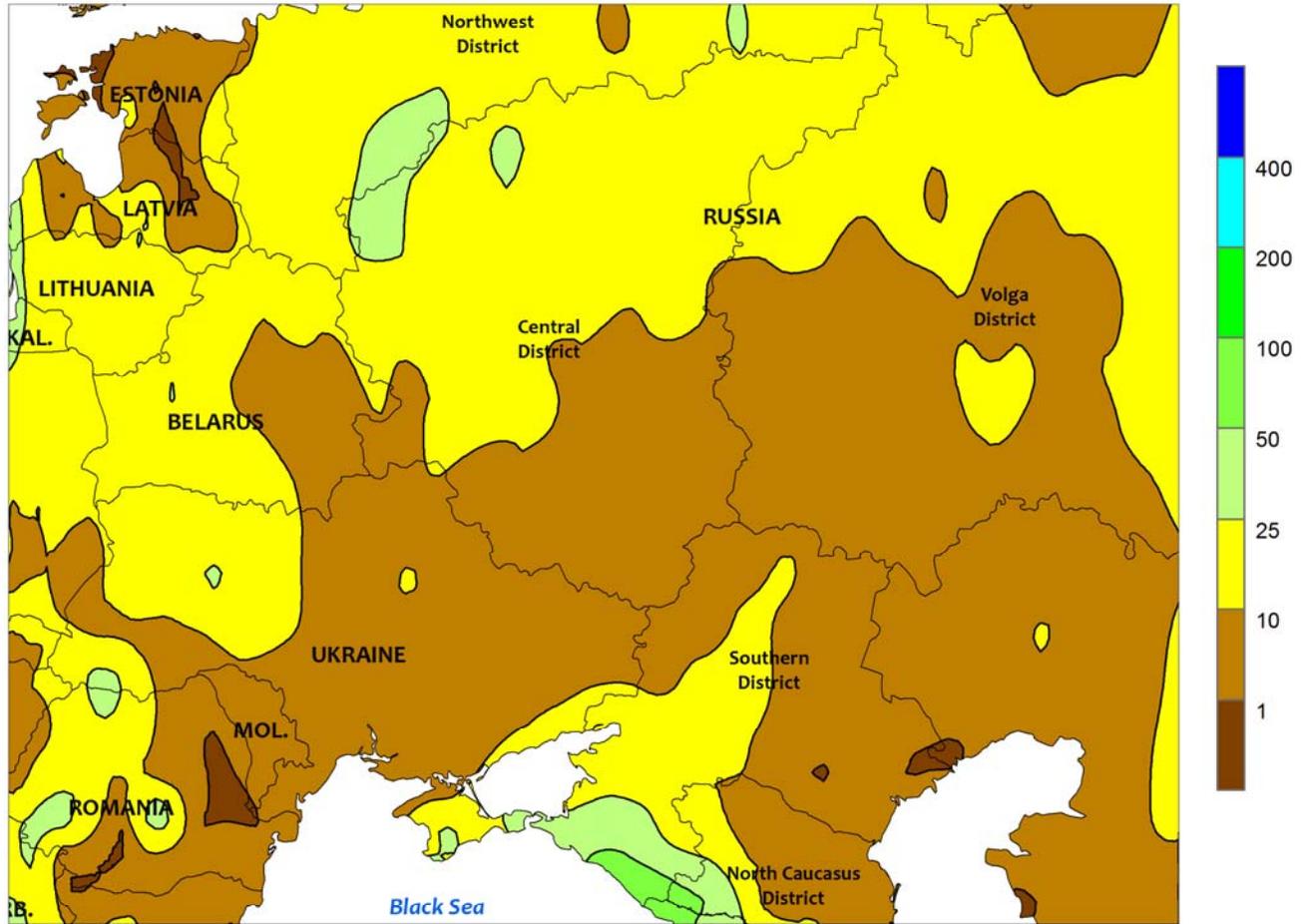


EUROPE

Warm, wet weather overspread central and northern Europe, while dry conditions prevailed across much of the south. A northward shift in the jet stream resulted in warmer weather following last week's cold snap, with temperatures averaging 1 to 5°C above normal from France and the United Kingdom into Poland and the northern Balkans. The warmth coupled with periods of rain (5-50 mm) melted most of the continent's protective snow cover but maintained adequate to abundant moisture reserves for dormant winter crops. Farther south,

chilly (1-3°C below normal) and unsettled weather prevailed over the central and southern Balkans, with some of the precipitation (1-25 mm liquid equivalent) falling as snow. Consequently, winter wheat and rapeseed in the lower Danube River Valley remained protected by a shallow to moderate snowpack. In contrast, sunny skies and near- to above-normal temperatures encouraged winter grain growth from Spain into Italy, though topsoil moisture has become limited on the Iberian Peninsula due to short-term dryness.

WESTERN FSU  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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

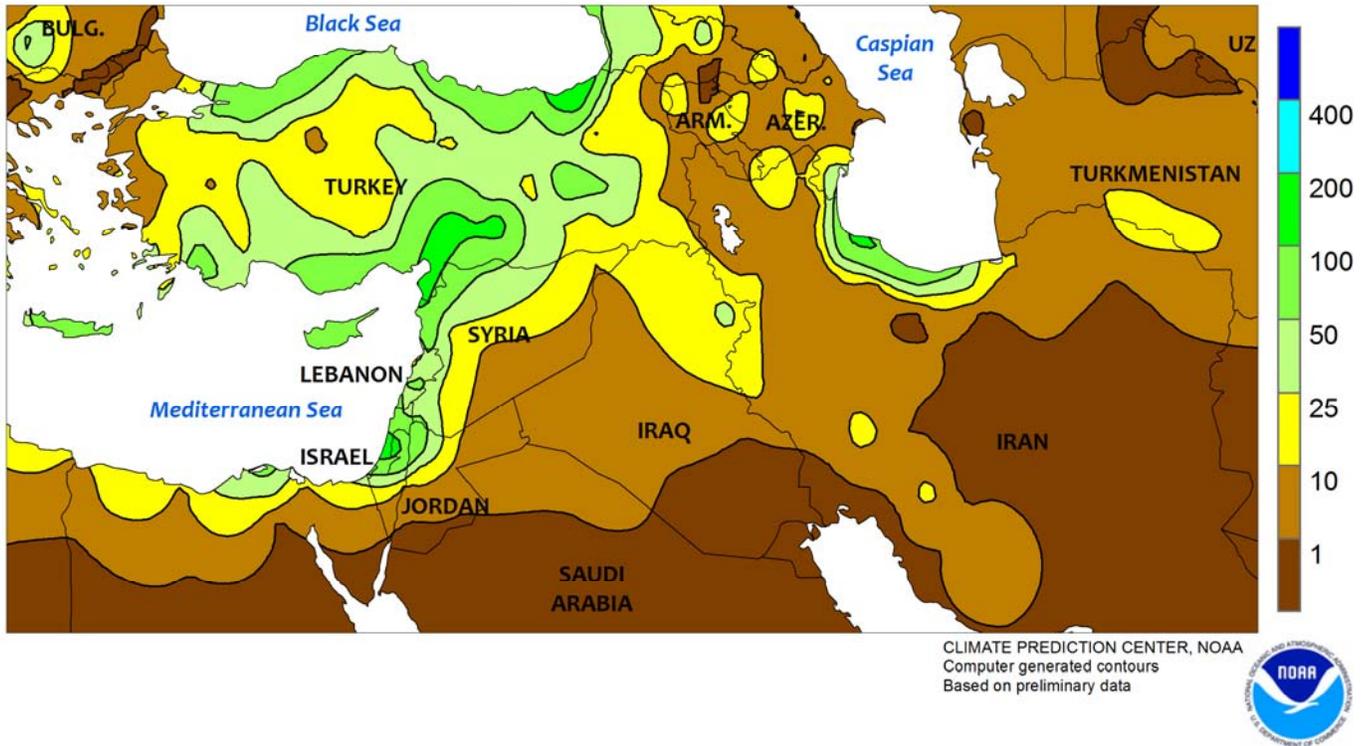


**WESTERN FSU**

Most winter crops remained adequately insulated from bitter cold by a moderate to deep snowpack. Across eastern Ukraine and Russia, a moderate to deep snowpack (5-40 cm) protected dormant winter wheat from nighttime lows below -20°C. However, wheat areas in northern Ukraine were under a

shallow, patchy snow cover (2-5 cm), and were likely exposed to some burnback or possibly even winterkill. Precipitation, which fell in the form of rain and snow, totaled 10 to 50 mm (liquid equivalent) in southern portions of the region, but was lighter (less than 10 mm) elsewhere.

MIDDLE EAST  
 Total Precipitation (mm)  
 JAN 4 - 10, 2015

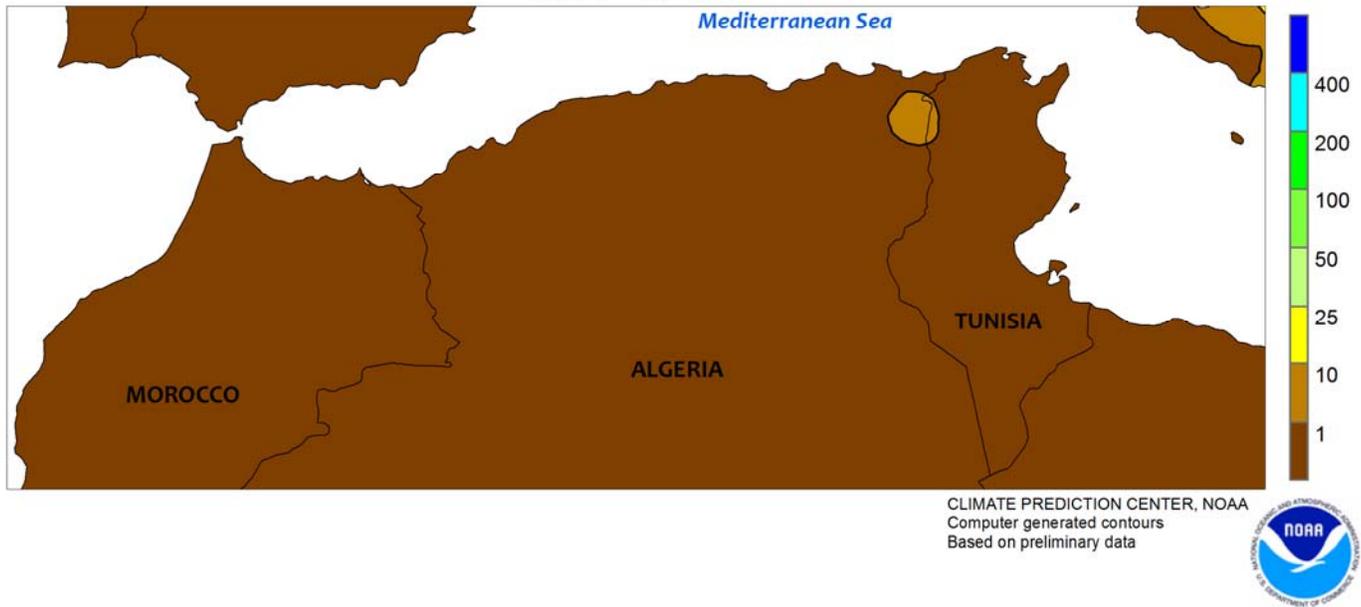


**MIDDLE EAST**

A slow-moving storm system generated widespread rain and snow in western and central growing areas, while late-week precipitation improved soil moisture in the east. Precipitation totaled 10 to locally more than 125 mm (liquid equivalent) over Turkey and the eastern Mediterranean Coast, boosting moisture reserves for dormant (north) to vegetative (south) winter grains. Much of the precipitation fell as snow in Turkey, and the typically warmer locales of

Israel and Jordan. Farther east, a fresh snowfall in the mountains of northern Iraq and western Iran boosted irrigation reserves and spring runoff prospects, while lower-elevation rain (5-25 mm) maintained excellent prospects for winter wheat and barley. After a dry, warm start to the period, late-week rain and high-elevation snow (1-10 mm liquid equivalent, locally more) improved soil moisture for winter grains across northeastern Iran.

NORTHWESTERN AFRICA  
Total Precipitation (mm)  
JAN 4 - 10, 2015

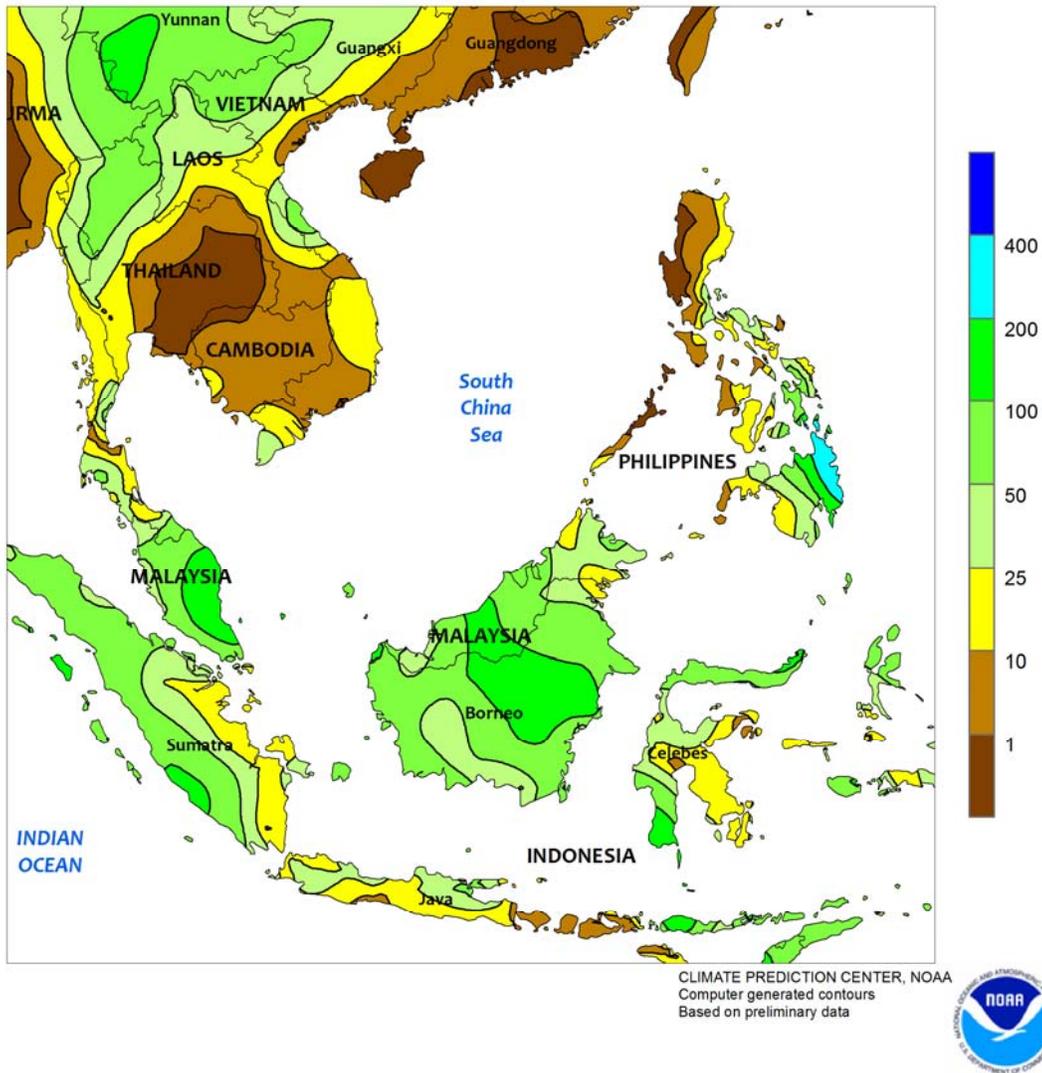


**NORTHWESTERN AFRICA**

After recent rain, sunny skies and near- to above-normal temperatures promoted winter grain growth. There was no precipitation observed during the period as high pressure settled over the region. Early-week cold (nighttime lows of 0 to 5°C) was replaced by notably warmer conditions

by week's end, with daytime highs reaching 20°C or greater in Morocco and the upper teens to near 20°C elsewhere. The sunny, warm weather benefited winter wheat and barley following a favorably wet start to the 2014-15 growing season.

SOUTHEAST ASIA  
Total Precipitation (mm)  
JAN 4 - 10, 2015

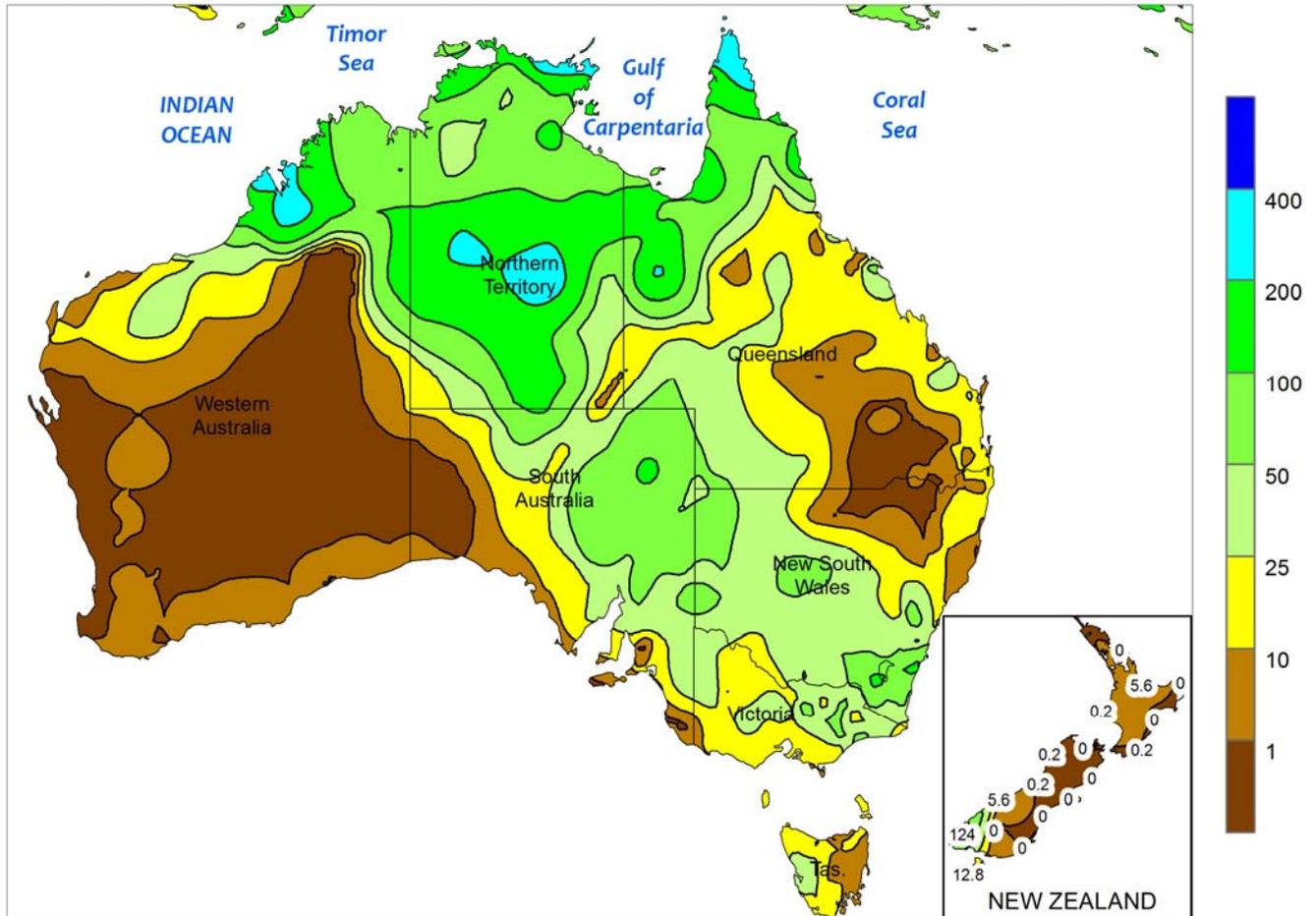


**SOUTHEAST ASIA**

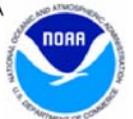
Showers, albeit lighter, continued across Java, Indonesia, maintaining favorable moisture supplies for rice. Rainfall for the week averaged around 30 mm across rice areas, with the majority of the rain occurring early in the period. Seasonal (since November 1) rainfall totals continued to hover near the long-term average, while remaining below last year's totals during the same period. Oil palm areas to the north also saw lighter showers, allowing harvest activities to resume at a more normal pace. However, the eastern portion of the Malaysian Peninsula received

upwards of 300 mm of rain, making the total since mid-December 2,000 mm and further disrupting fieldwork. Meanwhile in the Philippines, more seasonable rainfall returned to the east, with variable amounts between 25 to 100 mm, although heavy showers (over 350 mm) continued in relatively minor agricultural areas of northeastern Mindanao. In Thailand, unseasonably heavy showers (50-75 mm) in the north provided a welcomed boost to reservoir levels that were trending below the levels of the last 2 years and had caused concerns over reduced rice output.

AUSTRALIA  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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

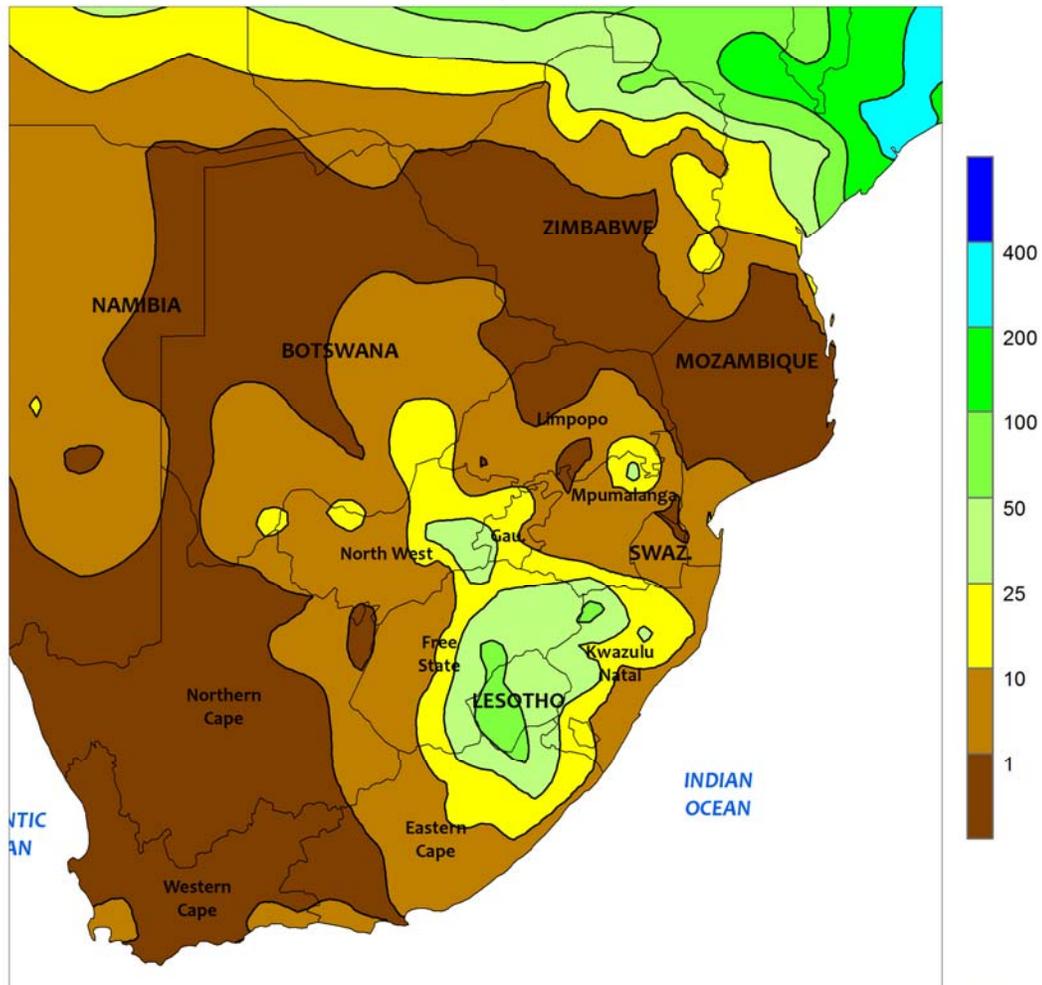


**AUSTRALIA**

Showers (5-25 mm, locally near 50 mm) traversed much of eastern Australia, but major summer crop producing areas in northern New South Wales and southern Queensland remained mostly dry. During the past several weeks, however, widespread showers have boosted topsoil moisture and local irrigation supplies within these latter two

areas. As a result, a combination of sunny skies and generally adequate moisture supplies favored cotton and sorghum development, as well as local fieldwork. Temperatures in major summer crop producing areas averaged near normal, with maximum temperatures in the upper 20s to middle 30s degrees C.

SOUTH AFRICA  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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

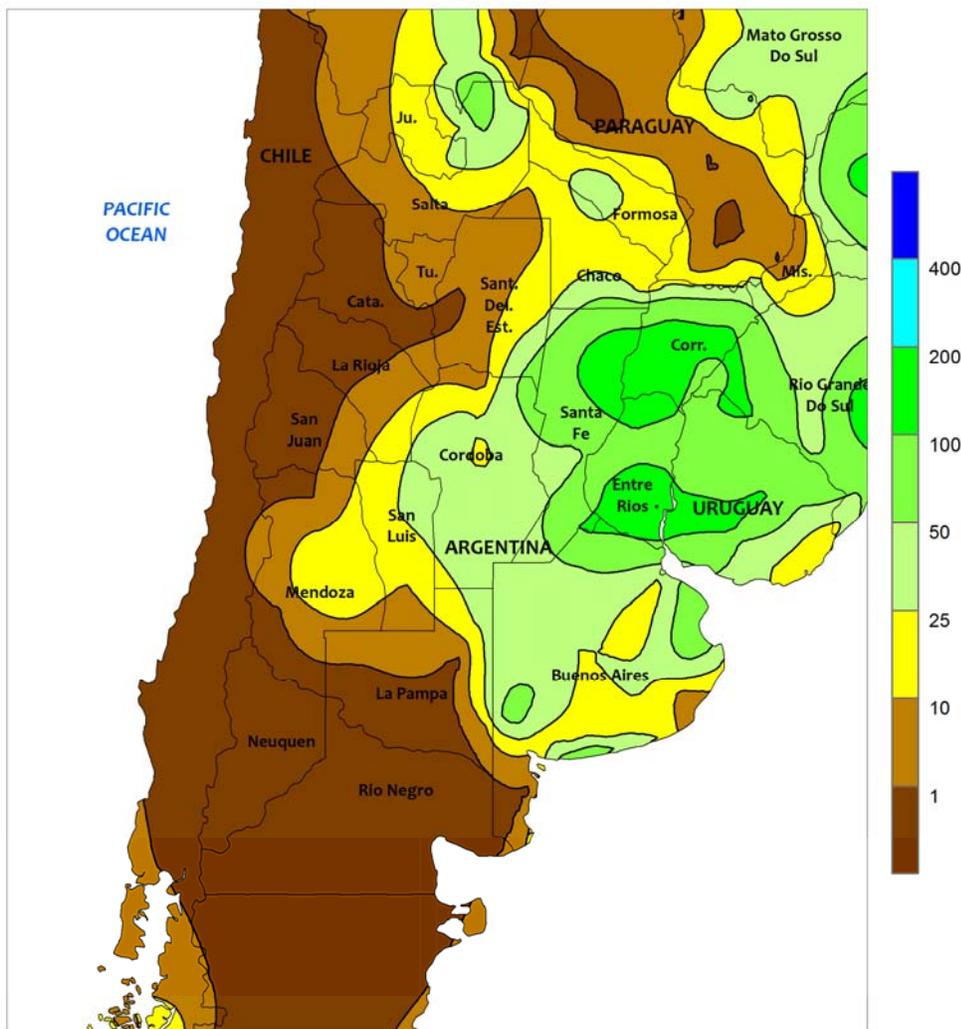


**SOUTH AFRICA**

Above-normal temperatures spurred rapid development of summer crops across the corn belt, although diminishing rainfall left many areas in need of moisture. Weekly temperatures averaged 1 to 3°C above normal, with daytime highs reaching the middle 30s (degrees C) on several days in key western production areas (western sections of North West and Free State). Moderate to heavy showers (greater than 25 mm) were generally confined to central and southeastern sections of the corn belt (North West southeastward to KwaZulu-Natal), with little to no rain falling in the north and east (Limpopo and Mpumalanga) and the aforementioned warm, western production areas. Corn is in or approaching reproduction in the eastern corn belt, and although conditions

have been overall favorable for much of the season to date, a return to more seasonable rain and temperatures is needed to ensure normal crop development. Elsewhere, drier-than-normal weather (rainfall totaling 3-25 mm) returned to rain-fed sugarcane areas of southern KwaZulu-Natal. Unseasonable warmth (weekly temperatures averaging 1-2°C above normal) hastened growth of sugarcane throughout KwaZulu-Natal and eastern Mpumalanga. Warm, mostly dry weather also continued throughout major irrigated farming areas of the Cape Provinces, with daytime highs reaching the upper 30s fostering rapid development of corn, cotton, and other crops in the Orange Valley, as well as tree and vine crops in Western Cape.

ARGENTINA  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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

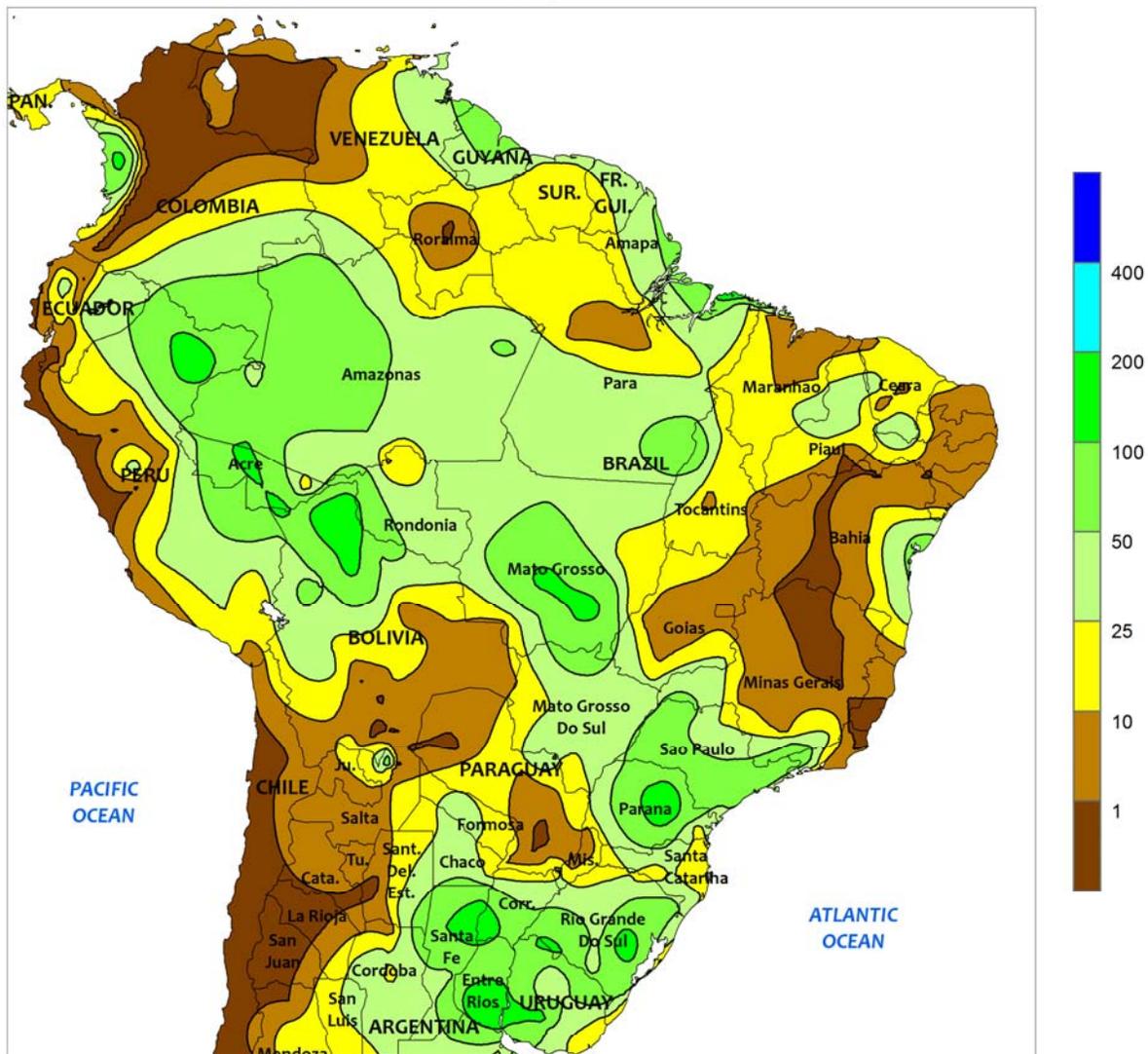


**ARGENTINA**

Summer crop prospects remained overall favorable, though brief periods of heat stressed early-planted corn in parts of central Argentina. Rainfall totaling 10 to 50 mm in the main farming areas of La Pampa, Buenos Aires, and Cordoba maintained generally adequate levels of soil moisture; however, weekly temperatures averaged 1 to 2°C above normal, owing mainly to a brief surge of heat (daytime highs in the middle and upper 30s degrees C) early in the week prior to the onset of the rain. Early planted corn was in or nearing reproduction, making the arrival of the showers particularly timely. Farther east, heavier showers (50 to more than 100 mm) disrupted the final stages of corn, soybean, and cotton

planting in Santa Fe and Entre Rios. In contrast, rainfall declined in the northeast, with amounts of 25 to 50 mm in cotton areas of Chaco and Formosa. In the northwest, mostly dry, warmer-than-normal weather (rainfall totaling 5-25 mm, with daytime highs exceeding 40°C) limited moisture for establishment of later-planted summer grains and oilseeds. According to Argentina’s Ministry of Agriculture, corn was 85 percent planted as of January 8, slightly ahead of last year’s pace (81 percent). Similarly, soybeans were 93 percent planted, 6 points ahead of last year. Additionally, wheat harvesting was nearing completion, advancing 10 points to 98 percent complete.

BRAZIL  
Total Precipitation (mm)  
JAN 4 - 10, 2015



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



**BRAZIL**

Showers intensified over key soybean areas of central Brazil but pockets of unseasonable warmth and dryness persisted in the northeastern interior. Following last week's lull in rainfall, amounts totaled 25 to more than 100 mm over Mato Grosso and Mato Grosso do Sul, though several days of above-normal temperatures (highs reaching the middle 30s degrees C) maintained high evapotranspiration rates and evaporative losses. Showers (greater than 25 mm) also increased over northern Tocantins and Piaui. However, unseasonable warmth and dryness persisted for a second week in northern Goias and neighboring locations in Bahia and Minas Gerais; weekly

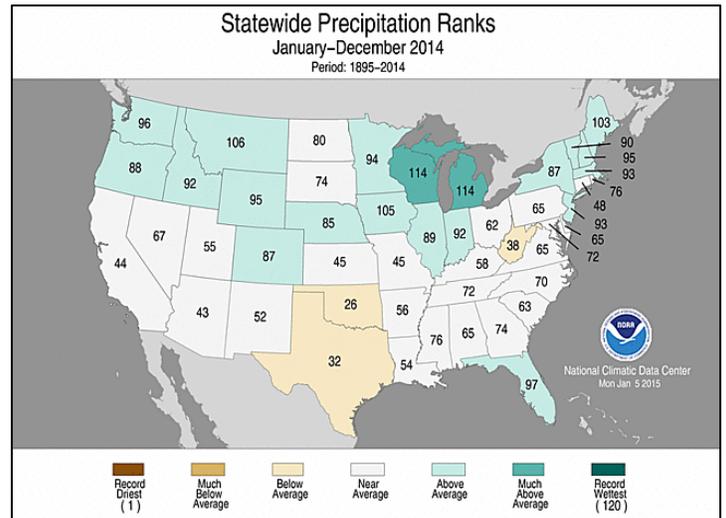
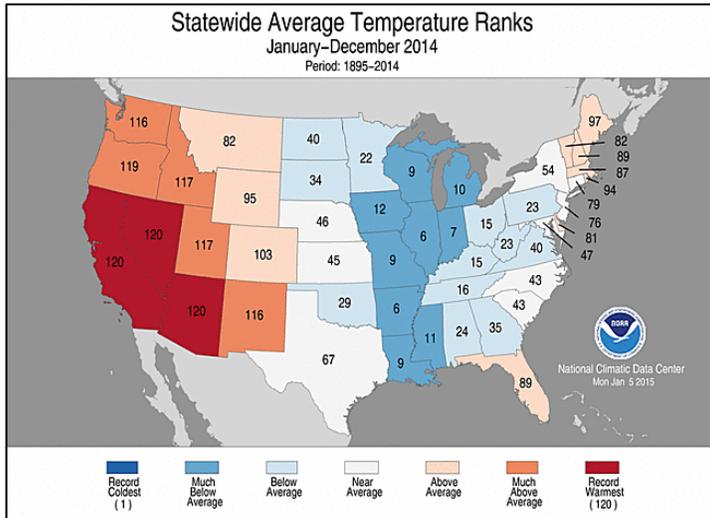
temperatures averaging 2 to 3°C above normal (daytime highs reaching the middle 30s on most days) compounded the effects of the dryness, raising additional concern for soybeans and other summer row crops. Meanwhile, warm showery weather (rainfall totaling 25-100 mm, with daytime highs mostly in the upper 20s and lower 30s) continued in southern and southeastern Brazil (Rio Grande do Sul to southern Minas Gerais), benefiting soybeans, corn, sugarcane, and coffee. Showers (greater than 25 mm) developed along the central coast of Bahia but seasonable dryness continued along the northeastern coast, favoring sugarcane harvesting and other seasonal fieldwork.

# U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on Jan. 12, 2015. Forecasts refer to Jan. 1.

The U.S. **all orange** forecast for the 2014-2015 season is 6.72 million tons, down 3 percent from the previous forecast and down 1 percent from the 2013-2014 final utilization. The Florida all orange forecast, at 103 million boxes (4.64 million tons), is down 5 percent from the previous forecast and 2 percent from last season's final utilization. Early, midseason,

and Navel varieties in Florida are forecast at 48.0 million boxes (2.16 million tons), down 8 percent from the previous forecast and down 10 percent last season's final utilization. The Florida Valencia orange forecast, at 55.0 million boxes (2.48 million tons), is down 2 percent from the previous forecast but up 7 percent from last season's final utilization.



The National Climatic Data Center indicated that the contiguous U.S. experienced its 34th-warmest year during the 1895-2014 period of record. The nation's annual average temperature was 52.6°F, 0.5°F above the 20th century mean. However, cool weather in the Mississippi Valley contrasted with near-record to record-setting warmth in the West.

On the strength of wet weather across the North, the U.S. experienced its 40th-wettest year during the 120-year period of record. Precipitation averaged 30.76 inches across the Lower 48 States, 103 percent of normal. However, drier-than-normal conditions affected the southern Plains, while precipitation in California was insufficient to provide much drought relief.

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