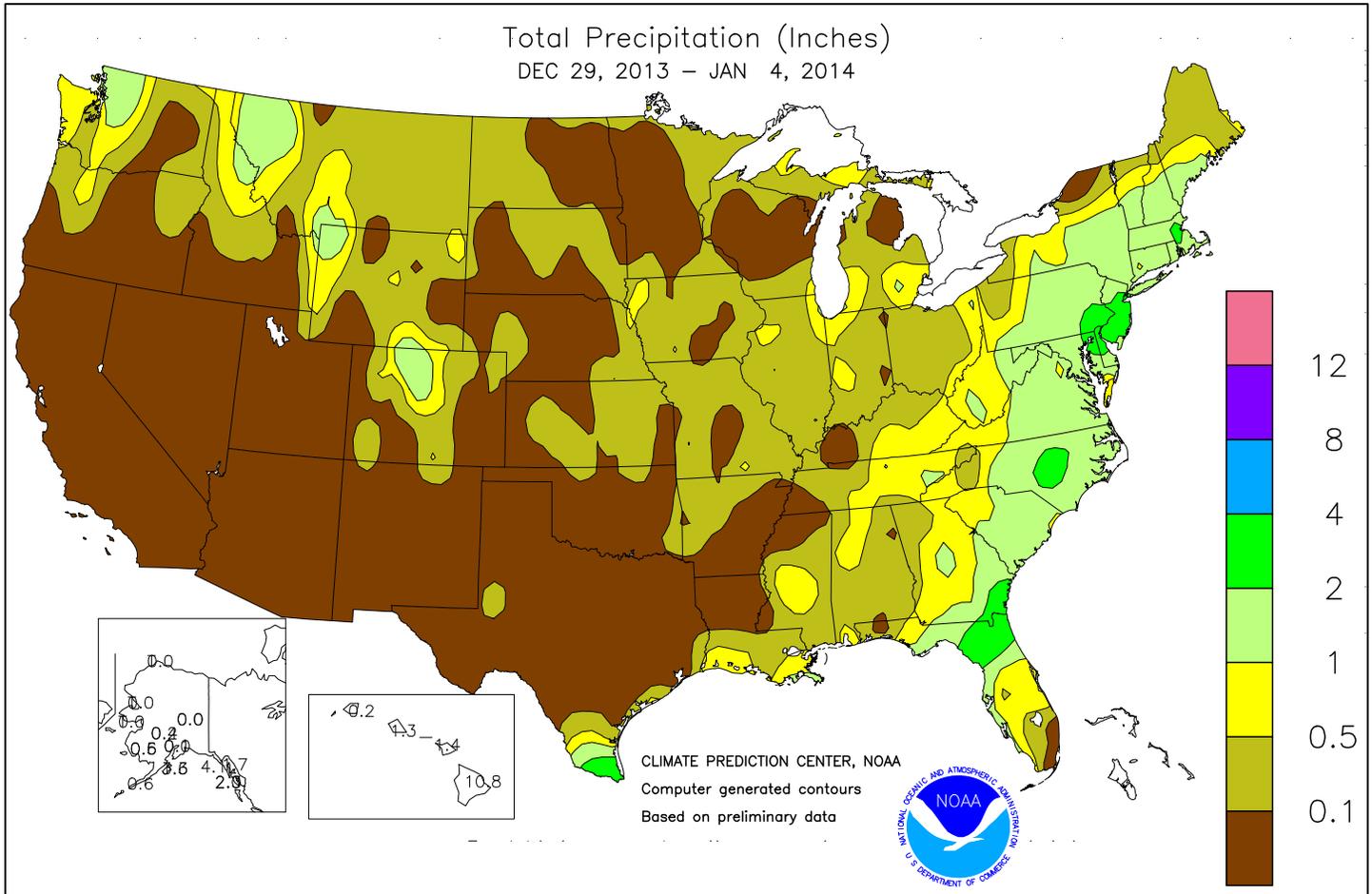


# WEEKLY WEATHER AND CROP BULLETIN



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

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



## HIGHLIGHTS

### December 29, 2013 - January 4, 2014

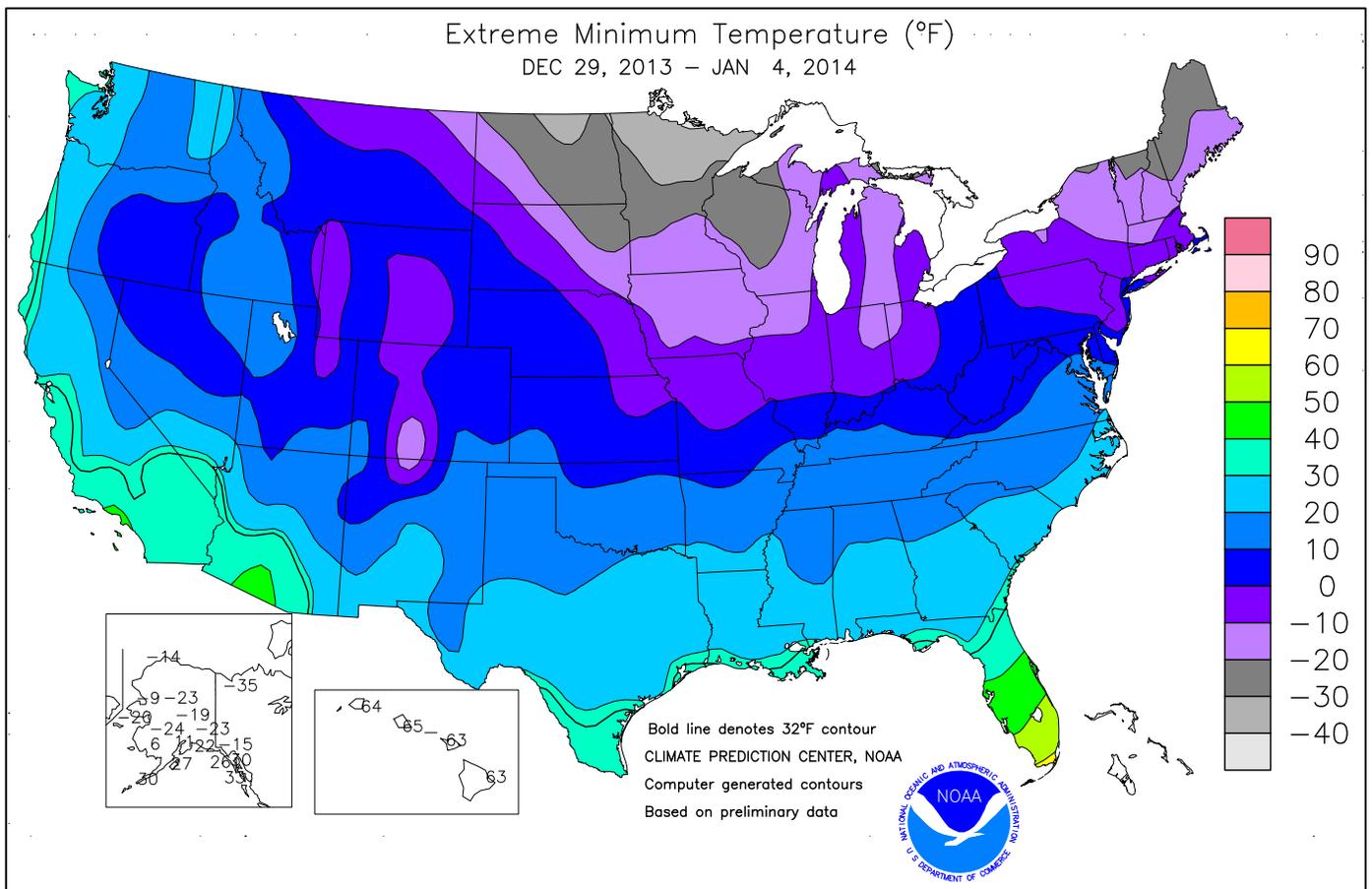
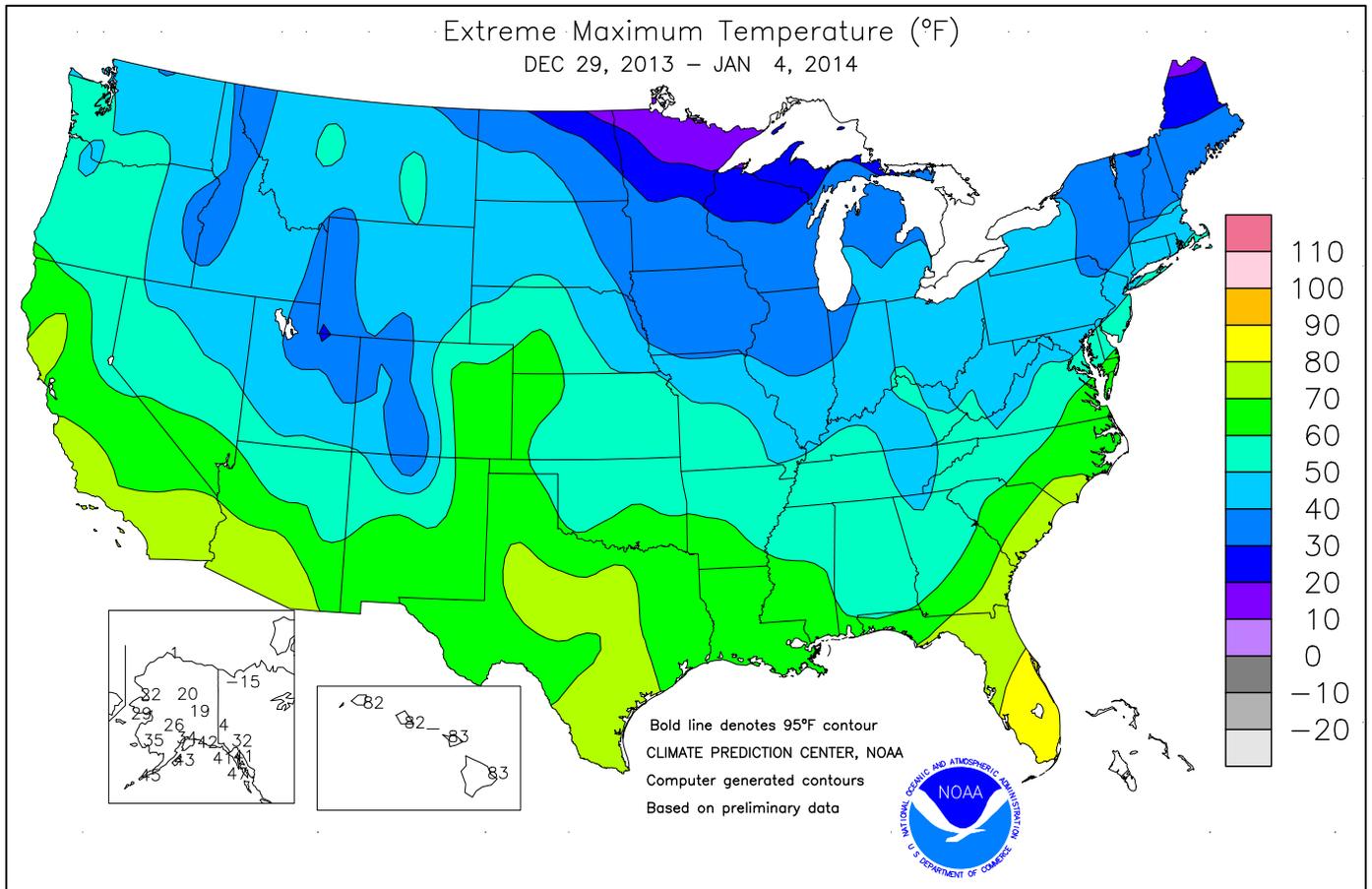
*Highlights provided by USDA/WAOB*

**B**itterly cold conditions intensified from the **Dakotas to New England**, holding weekly temperatures 10 to 20°F below normal. Readings below -20°F were noted across **northern New England** and the **upper Midwest**, while temperatures below -30°F were reported in **northern Minnesota**. In contrast, near- to above-normal temperatures covered the **southern Atlantic region** and most areas from the **Pacific Coast to the High Plains**. Dry conditions accompanied the **West's** mild weather, except for a few rain and snow showers from the **Pacific**

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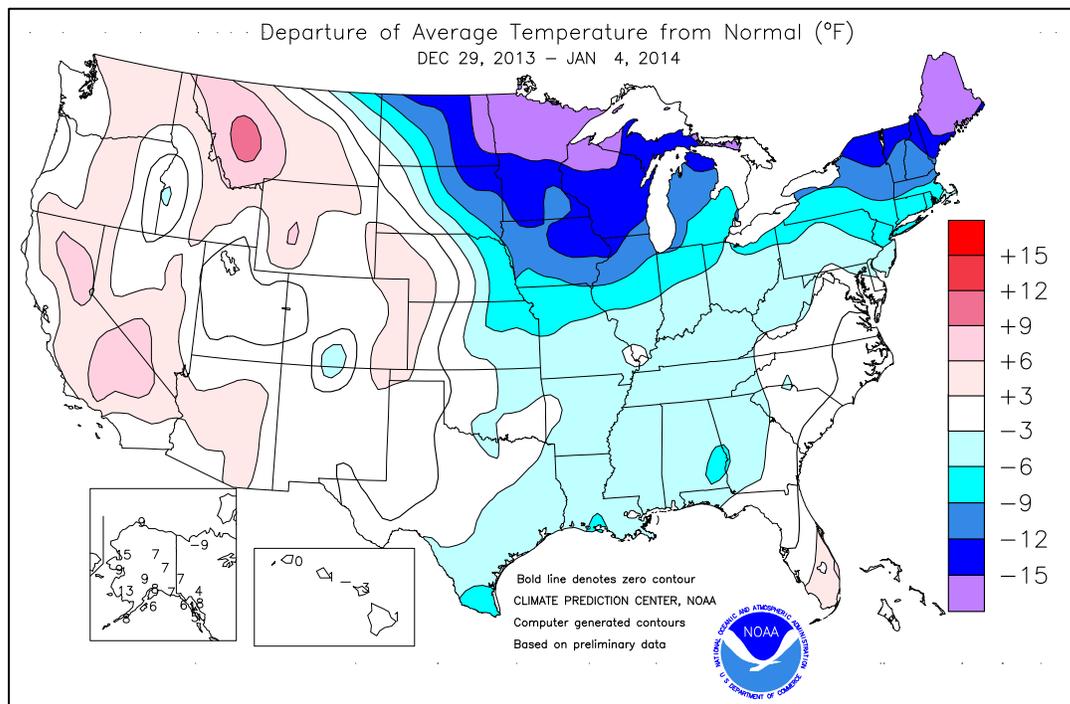


(Continued from front cover)

### Northwest to the northern and central Rockies. California

headed deeper into a potential third consecutive year of drought, maintaining concerns about rangeland health and summer water supplies. Farther east, significant precipitation across the nation's mid-section was confined to **Deep South Texas**. However, enough snow blanketed the **northern Plains** in advance of a cold outbreak to provide winter wheat with insulation from sub-zero temperatures. At week's end, a stronger cold wave bore down on the **Plains**, with some wheat exposed in a broad area centered on **Nebraska**. Meanwhile, periods of generally light snow blanketed the **Midwest**. From the **middle Mississippi Valley into the lower Great Lakes region**, more substantial snow arrived on January 5 in advance of a severe Arctic outbreak. Elsewhere, two storms crossed the **East** during the week, collectively dropping at least 1 to 2 inches of precipitation from **northern Florida to southern New England**. The heaviest precipitation fell on December 29 and January 2, with the latter event resulting in widespread snow in the **Northeast**.

For much of the week, record-setting warmth covered portions of **California**. December 29 featured daily-record highs in **California** locations such as **Red Bluff** (72°F) and **San Francisco** (68°F). The following day, additional record highs in **California** included 74°F in **Paso Robles** and 67°F in **Fresno**. January 1 was the warmest New Year's Day on record in **Redding, CA**, with a high of 73°F. From January 2-4, the week ended with a trio of daily-record highs (67, 66, and 68°F) in **Sacramento, CA**. In **southern California**, **Burbank** notched a daily-record high (84°F) on January 2. In stark contrast, frigid conditions gripped the **nation's northern tier**. **Grand Forks, ND**, collected a daily-record low of -26°F on December 29. In **Wisconsin**, record-setting lows for December 30 included -31°F in **Owen**; -27°F in **Antigo**; and -19°F in **Green Bay**. Another cold surge air arrived with the new year, resulting in consecutive daily-record lows (-39 and -43°F, respectively) on January 1-2 in **International Falls, MN**. In **Maine**, **Bangor's** temperature stayed below 0°F (high of -5°F on January 2) all day for the first time since January 15, 2004. Elsewhere in **Maine**, **Caribou** (high of -15°F on January 2) reported its second-lowest maximum temperature on record, behind only -16°F on January 4, 1981. The week ended with a slew of record lows across the **Midwest and East**. Daily-record lows for January 3 fell to -21°F in **Alpena, MI**; -20°F in **Montpelier, VT**; -15°F in **Cedar Rapids, IA**; and -10°F in **Ft. Wayne, IN**. Elsewhere on January 3, **Rockford, IL** (-18°F), experienced its lowest temperature since February 10, 2011, while **Memphis, TN** (19°F), posted its lowest reading since February 11, 2011. **Memphis** also saw the end of its longest stretch of readings of 20°F or greater – 1056 consecutive days – in airport records. The week ended with consecutive daily-record lows (-3 and -4°F, respectively) on January 3-4 in **Allentown, PA**.



The week opened in the midst of a significant **Eastern** rainfall event. Record-setting totals for December 29 climbed to 2.07 inches in **Augusta, GA**; 1.94 inches in **Raleigh-Durham, NC**; 1.86 inches in **Apalachicola, FL**; 1.37 inches in **Wilmington, DE**; and 1.32 inches in **Boston, MA**. The following day, post-storm showers resulted in a trace of snow as far south as **North Little Rock, AR**, and **Muscle Shoals, AL**. The next surge of moisture arrived across the **nation's mid-section** on New Year's Day, when record-setting snowfall totals for January 1 included 5.0 inches in **Billings, MT**, and 2.0 inches in **Concordia, KS**. Precipitation returned to the **East** on January 2, when **Jacksonville, FL**, received a daily-record rainfall of 1.87 inches. Farther north, record-breaking snowfall amounts for January 2 totaled 10.6 inches in **Boston, MA**; 7.1 inches in **Albany, NY**; 4.2 inches in **Cincinnati, OH**; and 4.0 inches in **Wilmington, DE**. The snowfall event carried into January 3 in the **northern Mid-Atlantic region**, boosting 2-day totals to 11.2 inches in **Islip, NY**, and 8.8 inches in **Newark, NJ**. Meanwhile, snow returned to parts of the **Plains** in advance of an Arctic cold front, with record-setting amounts for January 4 reaching 3.8 inches in **Billings, MT**; 3.5 inches in **Colorado Springs, CO**; and 1.0 inch in **Dalhart, TX**.

Mild weather encompassed **Alaska**, especially across the state's western tier. Following ten daily-record highs during December, **Cold Bay** noted another record (45°F on January 2) early in the new year. In **southern Alaska**, where wet weather prevailed, weekly precipitation totals reached 4.56 inches in **Yakutat** and 3.47 inches in **Kodiak**. Meanwhile in **Hawaii**, heavy rain persisted across windward sections of the **Big Island** through the end of December, followed by a generally tranquil start to the new year. **Hilo** received 10.76 inches of rain during the last 3 days of the year, including a daily-record total of 7.51 inches on December 30. As a result, **Hilo's** December rainfall climbed to 20.20 inches, 175 percent of normal. Early in 2014, some heavy showers developed across **Hawaii's western islands**, with 24-hour totals topping 2 inches on January 2-3 in locations such as **Koikee, Kauai** (2.76 inches), and **Maunawili, Oahu** (2.69 inches).

National Weather Data for Selected Cities

Weather Data for the Week Ending January 4, 2014

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	48	31	53	19	39	-4	0.36	-0.77	0.30	7.36	143	0.30	45	88	52	0	4	2	0	
HUNTSVILLE	47	27	54	17	37	-3	0.53	-0.72	0.30	6.88	109	0.31	43	87	65	0	5	3	0	
MOBILE	54	35	59	25	44	-6	1.08	-0.03	0.91	8.45	159	1.04	160	90	73	0	2	3	1	
AK MONTGOMERY	51	33	58	24	42	-5	0.37	-0.66	0.20	9.35	168	0.35	59	85	59	0	3	3	0	
ANCHORAGE	29	20	34	11	25	9	0.12	-0.06	0.10	1.58	137	0.12	120	90	78	0	7	2	0	
BARROW	-1	-7	1	-14	-4	9	0.01	0.01	0.01	1.21	1008	0.01	100	80	72	0	7	1	0	
FAIRBANKS	8	-11	19	-19	-2	7	0.00	-0.14	0.00	0.00	0	0.00	0	78	72	0	7	0	0	
JUNEAU	37	32	41	30	34	7	1.73	0.54	0.58	9.33	153	0.78	116	97	90	0	3	7	1	
KODIAK	41	31	43	27	36	6	3.27	1.40	1.68	6.20	71	1.87	175	93	84	0	5	5	2	
NOME	23	7	29	-20	15	9	0.03	-0.16	0.03	2.04	182	0.00	0	90	80	0	7	1	0	
AZ FLAGSTAFF	49	18	54	11	33	4	0.00	-0.42	0.00	1.35	65	0.00	0	76	23	0	7	0	0	
PHOENIX	71	45	77	43	58	5	0.00	-0.21	0.00	0.39	38	0.00	0	57	31	0	0	0	0	
TUCSON	71	40	76	36	56	5	0.00	-0.25	0.00	0.85	73	0.00	0	54	28	0	0	0	0	
YUMA	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0	0	0	0	
AR FORT SMITH	48	24	61	18	36	-2	0.00	-0.55	0.00	4.11	111	0.00	0	78	49	0	7	0	0	
LITTLE ROCK	48	24	60	17	36	-4	0.04	-0.80	0.04	6.98	134	0.04	8	87	44	0	6	1	0	
CA BAKERSFIELD	66	37	71	36	52	6	0.00	-0.21	0.00	0.10	11	0.00	0	67	45	0	0	0	0	
FRESNO	65	36	67	34	51	7	0.00	-0.39	0.00	0.15	10	0.00	0	73	56	0	0	0	0	
LOS ANGELES	69	48	78	46	58	1	0.00	-0.52	0.00	0.30	14	0.00	0	88	42	0	0	0	0	
REDDING	68	32	73	29	50	5	0.00	-1.28	0.00	0.38	7	0.00	0	79	48	0	4	0	0	
SACRAMENTO	65	33	68	30	49	4	0.00	-0.68	0.00	0.43	15	0.00	0	92	31	0	3	0	0	
SAN DIEGO	69	48	75	46	59	2	0.00	-0.41	0.00	0.46	30	0.00	0	70	45	0	0	0	0	
SAN FRANCISCO	62	42	68	41	52	4	0.00	-0.81	0.00	0.35	10	0.00	0	79	60	0	0	0	0	
STOCKTON	63	31	65	29	47	3	0.00	-0.49	0.00	0.35	17	0.00	0	87	69	0	7	0	0	
CO ALAMOSA	24	-10	34	-16	7	-7	0.13	0.07	0.13	0.17	47	0.00	0	89	73	0	7	1	0	
CO SPRINGS	46	18	61	8	32	4	0.18	0.10	0.18	0.25	53	0.18	360	78	31	0	7	1	0	
DENVER INTL	47	16	62	6	31	3	0.40	0.33	0.21	0.59	164	0.39	780	75	42	0	7	3	0	
GRAND JUNCTION	33	10	37	7	21	-5	0.02	-0.11	0.02	0.98	163	0.02	25	90	69	0	7	1	0	
PUEBLO	49	16	66	12	32	3	0.04	-0.04	0.04	0.06	14	0.04	80	84	58	0	7	1	0	
CT BRIDGEPORT	32	17	46	3	24	-7	1.67	0.85	1.31	4.76	121	0.36	77	79	63	0	6	3	1	
HARTFORD	28	9	42	-9	18	-9	1.53	0.70	1.17	4.29	105	0.36	75	79	53	0	7	4	1	
DC WASHINGTON	43	29	51	17	36	0	1.65	0.92	1.31	5.89	170	0.34	81	75	48	0	5	2	1	
DE WILMINGTON	37	20	49	5	29	-3	5.44	4.66	1.84	9.30	242	4.07	904	86	51	0	6	4	4	
FL DAYTONA BEACH	69	53	79	39	61	2	0.61	-0.05	0.25	2.05	66	0.36	95	93	63	0	0	3	0	
JACKSONVILLE	61	44	73	31	53	0	2.56	1.86	1.62	3.26	107	2.40	585	92	66	0	1	3	2	
KEY WEST	78	70	82	64	74	3	4.29	3.78	4.25	5.35	219	4.25	1417	93	77	0	0	3	1	
MIAMI	79	68	84	61	74	6	0.10	-0.30	0.08	4.78	199	0.10	45	90	67	0	0	2	0	
ORLANDO	72	56	83	44	64	3	0.50	0.00	0.42	0.73	28	0.44	152	89	69	0	0	3	0	
PENSACOLA	57	39	62	28	48	-4	0.41	-0.64	0.28	4.18	91	0.41	67	84	60	0	1	2	0	
TALLAHASSEE	59	43	71	29	51	-1	1.99	0.88	1.34	5.56	117	0.65	100	77	62	0	1	3	2	
TAMPA	68	55	77	43	62	0	1.15	0.68	0.54	1.42	55	0.61	226	87	67	0	0	3	1	
GA WEST PALM BEACH	80	68	86	58	74	7	0.04	-0.63	0.02	4.32	122	0.02	5	83	63	0	0	2	0	
ATHENS	48	31	57	21	39	-3	1.05	0.11	0.73	7.95	187	0.32	58	81	58	0	3	2	1	
ATLANTA	45	31	52	21	38	-5	0.37	-0.58	0.24	8.07	184	0.26	46	85	64	0	3	3	0	
AUGUSTA	52	31	61	21	42	-3	2.35	1.45	2.01	7.25	198	0.34	65	91	58	0	2	2	1	
COLUMBUS	48	34	55	24	41	-6	0.68	-0.34	0.31	9.39	188	0.50	85	88	55	0	3	3	0	
MACON	50	32	56	20	41	-5	1.24	0.24	0.89	9.40	208	0.35	60	93	57	0	3	3	1	
SAVANNAH	58	42	75	30	50	1	1.96	1.15	0.80	3.53	108	1.16	247	79	62	0	2	3	2	
HI HILO	79	66	83	63	72	0	10.80	8.82	6.77	20.22	174	0.01	1	94	87	0	0	4	2	
HONOLULU	80	68	82	65	74	0	1.34	0.69	1.34	4.99	155	1.34	372	78	68	0	0	1	1	
KAHULUI	81	68	83	63	75	3	1.41	0.60	0.96	3.03	85	0.97	206	84	74	0	0	4	1	
LIHUE	78	66	82	64	72	0	0.20	-0.89	0.19	5.56	103	0.19	30	83	70	0	0	2	0	
ID BOISE	36	20	39	15	28	-1	0.00	-0.29	0.00	0.67	43	0.00	0	95	83	0	7	0	0	
LEWISTON	41	29	49	23	35	2	0.02	-0.20	0.01	0.76	64	0.01	8	80	74	0	6	2	0	
POCATELLO	39	20	47	15	29	5	0.00	-0.25	0.00	0.43	35	0.00	0	87	74	0	7	0	0	
IL CHICAGO/O'HARE	23	4	40	-12	14	-9	1.08	0.66	0.30	2.69	101	0.73	304	77	64	0	7	6	0	
MOLINE	21	0	40	-15	11	-11	0.44	0.04	0.24	3.29	136	0.37	168	80	66	0	7	3	0	
PEORIA	25	7	38	-4	16	-7	0.38	0.00	0.21	1.88	72	0.37	176	85	65	0	7	4	0	
ROCKFORD	18	-2	36	-18	8	-12	0.68	0.35	0.23	2.13	95	0.42	221	83	72	0	7	4	0	
SPRINGFIELD	29	8	38	-7	19	-7	0.27	-0.17	0.21	1.77	64	0.27	113	87	61	0	7	2	0	
IN EVANSVILLE	39	21	49	10	30	-2	0.22	-0.42	0.12	9.43	242	0.10	28	76	55	0	7	3	0	
FORT WAYNE	25	10	44	-10	18	-7	0.49	-0.02	0.30	3.31	109	0.44	157	82	63	0	7	4	0	
INDIANAPOLIS	32	13	45	-3	23	-4	0.40	-0.17	0.36	4.85	145	0.40	125	85	58	0	7	2	0	
SOUTH BEND	23	9	41	-7	16	-9	0.83	0.27	0.26	2.89	85	0.59	190	76	67	0	7	6	0	
IA BURLINGTON	24	5	39	-6	14	-10	0.00	-0.33	0.00	0.11	5	0.00	0	86	64	0	7	0	0	
CEDAR RAPIDS	18	-4	34	-15	7	-12	0.04	-0.18	0.04	0.41	25	0.04	31	83	65	0	7	1	0	
DES MOINES	23	1	37	-7	12	-9	0.24	0.02	0.14	0.97	66	0.14	108	73	61	0	7	2	0	
DUBUQUE	16	-6	34	-15	5	-13	0.26	-0.02	0.16	1.23</										

Weather Data for the Week Ending January 4, 2014

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	
WICHITA	42	14	53	4	28	-2	0.05	-0.20	0.02	0.62	42	0.05	36	79	56	0	7	3	0	
KY JACKSON	40	22	52	8	31	-4	1.06	0.23	0.76	7.38	156	0.29	62	84	50	0	6	3	1	
LEXINGTON	38	20	48	5	29	-4	0.74	-0.09	0.52	5.80	129	0.22	47	83	65	0	7	2	1	
LOUISVILLE	40	22	49	12	31	-3	0.65	-0.09	0.44	5.65	137	0.21	49	79	50	0	7	2	0	
PADUCAH	41	21	50	10	31	-2	0.23	-0.53	0.19	8.19	170	0.04	9	84	50	0	7	3	0	
LA BATON ROUGE	56	36	64	26	46	-4	0.32	-0.94	0.29	4.05	68	0.32	44	93	52	0	2	2	0	
LAKE CHARLES	56	37	64	31	47	-4	0.35	-0.81	0.35	2.41	46	0.35	51	89	55	0	2	1	0	
NEW ORLEANS	56	40	62	31	48	-5	0.48	-0.61	0.33	3.64	64	0.36	57	91	73	0	1	3	0	
SHREVEPORT	54	30	63	25	42	-4	0.00	-0.99	0.00	5.01	98	0.00	0	83	51	0	5	0	0	
ME CARIBOU	4	-14	20	-28	-5	-16	0.27	-0.45	0.18	3.53	98	0.04	10	80	61	0	7	4	0	
PORTLAND	21	-1	35	-14	10	-13	1.51	0.57	0.87	5.09	106	0.63	117	85	57	0	7	4	1	
MD BALTIMORE	39	22	47	6	31	-2	1.53	0.75	1.09	5.70	150	0.44	98	82	59	0	6	3	1	
MA BOSTON	30	13	44	2	21	-10	1.89	1.05	1.32	5.21	123	0.57	116	77	47	0	6	3	1	
WORCESTER	24	8	40	-4	16	-9	1.72	0.82	1.18	5.00	116	0.54	104	86	49	0	7	3	1	
MI ALPENA	17	-3	31	-21	7	-13	0.04	-0.37	0.03	2.20	106	0.03	13	86	64	0	7	2	0	
GRAND RAPIDS	22	9	42	-9	16	-8	0.35	-0.11	0.14	2.60	88	0.22	85	82	59	0	7	4	0	
HOUGHTON LAKE	17	0	37	-16	9	-11	0.06	-0.30	0.03	2.12	109	0.03	15	82	66	0	7	3	0	
LANSING	21	7	40	-11	14	-9	0.31	-0.05	0.15	2.12	89	0.25	125	76	64	0	7	5	0	
MUSKEGON	23	12	41	2	18	-7	0.43	-0.09	0.28	2.60	88	0.32	107	73	62	0	7	4	0	
TRaverse CITY	21	8	42	2	15	-8	0.05	-0.59	0.02	1.04	34	0.03	8	82	60	0	7	3	0	
MN DULUTH	5	-18	20	-21	-7	-16	0.25	0.08	0.21	3.27	314	0.25	250	72	59	0	7	2	0	
INT'L FALLS	-3	-31	11	-43	-17	-20	0.48	0.34	0.26	1.87	240	0.48	600	75	59	0	7	2	0	
MINNEAPOLIS	14	-9	35	-11	2	-12	0.23	0.03	0.12	1.70	152	0.14	117	75	63	0	7	3	0	
ROCHESTER	14	-11	33	-19	1	-12	0.17	0.00	0.10	1.13	101	0.02	20	75	67	0	7	3	0	
ST. CLOUD	9	-18	33	-23	-5	-14	0.19	0.05	0.11	1.92	249	0.13	163	83	57	0	7	3	0	
MS JACKSON	53	33	62	22	43	-2	0.58	-0.65	0.44	5.10	84	0.58	82	89	52	0	3	2	0	
MERIDIAN	51	31	59	20	41	-5	0.33	-0.91	0.28	7.61	126	0.31	43	94	62	0	3	3	0	
TUPELO	48	27	58	17	37	-4	0.27	-1.02	0.17	6.57	96	0.19	26	84	63	0	5	4	0	
MO COLUMBIA	35	11	47	-2	23	-5	0.20	-0.18	0.18	1.92	72	0.20	95	80	51	0	7	2	0	
KANSAS CITY	35	8	52	-1	22	-6	0.29	0.01	0.16	1.10	61	0.29	181	81	50	0	7	2	0	
SAINT LOUIS	38	16	48	4	27	-3	0.20	-0.28	0.11	1.91	61	0.20	74	69	51	0	7	2	0	
SPRINGFIELD	40	14	54	2	27	-5	0.05	-0.41	0.02	2.64	77	0.05	19	80	58	0	7	3	0	
MT BILLINGS	38	23	45	8	30	6	0.58	0.41	0.33	2.48	326	0.49	544	81	59	0	7	3	0	
BUTTE	37	17	45	8	27	10	0.03	-0.08	0.02	0.25	42	0.03	50	87	46	0	7	2	0	
GLASGOW	18	1	41	-6	9	-2	0.25	0.17	0.21	1.01	240	0.01	20	85	78	0	7	3	0	
GREAT FALLS	41	16	49	1	29	7	0.29	0.12	0.18	1.23	162	0.25	278	92	49	0	7	3	0	
HAVRE	31	6	42	-4	19	4	0.39	0.28	0.11	1.46	256	0.23	383	86	78	0	7	5	0	
KALISPELL	35	19	41	8	27	6	0.34	0.01	0.28	1.90	103	0.30	158	96	73	0	6	3	0	
MISSOULA	37	26	44	24	32	10	0.19	-0.06	0.14	1.23	95	0.14	100	89	73	0	7	3	0	
NE GRAND ISLAND	33	9	50	4	21	-2	0.05	-0.06	0.05	0.16	22	0.05	83	76	59	0	7	1	0	
LINCOLN	29	4	45	-4	17	-6	0.10	-0.06	0.10	0.31	33	0.10	111	75	55	0	7	1	0	
NORFOLK	25	3	42	-6	14	-7	0.14	0.03	0.12	0.32	45	0.13	217	75	61	0	7	3	0	
NORTH PLATTE	41	11	61	2	26	3	0.04	-0.04	0.04	0.21	47	0.04	80	86	47	0	7	1	0	
OMAHA	25	3	39	-4	14	-8	0.09	-0.06	0.09	0.27	27	0.09	100	74	56	0	7	1	0	
SCOTTSBLUFF	44	15	55	5	29	5	0.22	0.11	0.22	0.85	137	0.22	367	76	58	0	7	1	0	
VALENTINE	34	12	55	1	23	2	0.03	-0.03	0.03	0.74	206	0.03	100	81	66	0	7	1	0	
NV ELY	45	14	53	4	30	5	0.00	-0.14	0.00	0.81	140	0.00	0	82	59	0	7	0	0	
LAS VEGAS	62	40	66	37	51	5	0.00	-0.10	0.00	0.05	11	0.00	0	40	26	0	0	0	0	
RENO	52	23	59	19	37	5	0.00	-0.19	0.00	0.41	41	0.00	0	82	64	0	7	0	0	
WINNEMUCCA	44	14	53	8	29	0	0.00	-0.19	0.00	0.61	66	0.00	0	93	69	0	7	0	0	
NH CONCORD	22	1	36	-17	11	-10	1.65	1.00	1.03	4.01	120	0.62	168	90	56	0	7	3	1	
NJ NEWARK	33	18	46	6	26	-6	1.84	0.99	1.32	5.14	127	0.52	106	72	53	0	6	3	1	
NM ALBUQUERQUE	51	25	61	22	38	3	0.00	-0.11	0.00	0.40	73	0.00	0	64	24	0	7	0	0	
NY ALBANY	24	4	42	-12	14	-10	1.68	1.13	0.89	4.16	140	0.77	248	81	53	0	7	5	2	
BINGHAMTON	23	8	41	-5	16	-7	1.62	1.05	0.91	4.16	124	0.70	219	87	70	0	7	5	2	
BUFFALO	25	12	45	0	18	-8	0.39	-0.37	0.21	5.18	122	0.28	65	78	56	0	7	4	0	
ROCHESTER	26	11	46	-6	18	-8	0.48	-0.05	0.33	3.57	118	0.39	130	74	63	0	7	4	0	
SYRACUSE	25	8	43	-8	17	-7	0.96	0.38	0.50	3.39	98	0.54	164	85	61	0	7	5	1	
NC ASHEVILLE	43	24	53	12	34	-2	0.76	-0.05	0.72	7.71	200	0.04	9	85	64	0	5	2	1	
CHARLOTTE	47	28	54	15	38	-4	2.03	1.20	1.82	7.36	201	0.21	44	84	50	0	5	2	1	
GREENSBORO	46	29	55	17	38	0	1.52	0.78	1.10	5.62	161	0.42	98	84	46	0	4	2	1	
HATTERAS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0	0	0	0	0
RALEIGH	50	31	63	19	40	0	2.27	1.47	1.94	6.26	178	0.33	70	79	51	0	4	2	1	
WILMINGTON	58	37	70	25	48	2	1.10	0.16	0.85	2.61	60	0.88	163	88	53	0	2	3	1	
ND BISMARCK	14	-8	43	-23	3	-8	0.31	0.23	0.15	1.33	271	0.03	60	78	69	0	7	4	0	
DICKINSON	20	-1	42	-11	10	-5	0.09	0.03	0.06	0.40	108	0.02	67	86	68	0	7	3	0	
FARGO	2	-17	29	-25	-8	-16	0.09	-0.06	0.04	1.16	176	0.05	56	76	66	0	7	3	0	
GRAND FORKS	-1	-24	25	-33	-13	-19	0.10	-0.03	0.08	0.93	148	0.09	113	83	66	0	7	3	0	
JAMESTOWN	6	-15	39	-29	-4	-14	0.05	-0.06	0.03	0.29	58	0.03	50	85	69	0	7	2	0	
WILLISTON	14	-5	41	-18	4	-5	0.30	0.19	0.15	1.18	187	0.09	150	79	70	0	7	6	0	
OH AKRON-CANTON	27	17	42	10	22	-5	0.52	-0.06	0.22	3.73	113	0.30	91	83	65	0	7	6	0	
CINCINNATI	37	17	47	3	27	-4	0.60	-0.09	0.31	5.05	138	0.31	79	81	66	0	7	2	0	
CLEVELAND	28	17	45	8	23	-4	0.69	0.12	0.27	4.43	128	0.43	134	77	58	0	7	6	0	
COLUMBUS	32	18	44	1	25	-5	0.63	0.06	0.35	4.68	144	0.28	88	76	60	0	6	2	0	
DAYTON	32	15	44	-5	24	-3	0.42	-0.19	0.26	4.85	141	0.26	74	83	57	0	7	2	0	
MANSFIELD	26	13	42	-5	20	-6	0.36	-0.25	0.19	4.03	112	0.19	54	90	63	0	7	4	0	

Based on 1971-2000 normals

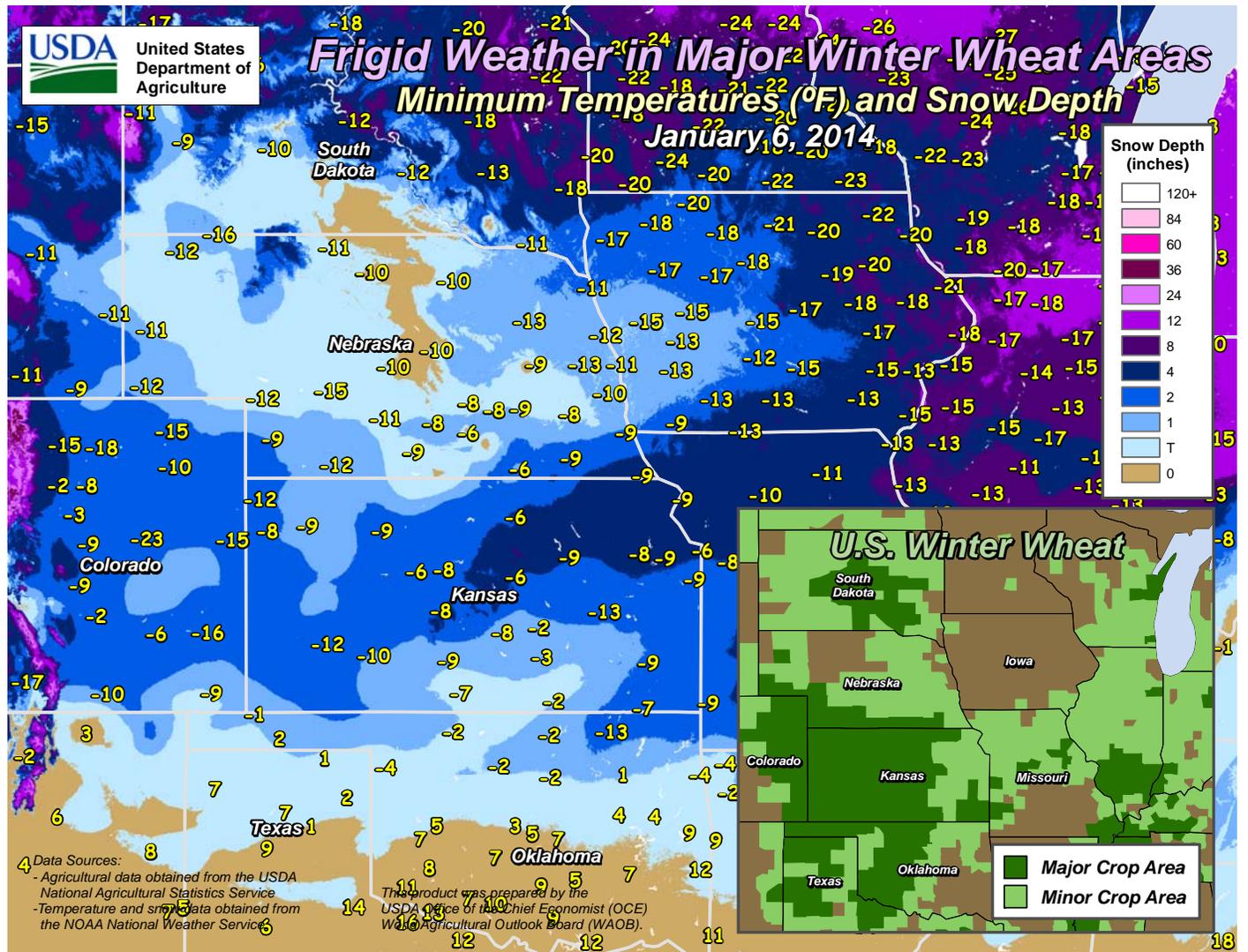
\*\*\* Not Available

Weather Data for the Week Ending January 4, 2014

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	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	01 INCH OR MORE	50 INCH OR MORE
OK TOLEDO	24	10	44	-12	17	-8	0.65	0.19	0.39	3.65	126	0.60	231	78	66	0	7	3	0
OK YOUNGSTOWN	27	14	42	2	20	-6	0.68	0.14	0.26	3.84	117	0.33	106	82	63	0	7	5	0
OK OKLAHOMA CITY	49	20	57	15	35	-2	0.01	-0.36	0.01	1.28	61	0.00	0	76	38	0	7	1	0
OR TULSA	46	18	57	11	32	-4	0.01	-0.38	0.01	1.79	68	0.01	5	68	51	0	7	1	0
OR ASTORIA	48	34	52	27	41	-1	0.56	-1.60	0.47	5.47	47	0.55	45	93	87	0	3	3	0
OR BURNS	42	12	47	3	27	3	0.00	-0.28	0.00	0.21	14	0.00	0	92	77	0	7	0	0
OR EUGENE	46	33	54	27	39	0	0.04	-1.64	0.04	1.57	17	0.04	4	97	90	0	2	1	0
OR MEDFORD	46	26	55	22	36	-2	0.00	-0.55	0.00	0.37	12	0.00	0	96	76	0	7	0	0
OR PENDLETON	43	26	48	18	34	1	0.03	-0.27	0.02	0.83	50	0.02	12	90	74	0	6	2	0
OR PORTLAND	44	34	48	29	39	0	0.17	-0.98	0.16	1.92	30	0.16	24	97	89	0	1	2	0
OR SALEM	46	32	51	26	39	0	0.08	-1.22	0.08	1.36	19	0.08	11	97	88	0	4	1	0
PA ALLENTOWN	32	14	43	-4	23	-5	1.30	0.54	0.84	4.59	120	0.45	102	78	62	0	7	4	1
PA ERIE	26	15	45	6	21	-8	0.52	-0.14	0.20	6.64	162	0.37	100	73	59	0	7	5	0
PA MIDDLETOWN	34	18	45	5	26	-4	1.16	0.55	0.81	4.10	114	0.35	100	85	52	0	6	3	1
PA PHILADELPHIA	37	22	49	8	30	-4	1.66	0.88	1.19	5.67	151	0.47	107	76	52	0	6	3	1
PA PITTSBURGH	32	19	44	6	26	-3	0.58	0.00	0.48	3.11	97	0.10	30	84	62	0	6	2	0
PA WILKES-BARRE	28	13	40	-4	20	-8	1.28	0.78	0.90	3.76	132	0.36	124	84	59	0	6	5	1
PA WILLIAMSPORT	29	13	39	-3	21	-6	1.35	0.77	1.09	3.91	120	0.26	79	79	62	0	7	4	1
RI PROVIDENCE	31	12	48	-3	21	-9	1.31	0.36	1.01	4.90	104	0.30	55	76	56	0	7	3	1
SC BEAUFORT	58	41	75	30	50	1	1.90	1.05	0.97	3.71	103	0.93	186	86	52	0	2	3	2
SC CHARLESTON	58	40	76	28	49	1	1.52	0.66	0.78	3.11	83	0.95	190	85	54	0	2	3	2
SC COLUMBIA	52	34	67	22	43	-2	1.81	0.87	1.57	6.23	159	0.24	44	86	56	0	2	2	1
SC GREENVILLE	47	30	59	19	38	-3	1.18	0.23	0.98	6.89	156	0.20	36	79	50	0	4	2	1
SD ABERDEEN	9	-13	39	-27	-2	-14	0.22	0.12	0.16	0.91	207	0.02	33	83	75	0	7	4	0
SD HURON	15	-8	40	-19	4	-11	0.28	0.20	0.17	1.11	252	0.07	140	80	66	0	7	4	0
SD RAPID CITY	34	12	51	2	23	0	0.07	-0.01	0.04	0.66	147	0.05	100	88	64	0	7	4	0
SD SIOUX FALLS	14	-6	38	-16	4	-10	0.18	0.10	0.06	1.19	209	0.06	120	78	68	0	7	3	0
TN BRISTOL	41	23	50	13	32	-2	0.87	0.13	0.66	6.56	172	0.21	49	85	51	0	5	2	1
TN CHATTANOOGA	45	27	51	18	36	-4	0.60	-0.51	0.37	8.23	151	0.23	35	82	64	0	5	2	0
TN KNOXVILLE	43	25	48	15	34	-4	1.41	0.39	0.79	8.74	172	0.62	107	88	56	0	5	2	2
TN MEMPHIS	47	27	55	19	37	-3	0.20	-0.80	0.13	4.98	80	0.15	27	81	46	0	6	3	0
TN NASHVILLE	44	22	55	14	33	-4	0.62	-0.30	0.36	8.25	163	0.26	50	83	47	0	6	2	0
TX ABILENE	57	27	72	20	42	-1	0.00	-0.26	0.00	1.12	79	0.00	0	77	52	0	5	0	0
TX AMARILLO	52	20	64	14	36	1	0.00	-0.17	0.00	0.32	46	0.00	0	77	30	0	7	0	0
TX AUSTIN	57	31	71	19	44	-6	0.00	-0.50	0.00	0.86	32	0.00	0	76	49	0	3	0	0
TX BEAUMONT	57	38	66	31	48	-4	0.16	-1.13	0.14	1.46	24	0.16	22	91	51	0	1	2	0
TX BROWNSVILLE	63	45	75	39	54	-5	2.83	2.61	2.39	3.61	291	0.06	46	94	77	0	0	3	1
TX CORPUS CHRISTI	61	41	74	32	51	-5	0.07	-0.30	0.04	0.31	16	0.01	5	84	58	0	1	3	0
TX DEL RIO	59	34	63	31	46	-5	0.00	-0.11	0.00	0.49	60	0.00	0	82	57	0	2	0	0
TX EL PASO	59	31	66	23	45	1	0.00	-0.13	0.00	0.26	31	0.00	0	59	26	0	4	0	0
TX FORT WORTH	55	30	70	24	42	-2	0.00	-0.53	0.00	2.78	97	0.00	0	75	40	0	6	0	0
TX GALVESTON	57	44	65	37	51	-5	0.08	-0.77	0.04	0.78	19	0.05	10	93	65	0	0	4	0
TX HOUSTON	59	38	67	31	48	-4	0.01	-0.81	0.01	1.68	40	0.01	2	83	55	0	1	1	0
TX LUBBOCK	57	24	72	17	40	2	0.00	-0.11	0.00	0.60	82	0.00	0	76	37	0	7	0	0
TX MIDLAND	58	29	69	25	44	1	0.00	-0.12	0.00	1.44	203	0.00	0	79	47	0	5	0	0
TX SAN ANGELO	60	30	72	24	45	0	0.00	-0.17	0.00	1.15	112	0.00	0	80	49	0	5	0	0
TX SAN ANTONIO	59	37	71	28	48	-2	0.00	-0.39	0.00	0.57	26	0.00	0	79	42	0	1	0	0
TX VICTORIA	62	39	75	29	51	-2	0.01	-0.54	0.01	0.45	16	0.01	3	79	59	0	1	1	0
TX WACO	56	29	70	19	42	-4	0.00	-0.50	0.00	1.34	44	0.00	0	85	52	0	5	0	0
TX WICHITA FALLS	52	23	65	18	38	-2	0.00	-0.31	0.00	1.30	70	0.00	0	77	46	0	7	0	0
UT SALT LAKE CITY	36	16	39	12	26	-3	0.11	-0.17	0.11	1.80	129	0.11	69	86	66	0	7	1	0
VT BURLINGTON	18	-1	42	-15	9	-11	0.33	-0.13	0.17	2.67	107	0.15	56	79	54	0	7	4	0
VA LYNCHBURG	43	24	52	13	34	-1	1.34	0.58	1.03	5.99	163	0.31	70	84	48	0	5	2	1
VA NORFOLK	51	33	66	20	42	1	1.31	0.51	0.79	5.27	151	0.52	111	79	47	0	2	3	2
VA RICHMOND	47	29	56	16	38	1	1.76	0.97	1.35	6.53	182	0.41	89	78	52	0	5	2	1
VA ROANOKE	43	26	53	13	35	-1	1.01	0.36	0.90	4.50	139	0.11	29	71	45	0	5	2	1
WA WASH/DULLES	40	23	49	8	32	0	1.63	0.96	1.27	5.95	172	0.36	92	80	57	0	6	2	1
WA OLYMPIA	45	34	50	24	40	3	0.20	-1.44	0.15	2.34	27	0.17	18	98	87	0	3	4	0
WA QUILLAYUTE	49	38	50	25	43	3	1.53	-1.51	1.37	7.81	48	1.40	81	90	85	0	2	4	1
WA SEATTLE-TACOMA	47	38	51	34	43	3	0.25	-0.88	0.13	1.92	31	0.22	34	88	80	0	0	4	0
WA SPOKANE	34	26	39	20	30	4	0.05	-0.38	0.02	0.71	29	0.02	8	93	77	0	7	3	0
WA YAKIMA	41	21	52	15	31	3	0.00	-0.28	0.00	0.32	21	0.00	0	83	73	0	7	0	0
WV BECKLEY	37	20	49	5	29	-2	1.65	0.95	1.40	6.59	189	0.22	55	71	61	0	6	3	1
WV CHARLESTON	39	20	52	6	30	-4	1.15	0.46	0.80	6.54	176	0.29	74	97	60	0	6	4	1
WV ELKINS	37	15	50	0	26	-4	1.33	0.59	1.04	6.51	168	0.23	53	88	56	0	6	4	1
WV HUNTINGTON	39	21	49	8	30	-3	0.90	0.18	0.63	5.08	134	0.26	63	87	55	0	6	4	1
WI EAU CLAIRE	13	-15	31	-20	-1	-14	0.01	-0.18	0.01	0.80	70	0.00	0	83	56	0	7	1	0
WI GREEN BAY	16	-9	35	-19	3	-14	0.01	-0.24	0.01	1.63	105	0.00	0	79	56	0	7	1	0
WI LA CROSSE	16	-8	37	-17	4	-13	0.04	-0.17	0.04	1.29	95	0.00	0	82	56	0	7	1	0
WI MADISON	17	-4	40	-14	7	-11	0.14	-0.13	0.09	1.66	92	0.00	0	76	64	0	7	2	0
WI MILWAUKEE	21	3	40	-5	12	-10	0.31	-0.09	0.13	2.00	82	0.21	95	77	66	0	7	5	0
WY CASPER	32	14	42	-6	23	1	0.32	0.21	0.11	1.45	213	0.28	467	82	67	0	7	4	0
WY CHEYENNE	39	16	50	3	28	2	0.15	0.07	0.09	0.42	82	0.15	300	73	51	0	7	2	0
WY LANDER	37	13	50	6	25	5	0.46	0.35	0.36	1.15	172	0.46	767	90	52	0	7	2	0
WY SHERIDAN	39	14	53	4	27	6	0.51	0.34	0.25	1.42	184	0.27	300	82	62	0	7	3	0

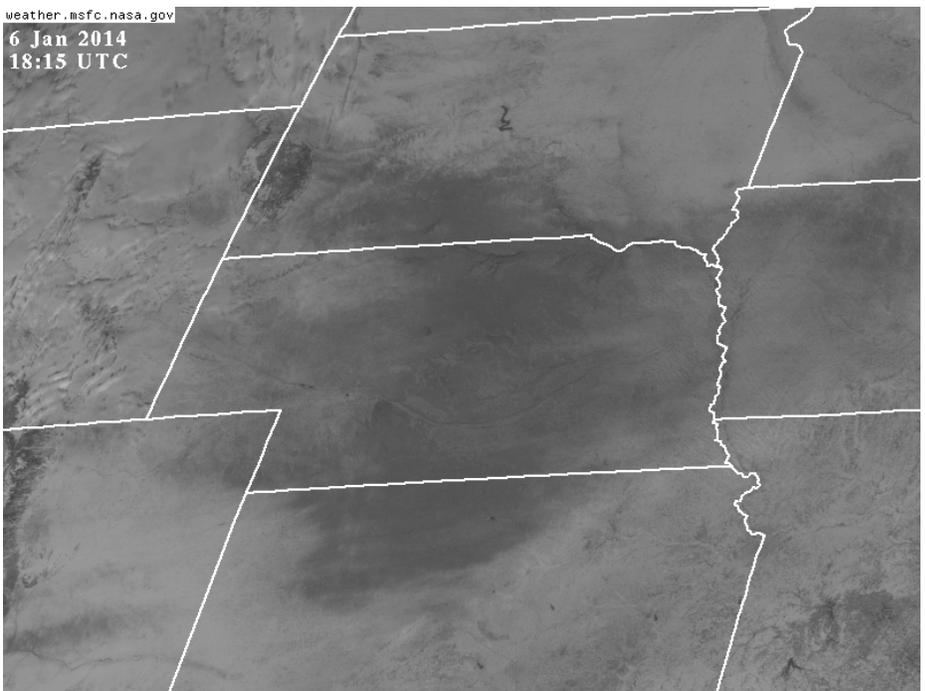
Based on 1971-2000 normals

\*\*\* Not Available



A cold wave that struck most areas from the Plains to the East Coast peaked on January 6-7, 2014, and will be covered in more detail next week. However, due to concern about the lack of snow cover during the cold snap in a portion of the Plains' winter wheat belt, some advance coverage has been provided.

Hard Red Winter wheat (HRW) areas of the Great Plains were partially covered by snow when the severe cold wave peaked on January 6. Notably, little or no snow covered much of Nebraska and parts of neighboring states on January 6 (right), when low temperatures generally ranged from -5 to -15°F (above). Such temperatures raised concern about potential winterkill to the exposed portion of the HRW crop. Heading into the cold wave, however, the overall health of the wheat crop was favorable, with 70% rated good to excellent in South Dakota, 65% in Nebraska, and 58% in Kansas. Well-established, healthy wheat is less susceptible to winterkill, especially during a short-lived cold snap.



# National Agricultural Summary

December 30, 2013 - January 5, 2014

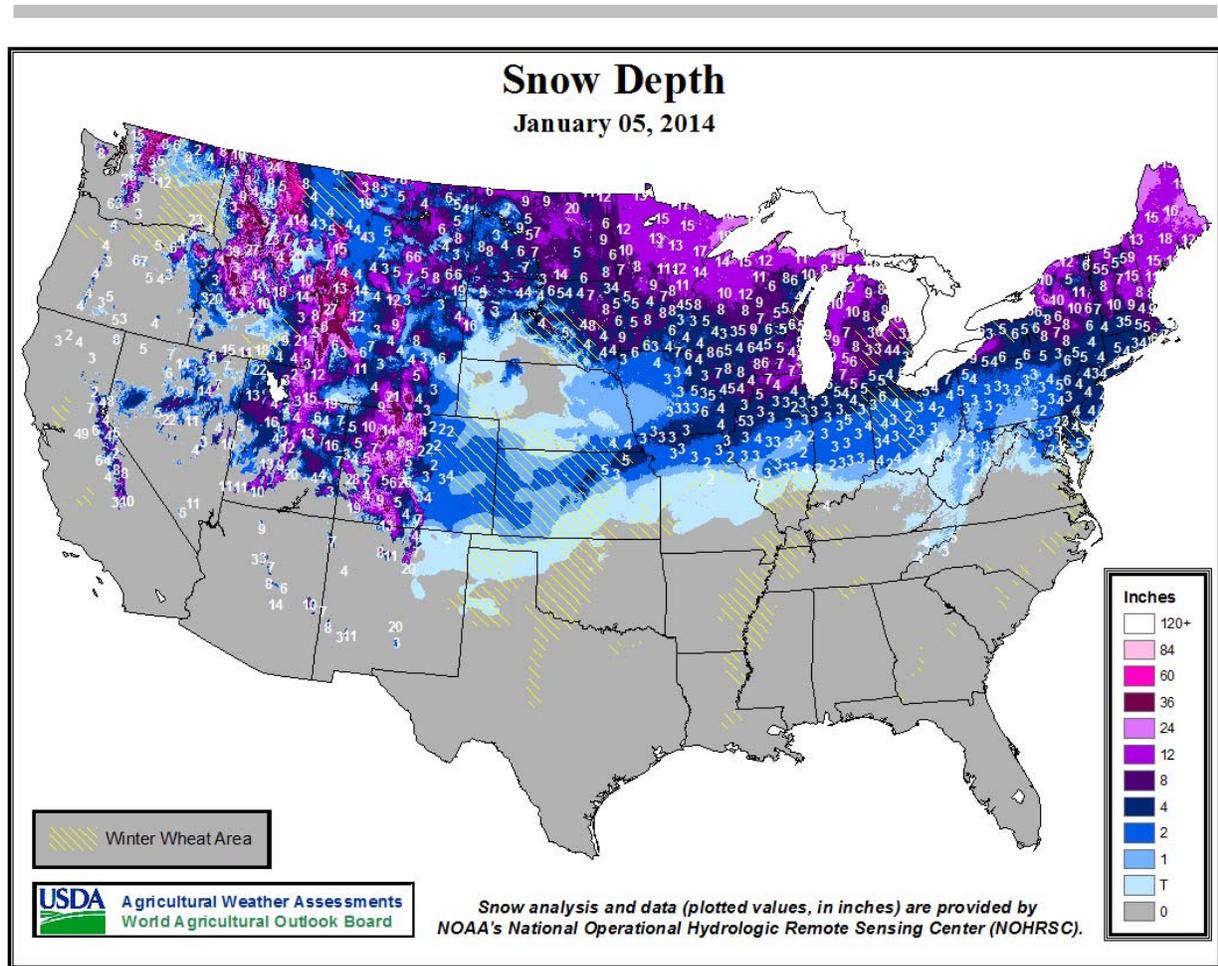
Weekly National Agricultural Summary provided by USDA/NASS

Generally dry conditions continued across most of the country this past week with only areas along the Atlantic coast recording more than one inch of precipitation. Temperatures were generally below normal in all areas east of the Rocky Mountains except for Florida. Large areas in the upper Midwest recorded temperatures greater than 10°F below normal.

A fairly quiet weather pattern brought dry conditions to California with no significant precipitation reported during the week. Daytime high temperatures were above normal and exceeded record levels, while overnight low temperatures were chilly and tended to be slightly cooler than normal. Small grain crops continued to develop and were treated with herbicides. Growers in Fresno County reported some fields of wheat, barley, and oats were showing signs of frost damage. Nearly the entire crop was emerged by week's end. Fields were cultivated and prepared for winter and spring plantings. Newly seeded grain and alfalfa fields were irrigated in Madera County. Small grain fields were sprinkler and flood irrigated in the Northern Central Valley. Strawberry transplants were planted in Monterey County. Pruning continued in tree fruit orchards. Orchards and vineyards continued to be irrigated due to lack of rain. Grape vines continued to be pruned. Disking, shredding brush and trellis work were ongoing. Harvest of navel oranges, tangerines, and lemons continued at a slower pace due to the cold weather. Avocados were harvested. Harvested almond, walnut, and pistachio orchards were pruned and irrigated due to the lack of rain. Dormant sprays were applied to nut trees. Tree removal was ongoing and land was prepared for tree planting. Tulare County reported fields were prepared and planted with winter vegetables. Onions and broccoli continued to develop. Range and non-irrigated pasture remained in poor to fair condition. Drought conditions persisted across most of the State with extreme conditions throughout the San Joaquin Valley and Central Coast. Livestock supplemental feeding of hay and grain continued. Sheep grazed some alfalfa fields. Bees were beginning to be moved in preparation for almond pollination.

In Arizona, cotton harvest was 99 percent complete, 4 percentage points ahead of last year and the five-year average. Arizona's alfalfa condition was rated very poor to good condition, depending on location. Harvesting occurred on over three-quarters of the alfalfa acreage across the State. Central Arizona growers shipped Chinese red and green cabbage, kale, lemons, cilantro, parsley, and radishes last week. Western Arizona growers shipped broccoli, Bok Choy, green and red cabbage, cauliflower, celery, Chinese cabbage, endive, escarole, frisee, kale, anise, arugula, cilantro, parsley, radicchio, spinach, and various lettuce including Boston, iceberg, romaine, green, and red leaf lettuce last week. Cold temperatures improved moisture levels throughout the State. Range and Pastures were rated in very poor to good condition, depending on location.

Most of Florida reported below one inch of rain last week with maximum temperatures from the 60s°F to the 80s°F. Farmers in the northern part of the State were completing the harvest of soybeans. Planting of oats, wheat, rye, and winter grazing was ongoing. Rain was beneficial to earlier plantings. Sugarcane harvest proceeded as scheduled in Hendry, Palm Beach, and Glades counties. Some frost damage and fungal diseases were evident on strawberries, collards, and turnips in Nassau County. Field workers were reporting small sizes on all citrus varieties. Grove activity included harvesting, hedging, and topping after harvest, resetting of new trees, pushing of dead groves and replanting new citrus, mowing, fertilizing, and psyllid control. The cattle condition across the State was primarily good. The majority of the pasture condition in the State ranged from fair to good, with the northern part of the State reporting pasture in very poor condition. Cattlemen were feeding hay and supplements across the State. Drought was the main contributing factor for the decline in pasture condition in the majority of the State, while cold weather in the northern part of the State contributed to pasture decline.



**International Weather and Crop Summary**

**December 29, 2013 - January 4, 2014**

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

**EUROPE:** Rain persisted over western and central Europe, curtailing fieldwork but further improving winter grain prospects on the Iberian Peninsula.

**FSU-WESTERN:** Dry, unseasonably warm weather maintained favorable conditions for dormant winter wheat but continued to melt the region's protective snow cover.

**MIDDLE EAST:** A Mediterranean storm generated rain and mountain snow across much of the region, maintaining favorable moisture reserves for winter wheat and barley.

**NORTHWEST AFRICA:** Showers in eastern growing areas maintained abundant soil moisture for winter wheat, while drier weather in the west promoted fieldwork.

**SOUTHEAST ASIA:** More rainfall in Java, Indonesia, maintained favorable rice prospects.

**AUSTRALIA:** Very hot, mostly dry weather stressed summer crops, potentially reducing yield prospects.

**SOUTH AFRICA:** Warm, mostly dry weather promoted growth of vegetative to reproductive corn.

**ARGENTINA:** Showers and milder weather brought some relief from a recent heat wave.

**BRAZIL:** Showers returned to the south, providing timely moisture for corn and soybeans after a spell of dryness.

**December 2013**

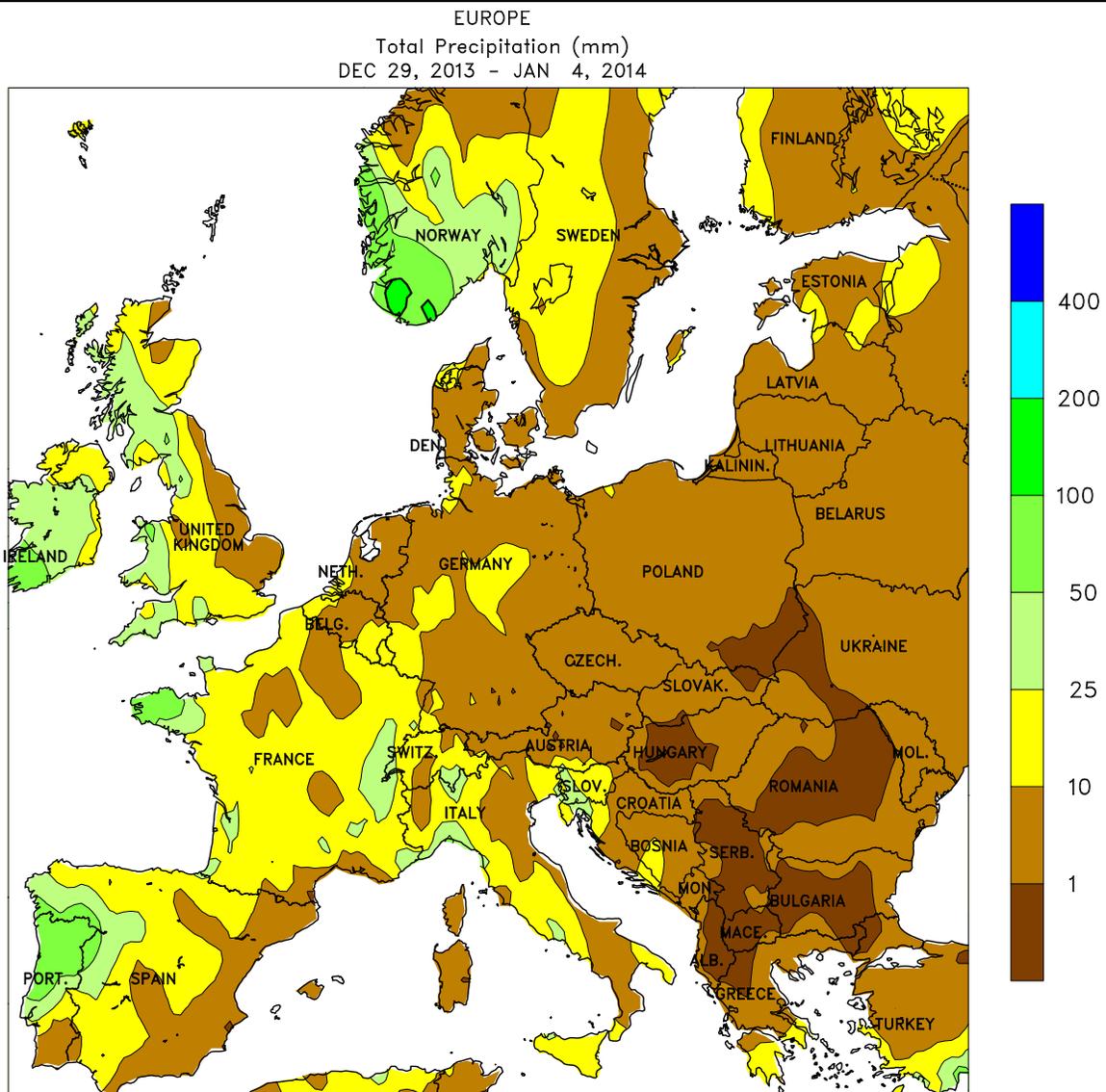
COUNTRY	CITY	TEMPERATURE					PRECIP.		
		AVG MAX	AVG MIN	HI MAX	LO MIN	DEP AVG	TOT	DEP NRM	
ALGERI	ALGER	18	7	21	2	12	0.5	167	77
	BATNA	13	0	17	-4	7	-0.1	34	4
ARGENT	IGUAZU	32	20	37	18	26	0.8	176	-9
	FORMOSA	35	23	40	18	29	2.2	57	-101
	CERES	35	21	43	17	28	3.7	42	-108
	CORDOBA	33	18	39	14	25	2.5	106	-57
	RIO CUARTO	32	19	41	13	25	3	214	58
	ROSARIO	33	20	38	15	27	3.4	69	-40
	BUENOS AIRES	32	18	38	10	25	3.2	71	-15
	SANTA ROSA	35	18	40	7	26	3.7	70	-32
	TRES ARROYOS	32	17	39	5	24	4.5	34	-58
AUSTRA	DARWIN	32	25	34	24	29	-0.4	435	160
	BRISBANE	27	20	30	15	23	-0.8	42	-76
	PERTH	31	16	40	10	23	1.2	0	-7
	CEDUNA	29	15	45	7	22	0.9	1	-16
	ADELAIDE	26	15	40	9	20	0	19	-5
	MELBOURNE	24	12	40	6	18	0.1	38	-9
	WAGGA	32	15	41	6	23	1.8	22	-28
	CANBERRA	29	11	38	3	20	1.2	23	-24
AUSTRI	VIENNA	5	1	14	-6	3	2.1	12	-28
	INNSBRUCK	6	-3	13	-9	2	2	7	-47
BAHAMA	NASSAU	29	22	30	18	25	2.9	17	-40
BARBAD	BRIDGETOWN	29	24	30	22	27	0.5	50	-54
BELARU	MINSK	1	-1	5	-9	0	3.4	33	-19
BERMUD	ST GEORGES	22	18	25	14	20	0.2	120	11
BOLIVI	LA PAZ	15	4	21	0	10	0.2	123	-27
BRAZIL	FORTALEZA	30	26	32	25	28	-0.4	4	-32
	RECIFE	30	26	31	23	28	-1.4	45	5
	CAMPO GRANDE	30	21	34	18	26	0.2	180	-30
	FRANCA	28	19	32	17	24	1.3	263	17
	RIO DE JANEIRO	30	23	38	21	27	0.4	194	57
	LONDRINA	32	20	37	17	26	2.8	128	-119
	SANTA MARIA	32	20	39	15	26	1.7	93	-24
	TORRES	27	20	34	15	23	-1.4	80	-11
BULGAR	SOFIA	5	-3	14	-9	1	0.1	4	-37
BURKIN	OUAGADOUGOU	34	18	38	14	26	0.9	0	-1
CANADA	TORONTO	-1	-7	16	-18	-4	-1.5	69	9
	MONTREAL	-5	-12	10	-25	-8	-2.1	96	18
	WINNIPEG	-16	-25	-2	-37	-21	-6.3	0	-17
	REGINA	-13	-23	1	-34	-18	-5	0	-16
	SASKATOON	-15	-25	3	-34	-20	-5.6	0	-16
	LETHBRIDGE	-22	-28	-9	-35	-25	-18.8	2	-16
	CALGARY	-3	-16	11	-30	-10	-2.3	38	26
	EDMONTON	-9	-18	6	-31	-13	-3.7	20	1
	VANCOUVER	5	0	11	-10	2	-1.3	66	-108
CANARY	LAS PALMAS	22	17	27	15	20	1.1	21	-8
CHILE	SANTIAGO	30	13	34	8	21	1.6	0	-3
CHINA	HARBIN	-10	-18	2	-25	-14	0.2	5	0
	HAMI	1	-12	6	-17	-6	1.3	2	0
	BEIJING	6	-4	15	-9	1	1.6	0	-3
	TIENTSIN	6	-5	14	-12	0	0.8	2	-2
	LHASA	9	-7	16	-12	1	1.8	0	*****
	KUNMING	14	3	19	-4	9	-0.2	40	26
	CHENGCHOW	9	-1	17	-6	4	2.3	1	-9
	YEHCHANG	13	4	20	-2	8	0.7	5	-12
	HANKOW	12	-1	20	-7	6	-0.9	2	-23
	CHUNGKING	12	8	18	4	10	0.3	16	-7
	CHIHKIANG	13	4	21	-2	8	0.6	37	8
	WU HU	10	1	19	-4	6	0.1	35	-1
	SHANGHAI	10	2	20	-4	6	-1.5	51	12
	NANCHANG	12	5	19	-2	9	0.3	54	13
	TAIPEI	18	15	26	10	17	-1.3	159	89
	CANTON	18	8	25	3	13	-2.5	105	74
	NANNING	18	7	24	2	12	-3.3	66	42
COLOMB	BOGOTA	19	9	22	4	14	0.7	128	82
COTE D	ABIDJAN	31	24	33	22	28	0.4	101	25
CUBA	HAVANA	28	19	31	14	24	1.7	0	-51
CYPRUS	LARNACA	17	9	23	2	13	-0.3	32	-40
CZECHR	PRAGUE	4	-1	9	-7	1	1.2	10	-16
DENMAR	COPENHAGEN	7	3	10	-6	5	2.9	32	-14

Based on Preliminary Reports

## December 2013

COUNTRY	CITY	TEMPERATURE					PRECIP.			COUNTRY	CITY	TEMPERATURE					PRECIP.		
		AVG	AVG	HI	LO	DEP	NRM	TOT	DEP			AVG	AVG	HI	LO	DEP	NRM	TOT	DEP
		(C)					(MM)					(C)					(MM)		
		MAX	MIN	MAX	MIN	AVG	NRM	TOT	DEP			MAX	MIN	MAX	MIN	AVG	NRM	TOT	DEP
EGYPT	CAIRO	19	11	30	5	15	-0.2	5	-1		TLAXCALA	22	8	26	4	15	1.5	5	0
	ASWAN	25	12	35	6	19	1.3	0	0		ORIZABA	22	14	30	10	18	2.3	22	-22
ESTONI	TALLINN	3	1	7	-6	2	4.1	64	3	MOROCC	CASABLANCA	19	10	22	6	14	0.6	27	-51
ETHIOP	ADDIS ABABA	22	9	25	5	15	0.0	0	-18		MARRAKECH	20	8	24	2	14	1.1	18	-4
F GUIA	CAYENNE	30	23	32	21	27	0.9	418	84	MOZAMB	MAPUTO	***	***	38	19	***	*****	*****	*****
FIJI	NAUSORI	31	23	33	19	27	1.3	314	54	N KORE	PYONGYANG	1	-7	9	-14	-3	-0.6	24	6
FINLAN	HELSINKI	2	0	5	-14	1	4.4	25	-31	NEW CA	NOUMEA	27	22	29	19	25	0.0	24	-55
FRANCE	PARIS/ORLY	9	3	13	-5	6	0.7	41	-17	NIGER	NIAMEY	33	17	37	14	25	0.4	0	0
	STRASBOURG	7	1	14	-3	4	1.2	41	-5	NORWAY	OSLO	2	-2	7	-13	0	5.0	70	7
	BOURGES	9	2	14	-5	5	0.7	32	-33	NZEALA	AUCKLAND	22	15	26	11	19	*****	117	*****
	BORDEAUX	11	3	18	-3	7	0.3	59	-47		WELLINGTON	21	15	24	10	18	*****	27	*****
	TOULOUSE	11	3	15	-4	7	0.5	25	-25	P RICO	SAN JUAN	30	24	31	21	27	1.3	201	85
	MARSEILLE	13	5	17	-2	9	1.1	59	8	PAKIST	KARACHI	28	13	32	6	20	0.4	0	-4
GABON	LIBREVILLE	29	25	30	23	27	0.7	401	65	PERU	LIMA	25	19	27	17	22	0.7	0	0
GERMAN	HAMBURG	7	3	14	-3	5	2.7	48	-30	PHILIP	MANILA	31	25	34	23	28	1.0	57	-6
	BERLIN	7	3	11	-2	5	2.7	24	-31	PNEWGU	PORT MORESBY	30	25	32	23	28	0.6	141	19
	DUSSELDORF	8	4	13	-2	6	1.7	55	-21	POLAND	WARSAW	5	0	11	-6	3	2.8	20	-16
	LEIPZIG	7	2	12	-3	5	2.8	18	-23		LODZ	5	0	11	-7	2	2.7	24	-20
	DRESDEN	6	2	11	-3	4	2.4	27	-16		KATOWICE	5	0	14	-6	2	2.6	17	-31
	STUTTGART	7	0	14	-6	3	1.6	34	-21	PORTUG	LISBON	15	9	17	3	12	0.0	41	-58
	NURNBERG	6	1	10	-4	3	2.0	15	-37	ROMANI	BUCHAREST	4	-4	12	-10	0	-0.3	1	-37
	AUGSBURG	5	-1	11	-6	2	1.1	4	-49	RUSSIA	ST.PETERSBURG	2	-1	6	-10	1	4.5	44	-3
GREECE	THESSALONIKA	11	2	15	-4	6	-0.5	20	-28		KAZAN	-3	-7	2	-22	-5	3.6	57	19
	LARISSA	11	0	16	-6	6	-0.5	28	-20		MOSCOW	0	-3	4	-17	-2	3.6	44	-5
	ATHENS	***	***	19	1	***	*****	*****	*****		YEKATERINBURG	-7	-11	0	-24	-9	1.8	30	5
GUADEL	RAIZET	29	23	31	21	26	0.8	118	-19		OMSK	-7	-12	1	-29	-10	4.0	28	-2
HONGKO	HONG KONG INT	19	13	25	8	16	-2.0	81	56		BARNAUL	-4	-9	4	-31	-6	6.2	22	-7
HUNGAR	BUDAPEST	5	0	12	-5	2	1.4	3	-35		KHABAROVSK	-14	-21	-7	-27	-17	0.1	11	-6
ICELAN	REYKJAVIK	***	***	7	-10	***	*****	*****	*****		VLADIVOSTOK	-6	-11	5	-16	-8	0.5	11	-3
INDIA	AMRITSAR	20	6	26	1	13	0.1	3	-9		VOLGOGRAD	-2	-6	4	-15	-4	1.2	28	-10
	NEW DELHI	23	9	28	2	16	0.3	6	-2		ASTRAKHAN	1	-4	9	-14	-1	0.7	21	6
	AHMEDABAD	29	13	32	8	21	-0.1	0	-2		ORENBURG	-5	-11	2	-22	-8	1.3	24	-10
	INDORE	26	12	29	9	19	-0.2	10	6	S AFRI	PRETORIA	28	17	34	15	23	0.5	139	27
	CALCUTTA	27	14	30	10	21	0.3	0	-12		JOHANNESBURG	24	15	29	13	19	0.2	136	21
	VERAVAL	30	17	35	12	24	0.0	0	*****		BETHAL	24	14	29	11	19	-0.6	255	120
	BOMBAY	32	19	35	15	26	0.1	0	*****		DURBAN	26	20	31	16	23	-0.5	134	19
	POONA	29	11	32	7	20	0.2	5	-2		CAPE TOWN	27	17	32	11	22	2.0	7	-14
	BEGAMPET	29	15	30	12	22	0.3	0	-5	S KORE	SEOUL	4	-3	11	-10	0	-0.5	16	-7
	VISHAKHAPATNAM	29	21	31	14	25	0.5	0	-8	SAMOA	PAGO PAGO	31	26	32	24	28	0.6	317	-23
	MADRAS	29	21	32	18	25	0.2	77	-105	SENEGA	DAKAR	27	21	33	18	24	0.9	10	5
	MANGALORE	33	20	35	17	27	-0.4	6	-9	SPAIN	VALLADOLID	8	0	12	-6	4	-1.2	50	-4
INDONE	SERANG	31	24	33	22	27	0.2	408	212		MADRID	12	0	17	-4	6	-0.5	31	-16
IRELAN	DUBLIN	9	5	15	1	7	0.9	39	-37		SEVILLE	18	7	21	2	12	0.1	40	-60
ITALY	MILAN	8	0	14	-4	4	0.9	45	-8	SWITZE	ZURICH	5	0	11	-4	2	0.8	23	-57
	VERONA	9	1	14	-5	5	2.1	22	-30		GENEVA	5	-1	15	-7	2	-0.9	75	-11
	VENICE	10	3	14	-2	7	2.7	15	-33	SYRIA	DAMASCUS	11	2	18	-5	6	-0.8	67	23
	GENOA	14	9	18	4	12	1.8	136	52	TAHITI	PAPEETE	30	24	31	23	27	0.4	76	-262
	ROME	15	5	19	0	10	0.5	36	-47	TANZAN	DAR ES SALAAM	32	25	34	23	29	1.3	72	-31
	NAPLES	15	7	17	2	11	0.5	37	-72	THAILA	PHITSANULOK	28	16	32	12	22	-2.1	20	13
JAMAIC	KINGSTON	32	24	34	23	28	1.2	31	-5		BANGKOK	31	21	34	18	26	-0.3	2	-4
JAPAN	SAPPORO	3	-1	11	-6	1	1.8	67	-38	TOGO	LOME	32	25	33	21	28	1.4	0	-9
	NAGOYA	11	3	16	-2	7	0.1	51	13	TRINID	PORT OF SPAIN	31	23	32	21	27	1.3	180	44
	TOKYO	12	5	18	1	9	0.2	38	-2	TUNISI	TUNIS	17	10	20	5	14	0.7	45	-18
	YOKOHAMA	12	5	18	1	9	-0.1	35	-13	TURKEY	ISTANBUL	10	4	17	0	7	-1.0	33	-58
	KYOTO	11	3	16	-2	7	-0.6	49	2		ANKARA	2	-7	13	-16	-2	-3.6	10	-37
	OSAKA	11	5	16	1	8	-0.3	44	6	TURKME	ASHKHABAD	9	0	19	-7	5	-0.4	12	-10
KAZAKH	KUSTANAY	-7	-12	3	-27	-10	2.5	31	6	UKINGD	ABERDEEN	9	4	14	-1	6	2.4	19	-58
	TSELINOGRAD	-6	-11	3	-31	-8	3.6	28	7		LONDON	10	4	13	-2	7	1.2	64	9
	KARAGANDA	-5	-10	5	-29	-8	3.3	24	1	UKRAIN	KIEV	2	-2	8	-11	0	1.8	9	-32
KENYA	NAIROBI	25	15	27	13	20	0.5	129	56		LVOV	4	-3	12	-9	1	2.0	8	-41
LIBYA	TRIPOLI	18	9	20	6	13	0.0	22	-19		KIROVOGRAD	1	-4	7	-14	-1	1.1	9	-24
	BENGHAZI	18	10	20	7	14	-0.4	54	-18		ODESSA	4	-1	9	-7	2	0.3	3	-35
LITHUA	KAUNAS	3	0	7	-8	2	3.3	30	-18		YALTA	7	3	12	-3	5	-0.6	9	-67
LUXEMB	LUXEMBOURG	5	2	11	-2	4	1.8	40	-47		KHARKOV	0	-3	5	-15	-2	1.4	12	-25
MALAYS	KUALA LUMPUR	32	24	34	23	28	1.6	315	69	UZBEKI	TASHKENT	7	0	23	-8	4	-0.1	64	12
MALI	BAMAKO	33	17	36	13	25	-0.4	0	-1	VENEZU	CARACAS	***	***	36	19	***	*****	*****	*****
MARSHA	MAJURO	29	27	31	24	28	0.9	147	-135	ZIMBAB	KADOMA	28	19	35	15	23	-0.9	226	51
MARTIN	LAMENTIN	30	24	31	22	27	1.4	228	58										
MAURIT	NOUAKHOTT	30	19	38	16	25	2.6	0	-3										
MEXICO	GUADALAJARA	21	11	26	8	16	0.0	27	11										

Based on Preliminary Reports



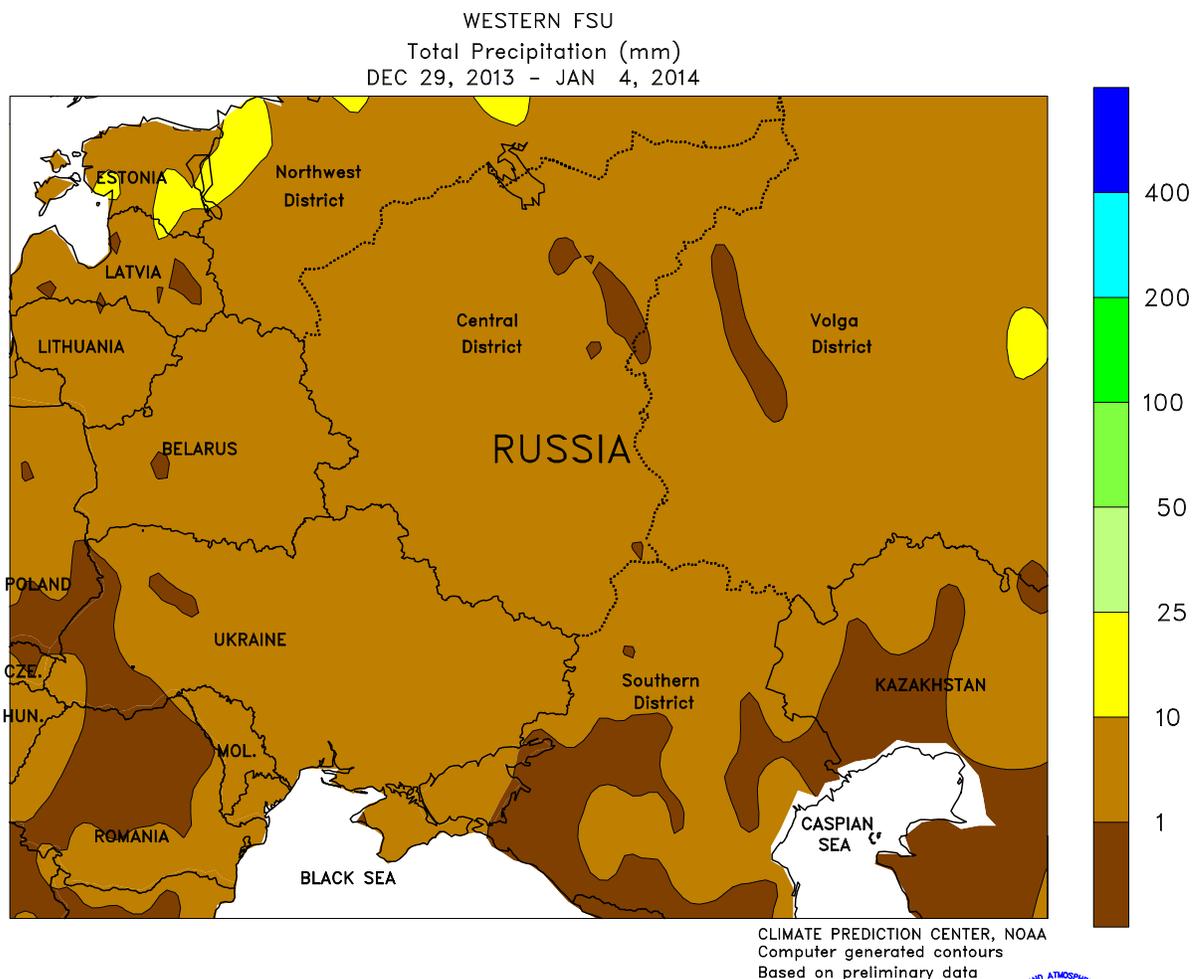
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



**EUROPE**

Wet weather across central and western growing areas contrasted with dry, warm conditions in eastern Europe. A persistent ridge of high pressure over Eurasia maintained mostly dry, unseasonably warm conditions (up to 5°C above normal) from Poland and the Baltic States into the Balkans. The ongoing warmth has kept these typically colder eastern growing areas devoid of a protective snowpack that normally blankets the eastern third of Europe by early January. Consequently, winter wheat and rapeseed remained exposed to potential incursions of bitter cold,

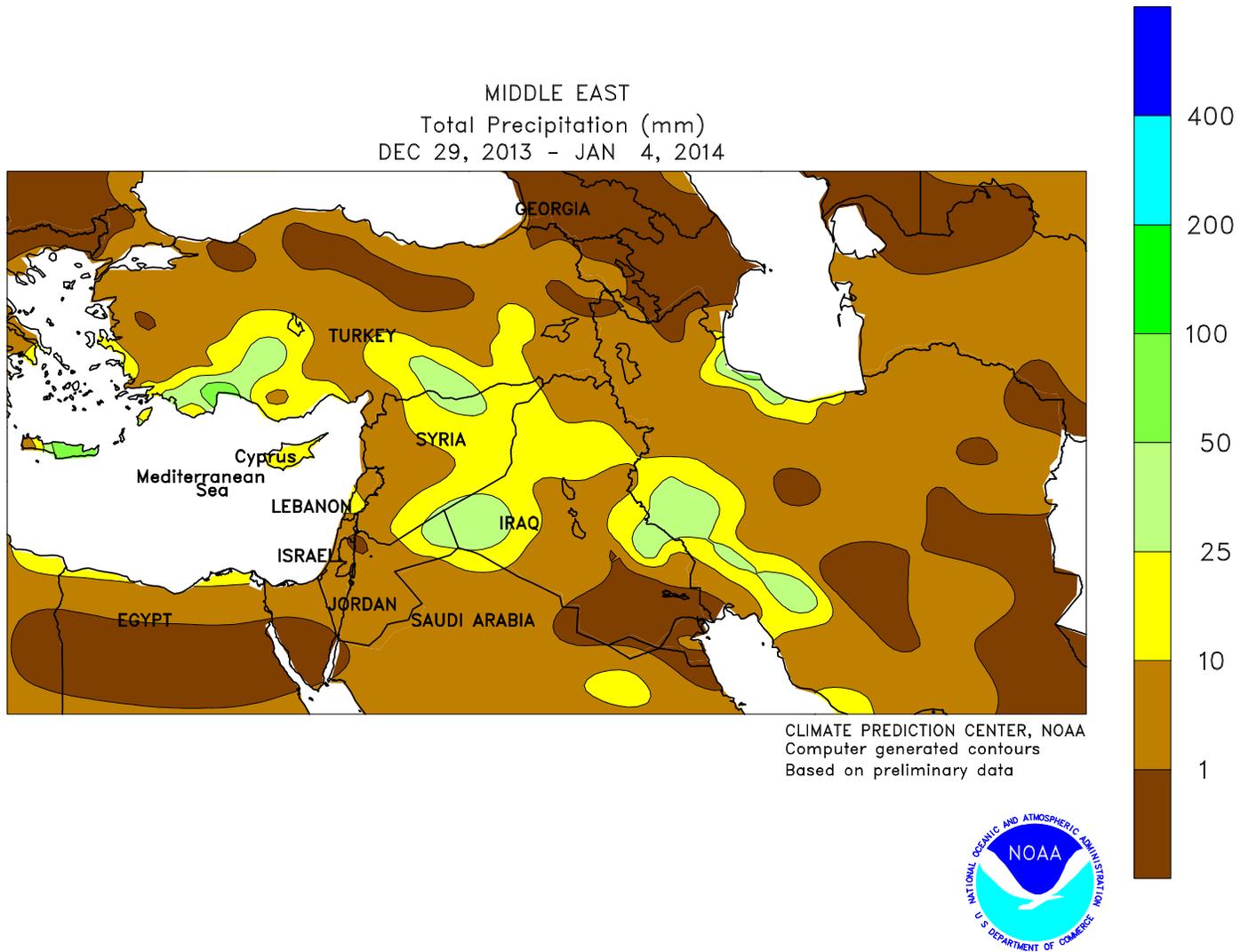
although as of early January there have been no freeze threats to dormant winter crops. In western Europe, a series of Atlantic disturbances generated widespread showers (2-50 mm, locally more), maintaining abundant soil moisture for dormant winter crops in northern growing areas while further improving soil moisture for Spain’s vegetative winter wheat and barley. Despite the unsettled weather, temperatures averaged up to 3°C above normal in western Europe, with crops in France and the United Kingdom losing some cold hardiness.



**WESTERN FSU**

Dry, unseasonably warm weather persisted, maintaining favorable conditions for winter wheat but leaving the region uncharacteristically devoid of snow. Temperatures averaged 2 to 6°C above normal, minimizing the risk of winterkill but

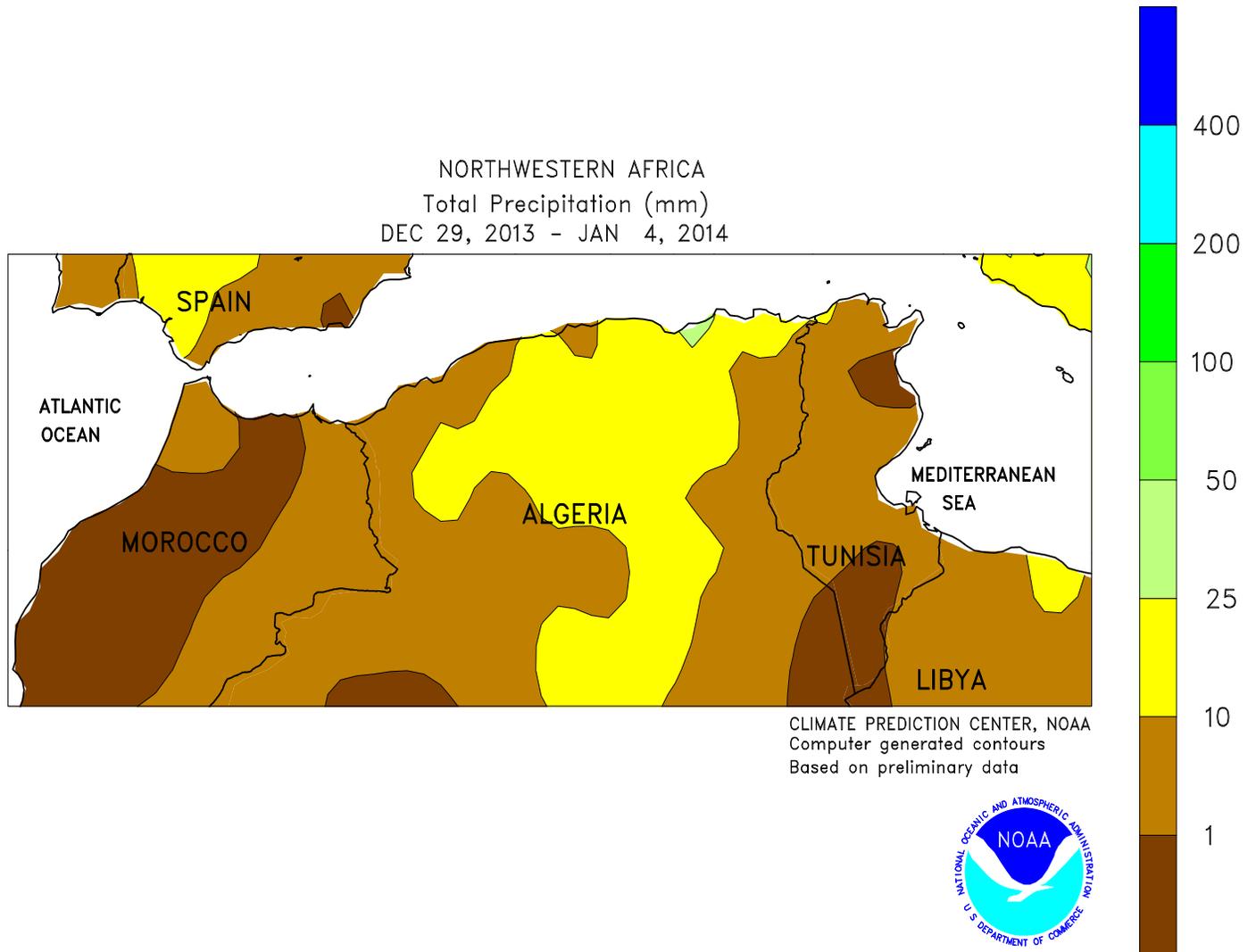
further eroding the region’s protective snowpack. By week’s end, key southern winter wheat areas were devoid of snow cover, while areas from Belarus and Ukraine into central Russia were covered by 2 to 20 cm of snow.



**MIDDLE EAST**

A slow-moving Mediterranean storm generated widespread rain and mountain snow as it traversed the region. Moderate to locally heavy rain (5-40 mm) was reported from southern Turkey and the eastern Mediterranean Coast into central Iraq and western Iran. At week's end, the storm was located in the northern Persian Gulf, and was continuing to generate locally heavy rain and mountain snow in the usually drier southern half of Iran. The moisture was overall beneficial for winter

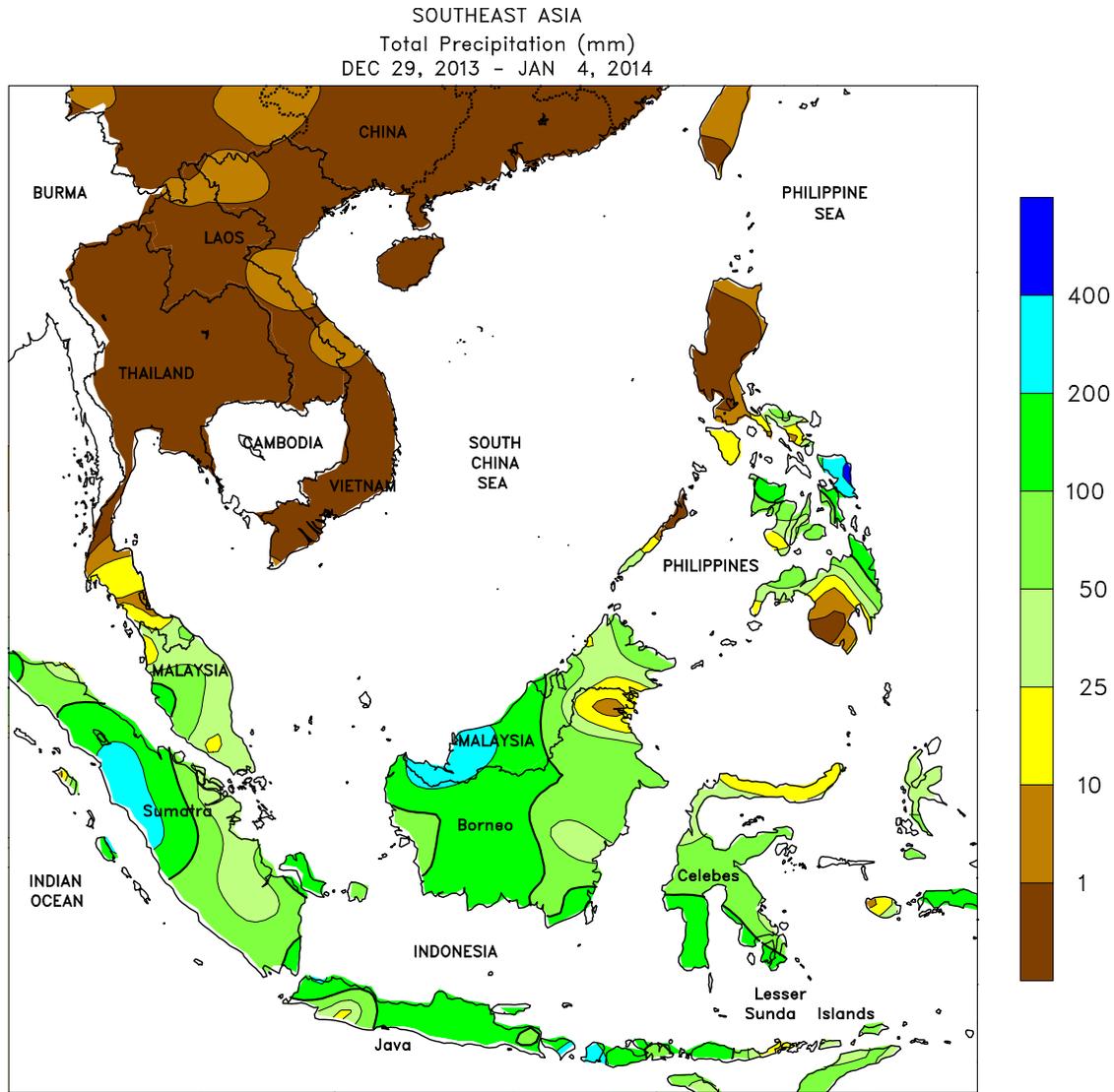
wheat and barley, which remained dormant from central Turkey into northern Iran and was vegetative in the region's southern growing areas. However, rain and snow mostly bypassed key wheat areas of Turkey's Anatolian Plateau, where crops were poorly established following an unfavorably dry autumn. In addition, temperatures averaged up to 4°C above normal in Turkey, melting much of the remaining protective snow cover.



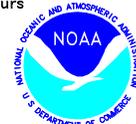
**NORTHWESTERN AFRICA**

Lingering showers in central and eastern growing areas contrasted with a return of drier weather in western growing areas. After recent, much-needed rain, dry conditions returned to northern Morocco, favoring fieldwork and promoting winter crop development. Meanwhile, showers (4-20 mm) continued

over Algeria and Tunisia, maintaining abundant soil moisture for winter wheat and barley but making fieldwork difficult. Overall, the region has experienced a favorable start to the winter grain growing season, although pockets of dryness continue in southwestern Morocco.



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

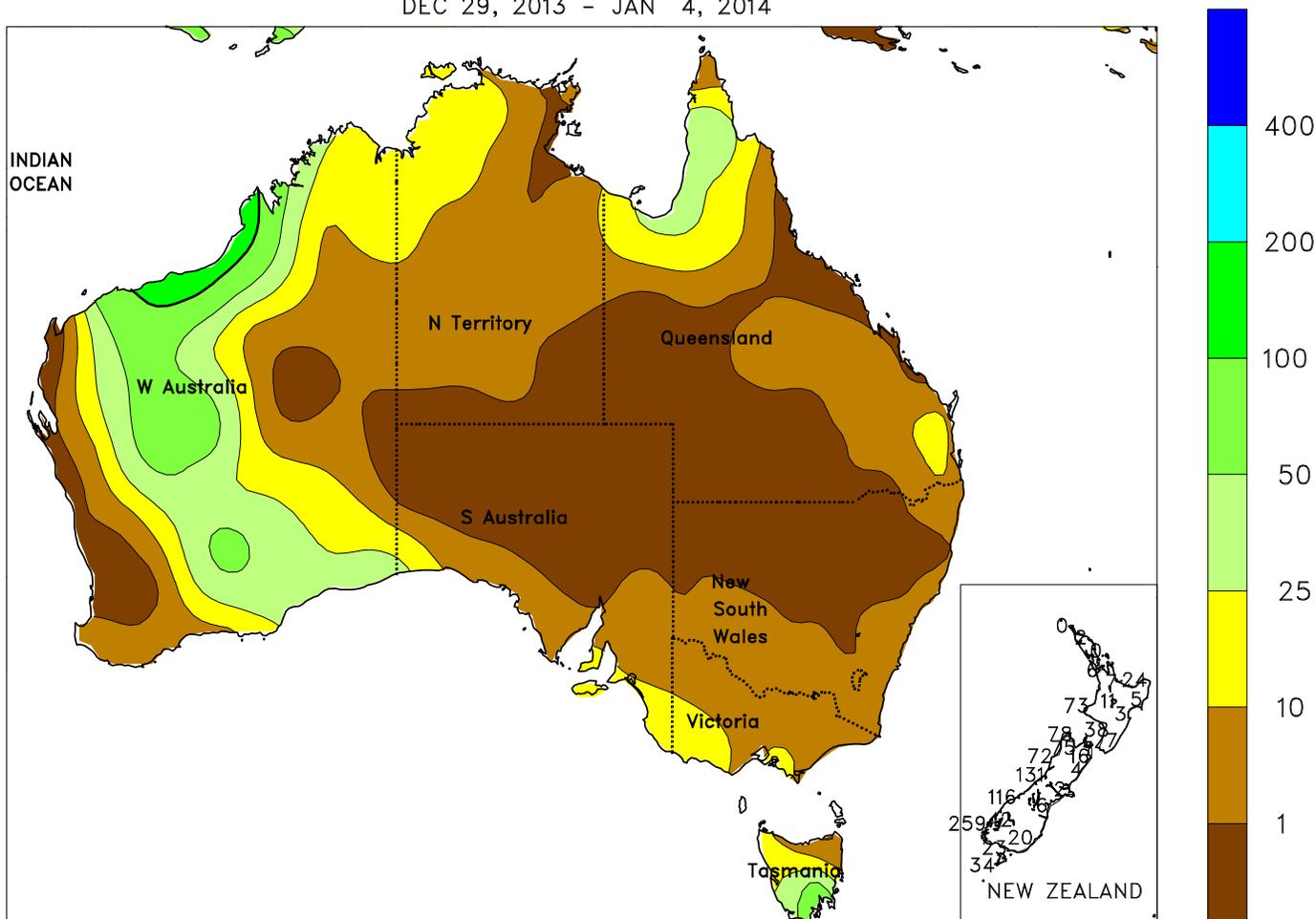


**SOUTHEAST ASIA**

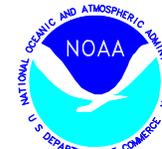
Moisture conditions remained good for rice entering into reproduction across Java, Indonesia. Rainfall for the week ranged between 50 and 150 mm, maintaining favorable crop prospects. However, portions of western Java have experienced flooding over the last several weeks, where the heaviest rainfall has occurred. Similarly, consistently heavy showers (50-150 mm) in nearby oil palm areas of Indonesia and Malaysia maintained abundant soil moisture, while

flooding eased on the Malay Peninsula from lighter showers (10-25 mm). Meanwhile, the heavy showers experienced in the northeastern Philippines shifted south bringing more seasonable rainfall totals (10-50 mm) to rice and corn in Luzon but causing flooding in the eastern Visayan Islands from over 200 mm of rain. In Vietnam, winter-spring rice benefited from warm, sunny conditions as the heavy rainfall during the late fall and early winter abated.

AUSTRALIA  
Total Precipitation (mm)  
DEC 29, 2013 - JAN 4, 2014



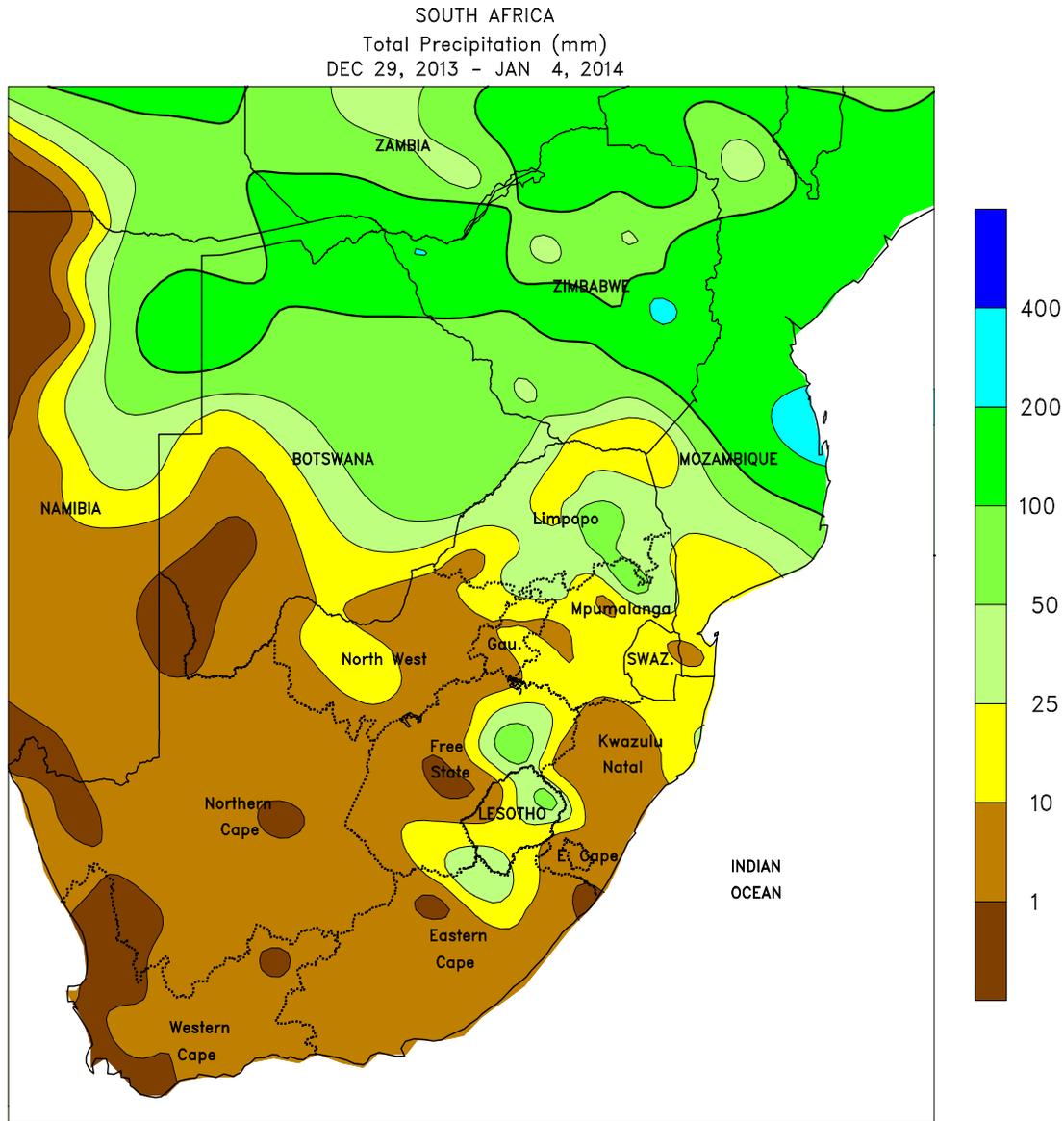
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Based on preliminary data



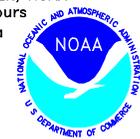
**AUSTRALIA**

In Queensland and northern New South Wales, very hot, mostly dry weather stressed summer crops, potentially reducing yield prospects. The hardest hit crops were dryland varieties, such as sorghum, which experienced large evaporative losses and received little rainfall (generally less than 5 mm). Where possible, irrigated crops, such as cotton, were likely watered to help mitigate the impacts of the extreme

heat. Daily maximum temperatures in major summer crop areas ranged from the upper 30s to middle 40s degrees C. Elsewhere in the wheat belt, scattered showers (5-15 mm) may have slowed final winter crop harvesting across portions of southeastern Australia. In Western Australia, dry weather favored winter grain and oilseed harvesting, which has nearly finished in this region.



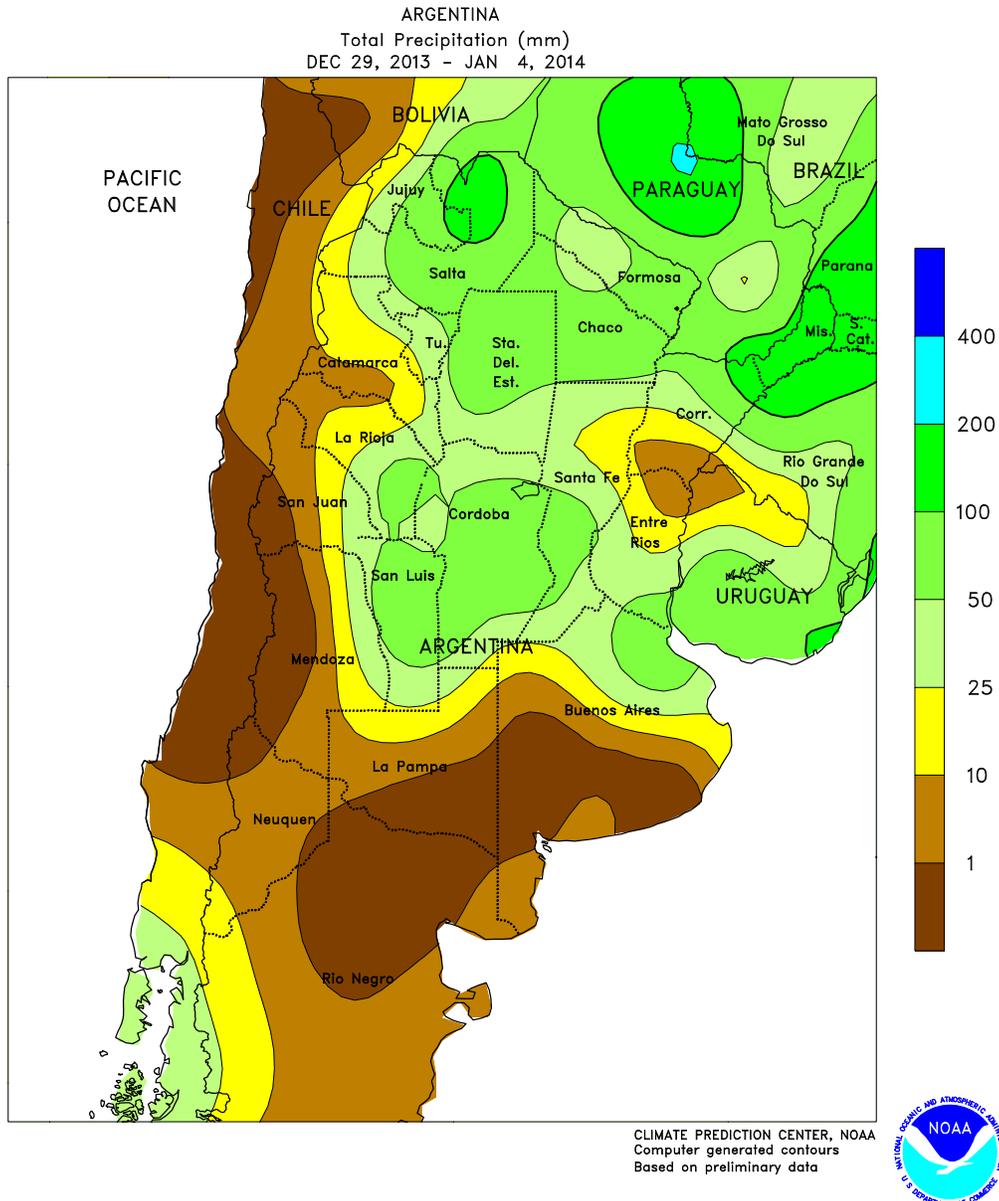
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



**SOUTH AFRICA**

Drier conditions developed over eastern sections of the region, spurring development of corn and other summer crops. Aside from a few isolated heavy showers, rainfall totaled less than 25 mm across the corn belt, most of it coming at the beginning of the week. A similar pattern prevailed over Eastern Cape and KwaZulu-Natal, but heavier rain (10-50 mm) continued in outlying northern farming areas (in and around Limpopo). Weekly average temperatures were generally within 1°C of

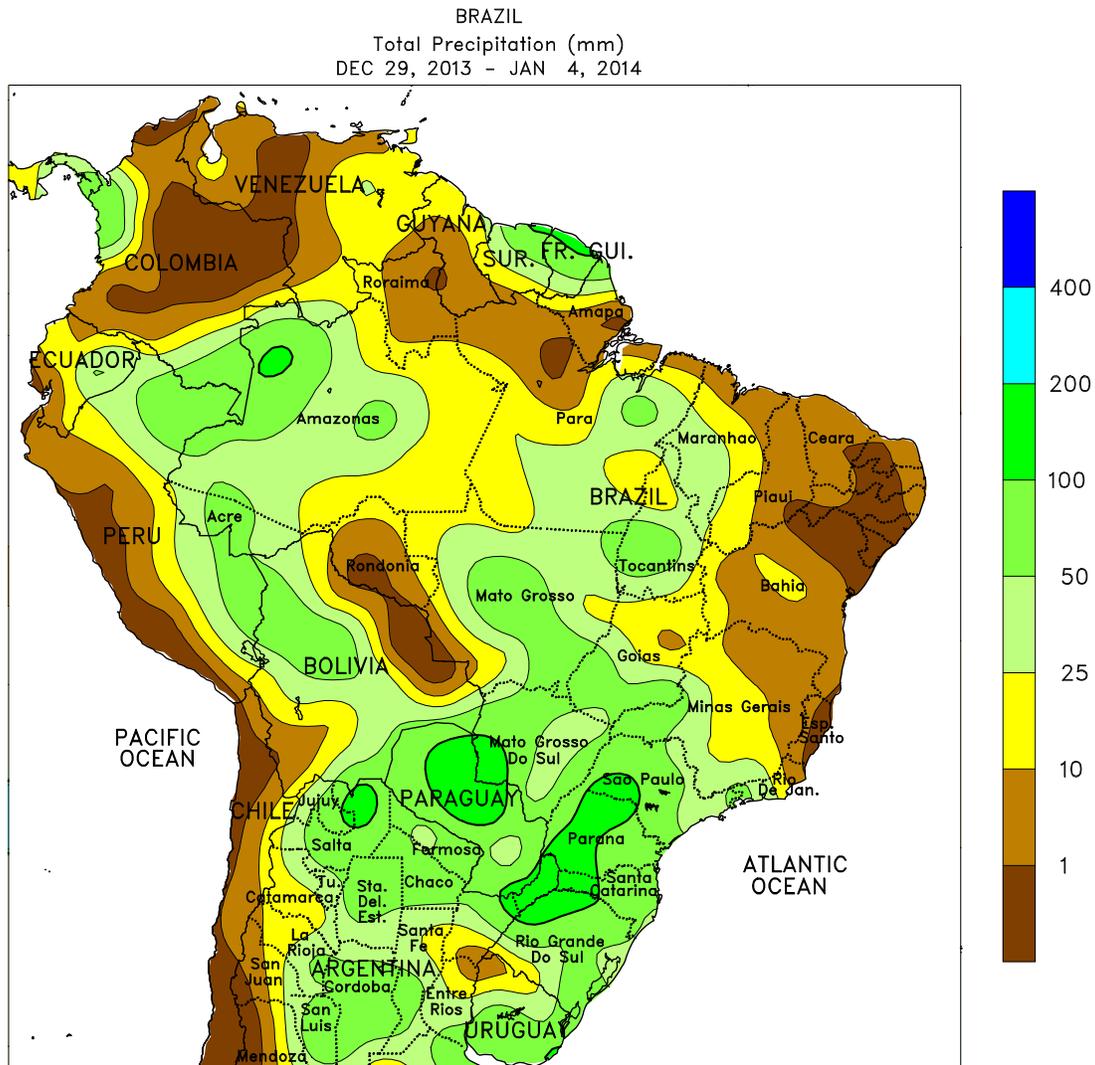
normal in these areas, with daytime highs reaching the middle 30s (degrees C) in outlying northern and western production areas (Limpopo and western sections of North West and Free State). Elsewhere, dry, unseasonably warm weather (weekly temperatures averaging up to 4°C above normal, with daytime highs often reaching the upper 30s) continued to dominate Northern and Western Cape Provinces, fostering rapid development of irrigated row crops and fruit.



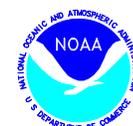
**ARGENTINA**

Rain brought relief from a brief but significant period of stressful heat. Showers — which developed in Argentina’s southwestern farming areas at the end of last week — spanned the main central and northern farming areas, with most locations recording 25 to 100 mm. Drier conditions returned, however, to the south (most of La Pampa and Buenos Aires) and continued over a minor section of the northeast, including portions of Santa Fe and Entre Rios. After a warm start to the week, the frontal system generating the rainfall ushered cooler weather into the region, with weekly temperatures averaging near normal in central Argentina and 1 to 2°C above normal across the north (Salta and Santiago del Estero to Corrientes). Unseasonable heat

lingered for a longer period over northern Argentina, where daytime highs reached 40°C on several days. Farther south, daytime highs reached the middle and upper 30s before the onset of the rain, and again at week’s end as unseasonable warmth returned to the region. A return to a more normal pattern of rainfall and temperatures is needed to prevent additional stress on corn and, as more crops advance through critical phases of development, to avoid problems with soybeans and cotton. According to Argentina’s Ministry of Agriculture, corn and soybeans were 78 and 83 percent planted, respective, as of January 2, slightly behind last year’s pace for both crops. In addition, winter wheat was 97 percent harvested (14 points ahead of last year).



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



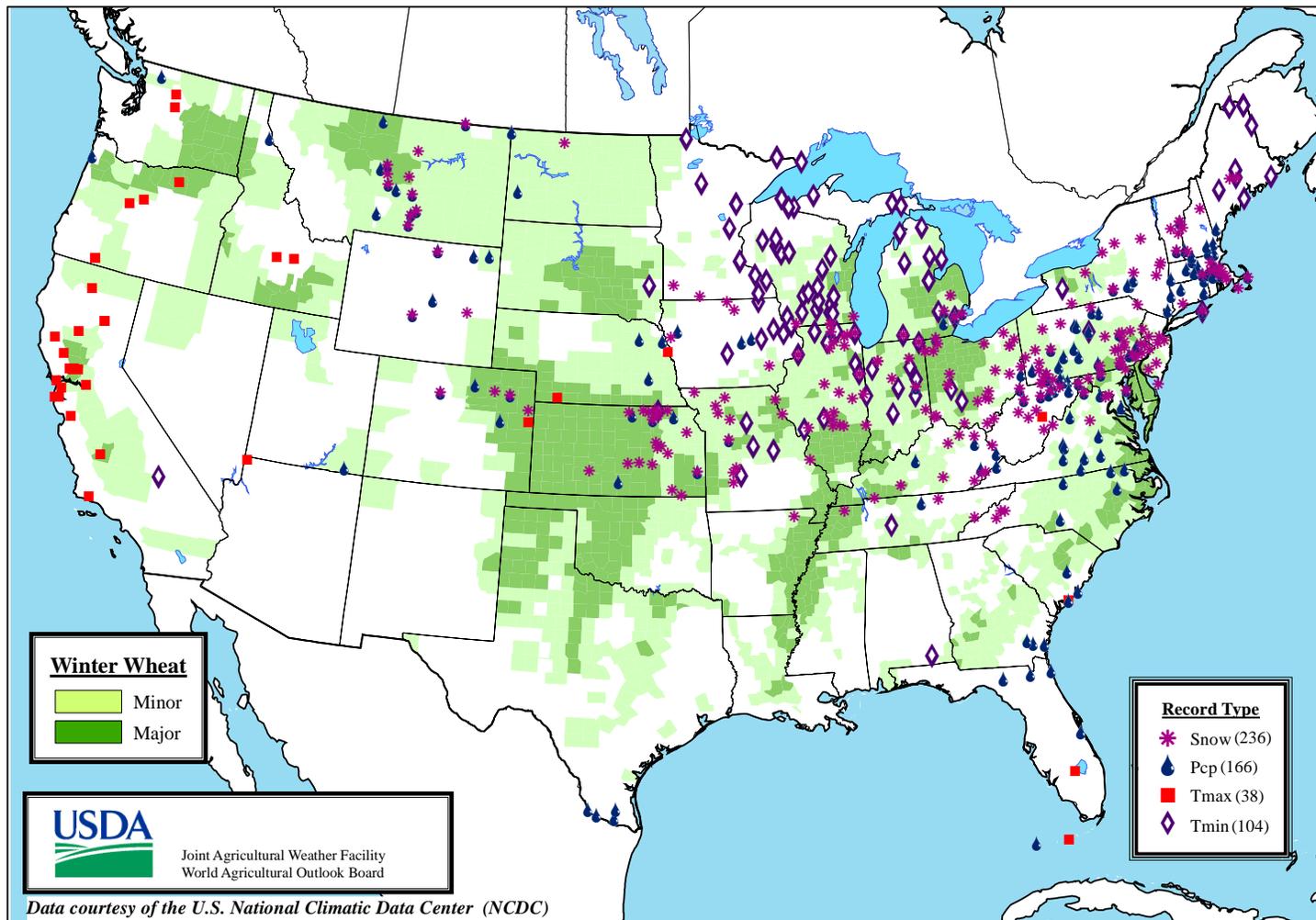
**BRAZIL**

Beneficial rain returned to southern Brazil, providing a timely boost in moisture to soybeans and corn following several weeks of dryness. Rainfall totaled 50 to 150 mm from Sao Paulo to Rio Grande do Sul; in spite of the rain, however, weekly temperatures averaged up to 2°C above normal due to several days with temperatures reaching the lower and middle 30s (degrees C). Elsewhere, moderate to heavy rain (25-100 mm) fell in sections of central Brazil, increasing moisture for soybeans, cotton, and coffee stretching from Mato Grosso to southern Minas Gerais, as well as in parts of the northeastern interior (in and around

Tocantins). However, unseasonable dryness dominated a large section of the northeast ranging from the coast westward through Bahia to northern Goias. Unseasonable warmth (weekly temperatures averaging up to 2°C above normal, with daytime highs in the middle and upper 30s) accompanied the dryness in the interior farming areas of Goias, Bahia, and Minas Gerais, reducing moisture for soybeans, cotton, and other rain-fed summer crops. Meanwhile, seasonable warmth (highs reaching the lower 30s) fostered growth of sugarcane, cocoa, and other irrigated crops along the northeastern coast.

# Daily Weather Records (ASOS & COOP)

December 29, 2013-January 4, 2014



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