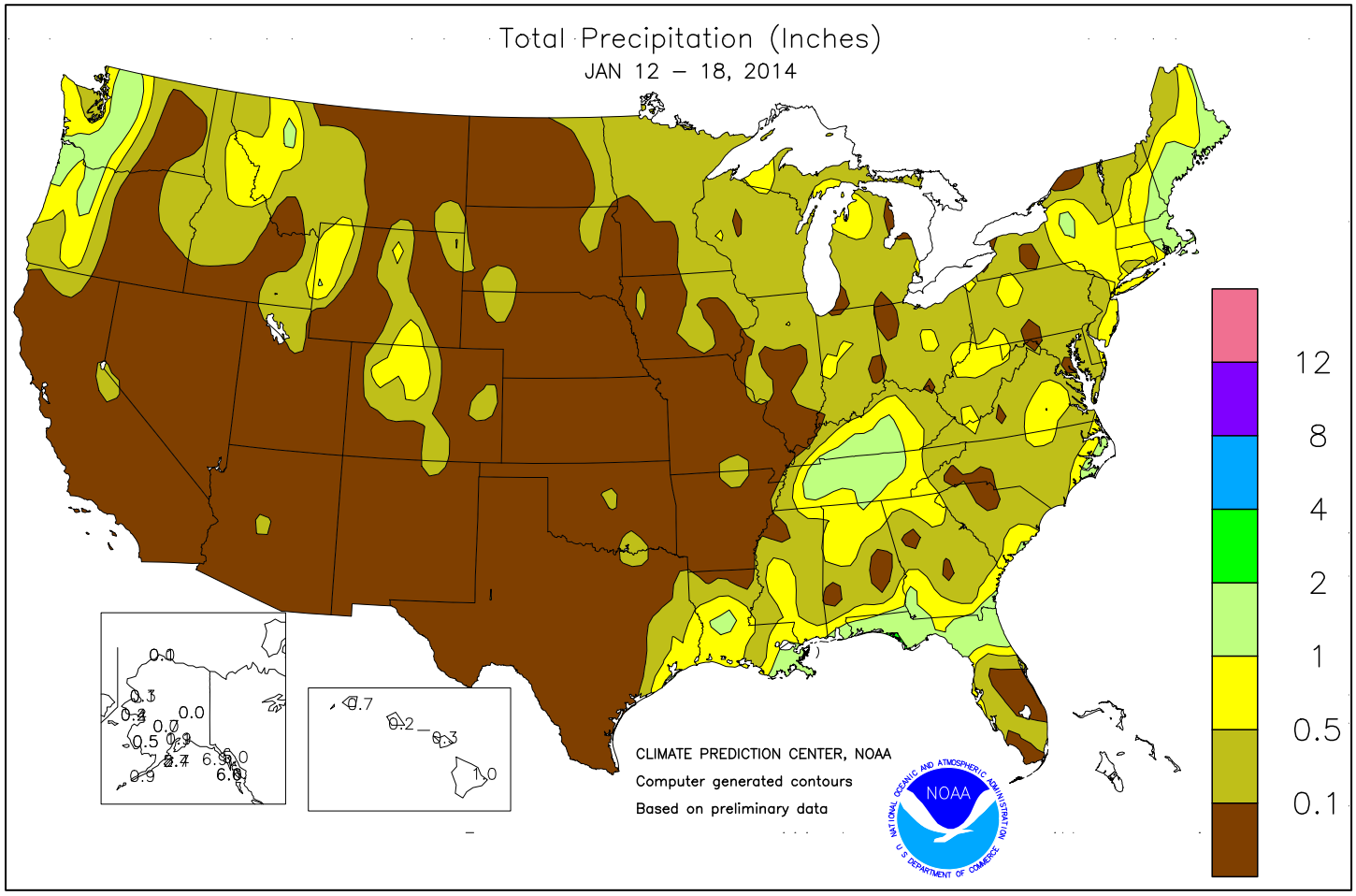
Volume 101, No. 3 http://www.usda.gov/oce/weather January 23, 2014

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 12-18, 2014

Highlights provided by USDA/WAOB

In a reversal from early January, near- to above-normal temperatures dominated the nation. In fact, weekly temperatures averaged at least 15 to 20°F above normal across portions of the **northern Plains** and **New England**, while several monthly record highs were established in **California**. However, there was enough cold air to hold weekly temperatures at below-normal levels in the **lower Southeast**, culminating in a minor freeze across parts of **Florida's peninsula** on January 17. Despite above-normal weekly temperatures, brief surges of cold air sent

(Continued on page 5)

Contents

Water Supply Forecast for the Western United States

Highlights

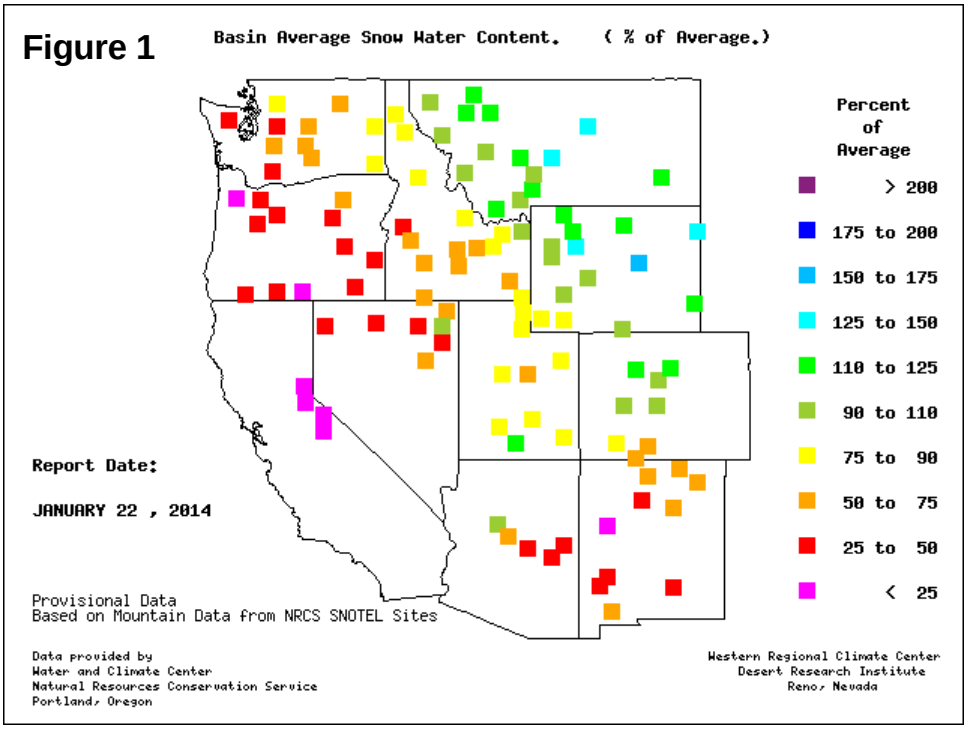
The phase of the El Niño-Southern Oscillation was neutral during the early and middle portion of the 2013-14 Western winter wet season. ENSO-neutral conditions often feature heightened weather variability across the western U.S. Indeed, an early-season Western cold outbreak in December was followed by a return to warm weather in January. However, Western precipitation has waned or disappeared altogether in recent weeks, with drought becoming more prominent west of the Continental Divide. Of particular concern are areas such as California, the Great Basin, and parts of the Southwest, entering a third year of drought, as reservoirs reflect multi-year precipitation deficits.

Snowpack and Precipitation

As 2014 began, the majority of the West was suffering from deficient snowpack. The wettest regions included the northern and central Rockies. By January 22, 2014, snow water content values were less than 75 percent of normal across a vast area stretching across the Pacific Coast States, the northern Great Basin, and portions of the Southwest (figure 1). Snowpack values in Utah were mostly below average but higher than those in neighboring states to the west and south. Only parts of Colorado, Montana, and Wyoming were faring well, with most basins in each state reporting near- to above-average snowpack.

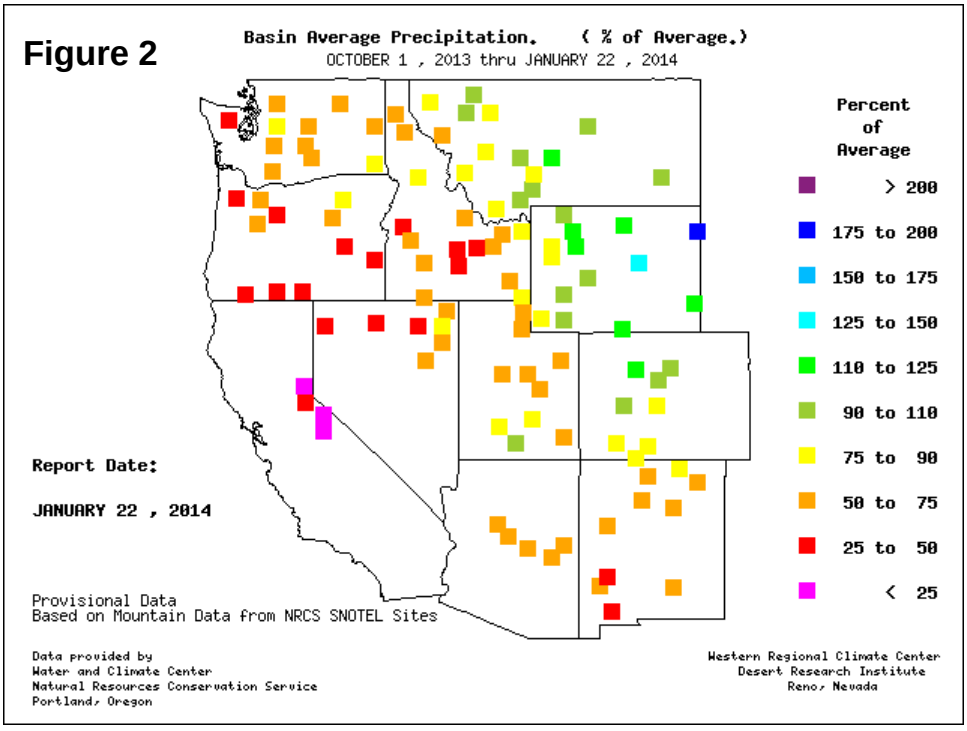
SNOTEL – River Basin Snow Water Content

Figure 1



SNOTEL – River Basin Precipitation

Figure 2



Season-to-date precipitation (October 1, 2013 – January 22, 2014) was below-normal in nearly all Western basins, except across the northern and central Rockies. Moisture has been especially scarce in the Sierra Nevada, where precipitation has averaged less than 25 percent of normal in several basins (figure 2).

Spring and Summer Streamflow Forecasts

By January 1, 2014, projections for spring and summer streamflow were indicating the likelihood of below-normal runoff in most basins west of the Rockies. In particular, less than half of the normal runoff can be expected—barring heavy, late-winter precipitation—in the Sierra Nevada and the northern Great Basin (figure 3). In contrast, most basins in the northern and central Rockies—straddling the Continental Divide—can expect near- to above-normal runoff. Expectations for the Four Corners States include a mix of normal and below-normal runoff.

Reservoir Storage

On January 1, 2014, reservoir storage as a percent of average for the date was below average in all available Western States except Montana (figure 4). Information for Arizona has not yet been finalized. Storage was substantially below average in California, Nevada, New Mexico, and Oregon. For California—entering a third consecutive year of drought (2011-12, 2012-13, and 2013-14)—storage in 154 intrastate reservoirs has been in general decline, relative to normal, since April 30, 2012 (figure 5). By December 31, 2013, California's storage stood at just 70 percent of the long-term average.

For More Information

The National Water and Climate Center homepage provides the latest available snowpack and water supply information. Please visit: http://www.wcc.nrcs.usda.gov

Figure 3

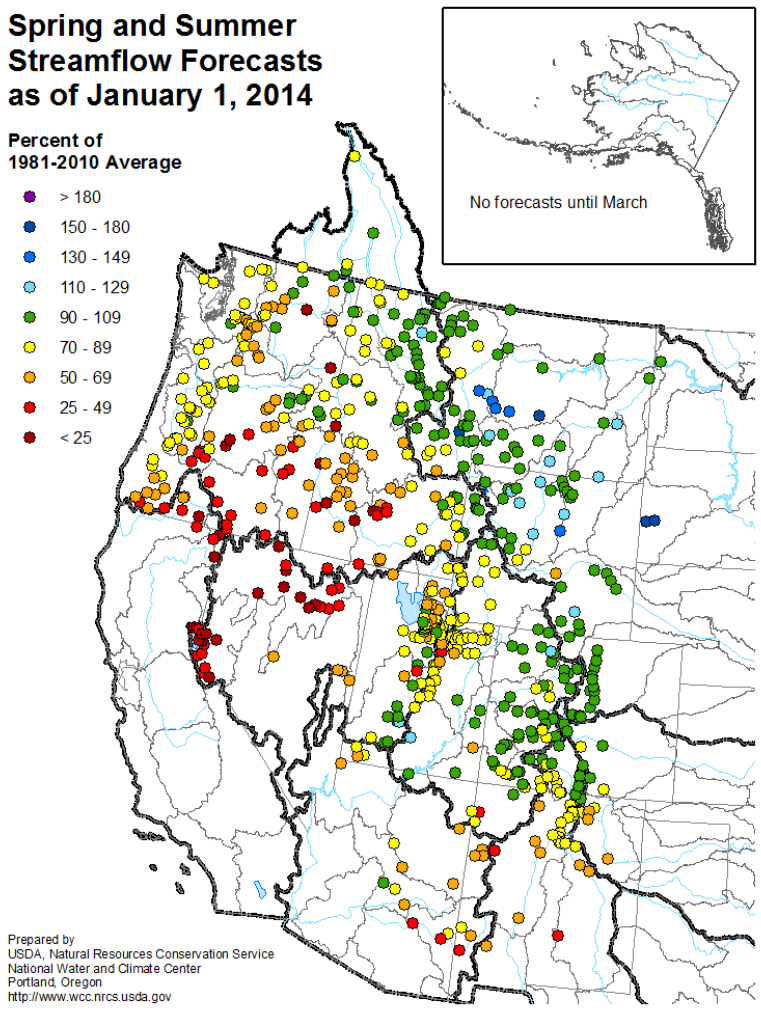


Figure 4

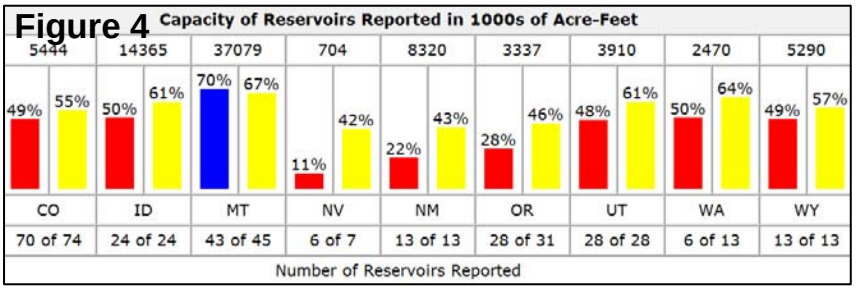
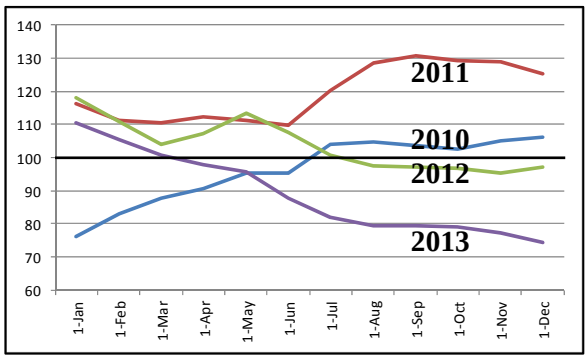
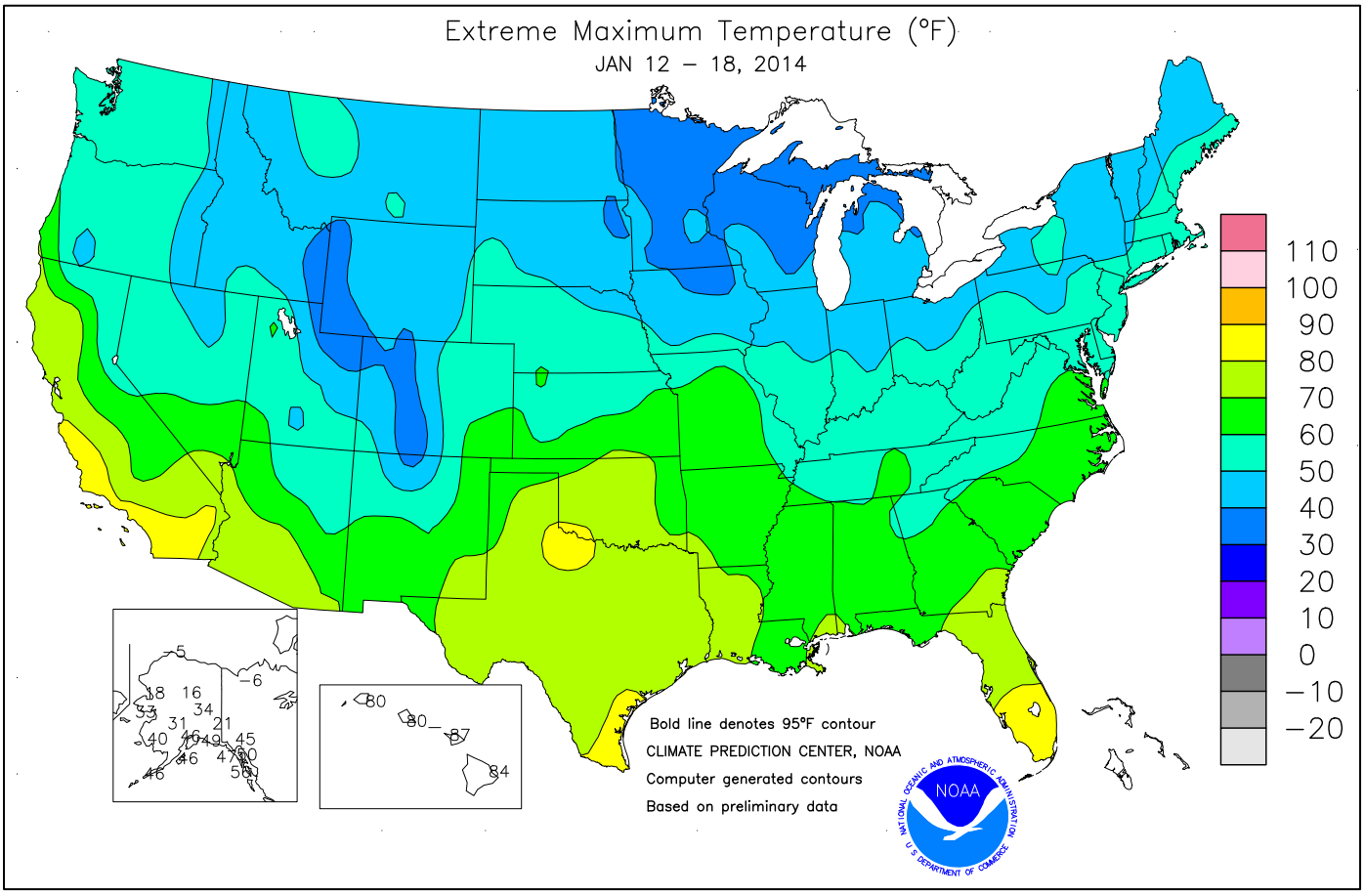
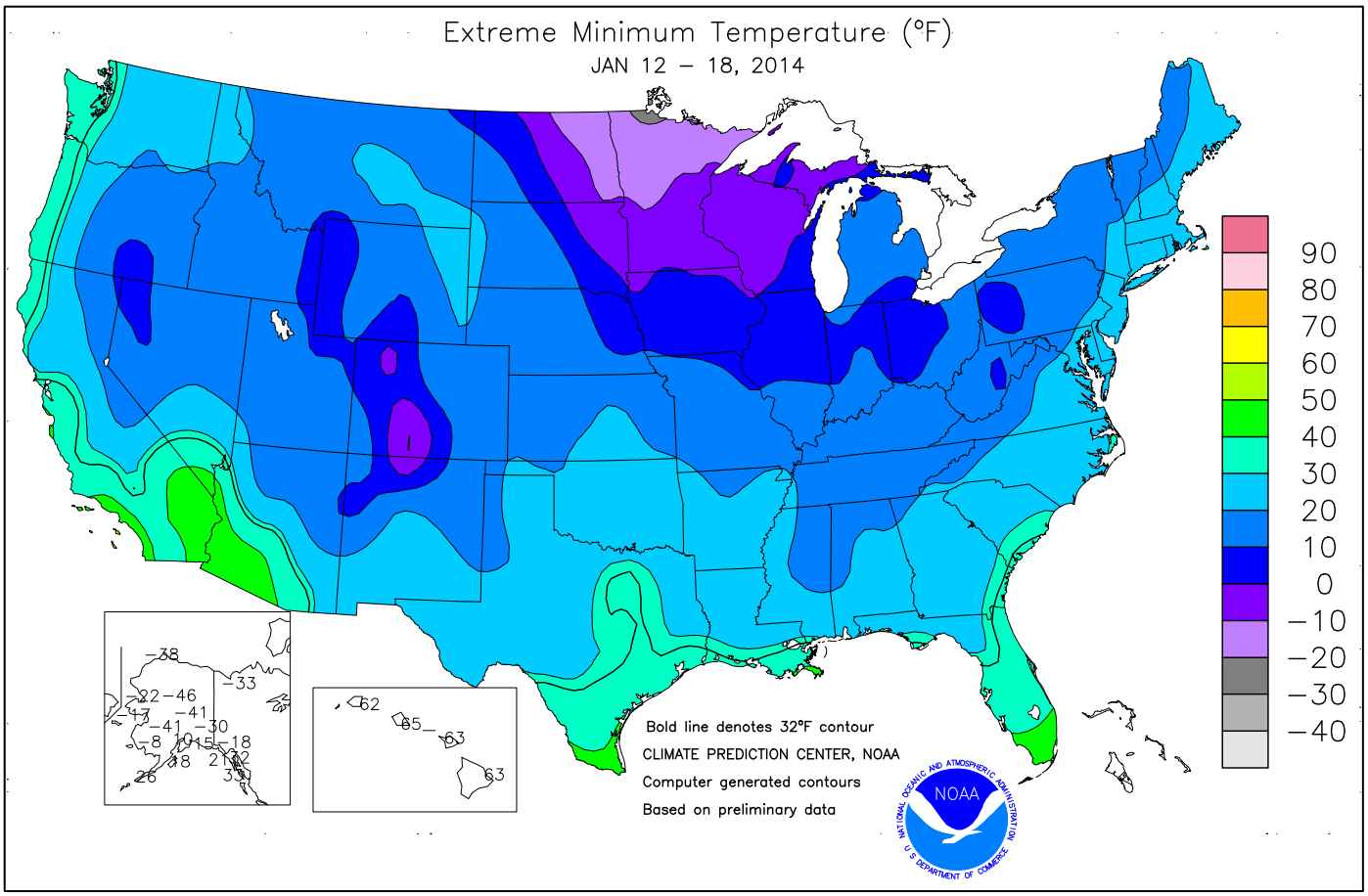


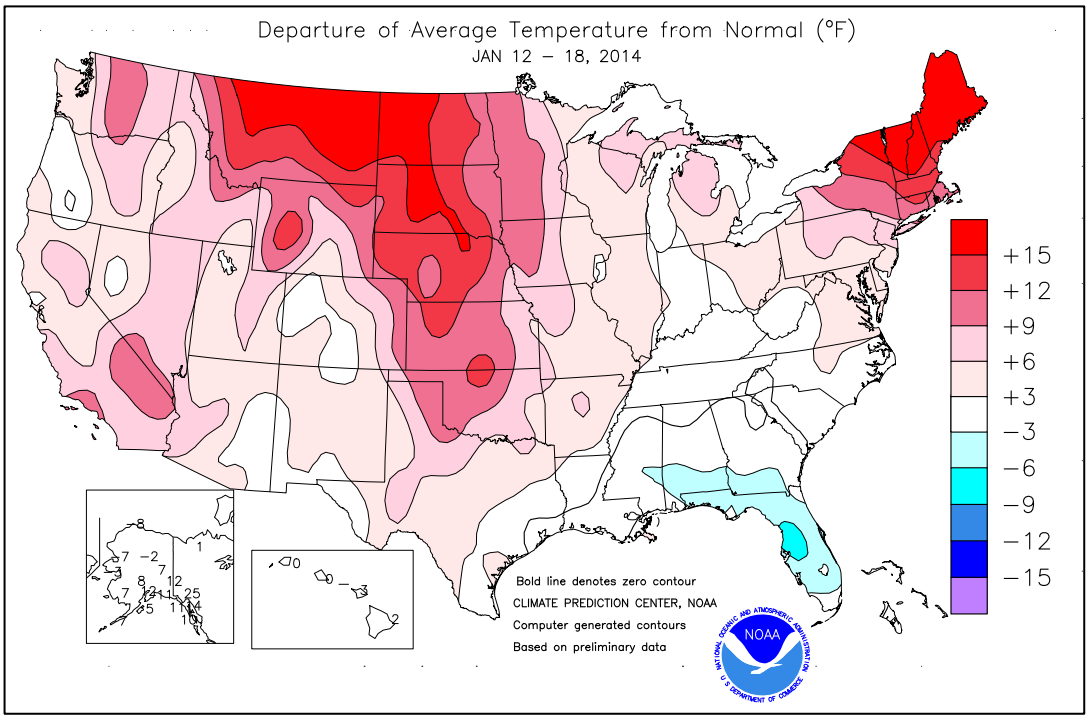
Figure 5

California reservoir storage as a percent of normal, 2010-13.




Extreme Maximum Temperature (°F)
JAN 12 – 18, 2014
110
100
90
80
70
60
50
40
30
20
10
0
−10
−20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
NOAA


Extreme Minimum Temperature (°F)
JAN 12 – 18, 2014
90
80
70
60
50
40
30
20
10
0
−10
−20
−30
−40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
NOAA

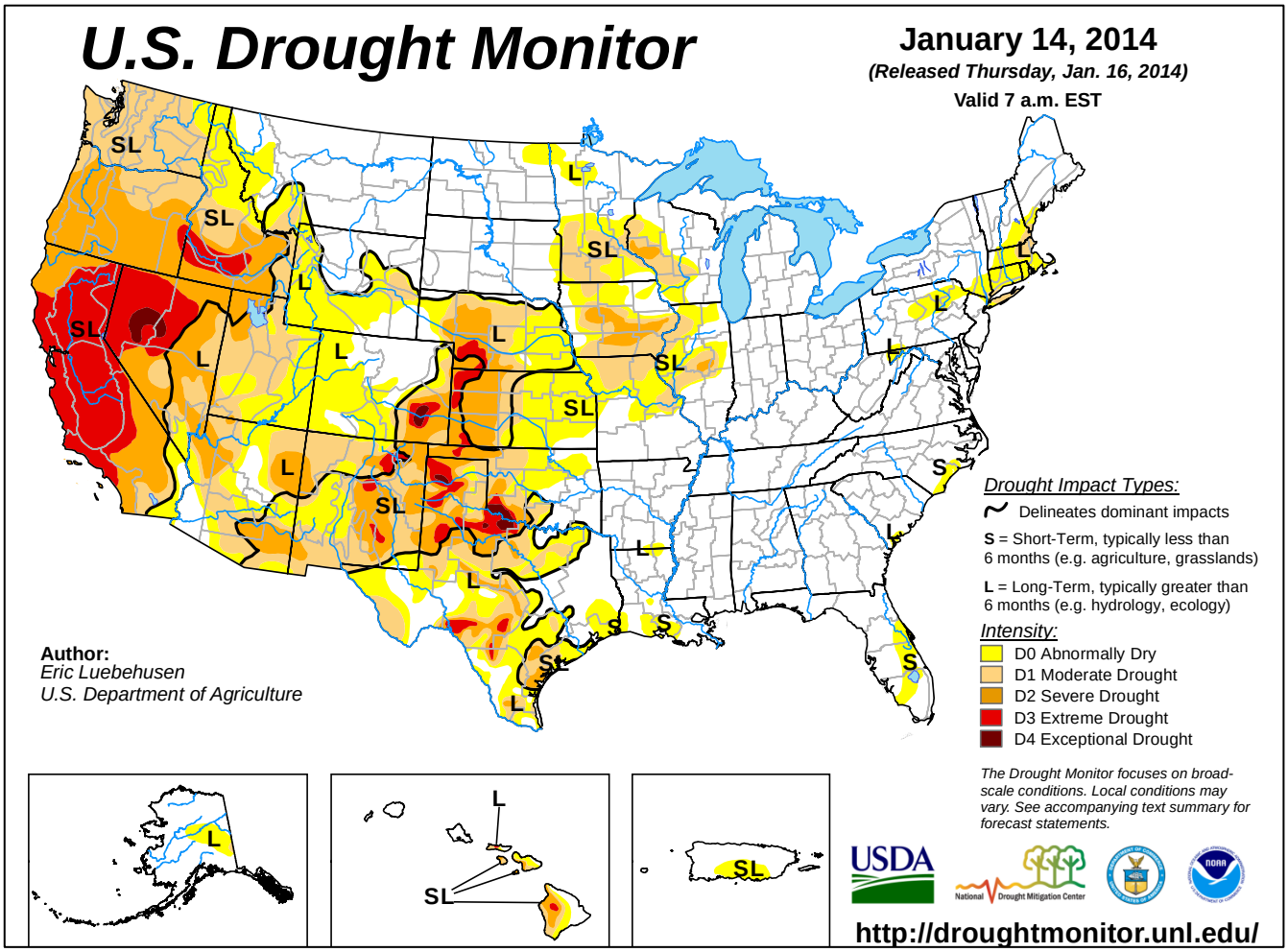


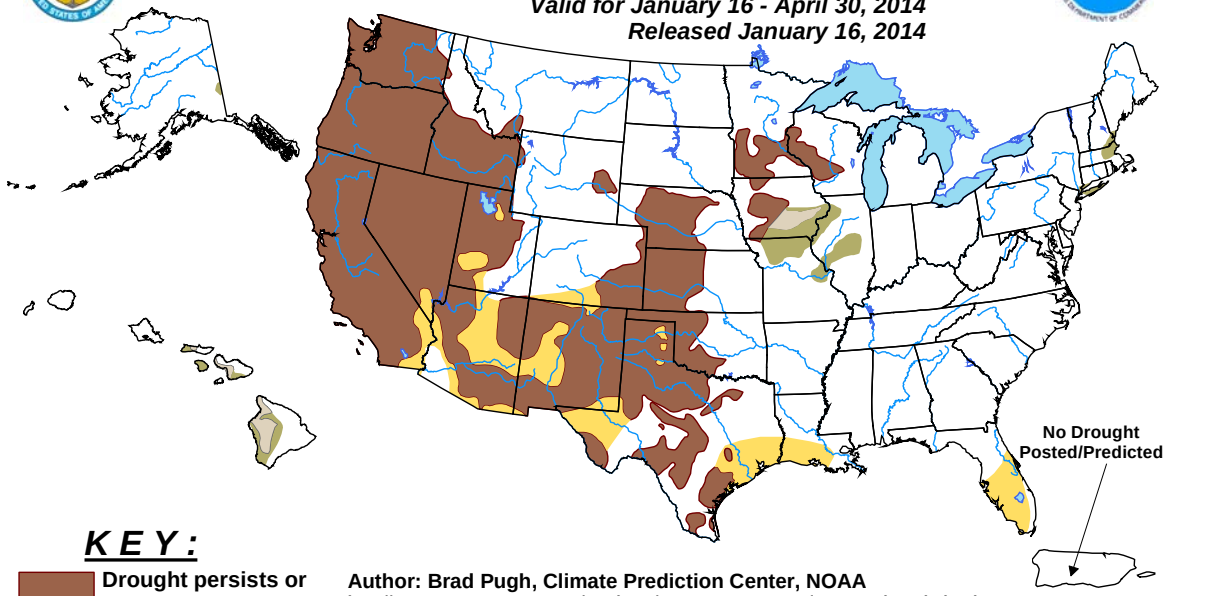
(Continued from front cover) temperatures below 0°F on January 15 and 17-18 in the **upper Midwest**. Meanwhile, heavy precipitation was largely absent from the U.S. Weekly totals in excess of an inch were generally limited to **coastal New England**, the **Tennessee Valley**, the **Pacific Northwest**, and portions of the **lower Southeast**. However, snow showers and squalls stretched from the **upper Midwest into the Northeast**, causing occasional travel disruptions. The week's most significant storm crossed the **East** during the first half of the week, resulting in the aforementioned 1-inch totals. Elsewhere, generally dry weather prevailed from **California to the Plains**, except for some light precipitation in the **northern and central Rockies**. Prospects for spring and summer runoff remained bleak in most areas **west of the Rockies**, with especially dire expectations in **California**, the **Great Basin**, and portions of the **Southwest**.

Unusual warmth was especially persistent in **California**, where a steady parade of record highs occurred. Early in the week, however, warmth briefly expanded across the **central and southern Plains**. On January 12, record-setting highs included 81°F in **Childress, TX**; 75°F in **Oklahoma City, OK**; and 70°F in **Wichita, KS**. The following day in **Washington**, **Omak's** high of 61°F set a January record (previously, 60°F on January 17, 1920). In **California**, records were set for consecutive January days with a high of 80°F or greater in **Santa Maria** (January 13-19), **Santa Barbara** (January 14-17), and **Paso Robles** (January 15-17). Previous records had been 4 days (January 26-29, 1931) in **Santa Maria**; 3 days (January 13-15, 1991) in **Santa Barbara**; and 2 days (January 16-17, 1976) in **Paso Robles**. With a high of 89°F on January 16, **Santa Maria** also set a monthly record high (previously, 87°F on January 13, 2009, and January 15, 2014). Other stations in **California** setting or tying monthly record highs on January 16 were **Salinas** (84°F) and **San Francisco** (73°F). **Salinas** topped that mark on January 17 with a high of 86°F. **California's** hot, dry conditions, which included a daily-record high of 90°F (on January 16) in **Burbank**, contributed to the expansion of the nearly 2,000-acre Colby fire, which engulfed or damaged about a dozen homes near **Glendora**. Farther north, howling chinook winds swept across **Montana**. In the **northern Rockies**, a wind gust to 119 mph was clocked in **Logan Pass, MT**, on January 13—the highest gust in that location in nearly 2 years. Elsewhere in **Montana** on the 13th, wind gusts included 67 mph in **Cut Bank**, 64 mph in **Lewistown**, and 62 mph in **Helena** and **Great Falls**. It was **Lewistown's** highest January gust since 2007. **Cut Bank** recorded an even higher gust, 71 mph, on January 15.

Precipitation highlights were scarce, but included occasional snow from the **northern Plains into the Northeast**. **Great Falls, MT**, netted a daily-record snowfall of 3.3 inches on January 13. The following day in **Wisconsin**, **Eau Claire's** 9.0-inch total set a record for January 14. More widespread snow unfolded across the **Midwest** late in the week. Record-setting snowfall totals for January 18 included 5.7 inches in **St. Cloud, MN**, and 3.6 inches in **Dayton, OH**. Earlier, **Eastern** rainfall totals had approached or reached an inch, especially along the **New England coast**. For example, January 14 rainfall included 0.93 inch in **Portland, ME**, and 0.79 inch in **Boston, MA**.

Frigid conditions were confined to **northern Alaska**, while warmer-than-normal weather covered the southern half of the state. In fact, consecutive daily-record highs were set or tied in several **Alaskan** locations, including **Petersburg** (57°F on January 17-18) and **Cold Bay** (46 and 45°F on January 16-17, respectively). Meanwhile, heavy precipitation pounded **southeastern Alaska**, where January 14 was the wettest January day on record in locations such as **Pelican** (5.74 inches; previously, 5.39 inches on January 18, 1976) and **Annex Creek** (3.85 inches; previously, 3.68 inches on January 15, 1965). **Pelican's** weekly precipitation climbed to 12.76 inches. In addition, daily-record totals for January 14 included 3.75 inches in **Petersburg**, 3.56 inches in **Sitka**, and 3.51 inches in **Port Alexander**. In **Valdez**, the weekly snowfall of 28.4 inches was boosted by a daily-record sum of 12.5 inches on January 14. Farther inland, daily-record snowfall totals reached 5.4 inches (on January 16) in **McGrath** and 2.5 inches (on January 12) in **King Salmon**. **Bettles** received consecutive record-setting snowfall amounts on January 17-18, totaling 9.3 inches. Farther south, **Hawaii's** weather featured little in the way of significant rainfall, although showers dotted the western islands early in the week. At the state's major airport observation sites, year-to-date rainfall through January 18 ranged from 1.00 inch (45 percent of normal) in **Lihue, Kauai**, to 1.56 inches (105 percent) in **Honolulu, Oahu**. However, much (1.25 inches) of **Honolulu's** rain fell earlier, on January 2.


U.S. Drought Monitor
January 14, 2014
(Released Thursday, Jan. 16, 2014)
Valid 7 a.m. EST
Author:
Eric Luebehusen
U.S. Department of Agriculture
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
National Drought Mitigation Center
http://droughtmonitor.unl.edu/


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for January 16 - April 30, 2014
Released January 16, 2014
NOAA
No Drought Posted/Predicted
KEY:
Drought persists or intensifies
Drought remains but improves
Drought removal likely
Drought development likely
Author: Brad Pugh, Climate Prediction Center, NOAA
http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity).
For weekly drought updates, see the latest U.S. Drought Monitor.
NOTE: The tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.
The Green areas imply drought removal by the end of the period (D0 or none)

National Weather Data for Selected Cities

Weather Data for the Week Ending January 18, 2014

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	53	31	62	20	42	0	0.35	-0.91	0.30	8.54	117	1.48	53	85	29	0	5	3	0
	HUNTSVILLE	51	30	59	20	40	1	0.58	-0.69	0.58	9.94	117	3.37	116	81	43	0	5	1	1
	MOBILE	58	33	65	21	46	-4	0.57	-0.74	0.57	9.68	129	2.31	81	89	40	0	3	1	1
	MONTGOMERY	57	31	65	20	44	-2	0.39	-0.71	0.36	11.27	152	2.31	94	81	32	0	4	2	0
AK	ANCHORAGE	33	23	46	10	28	12	1.06	0.92	0.36	2.83	201	1.22	339	88	75	0	6	7	0
	BARROW	-13	-30	-5	-38	-22	-9	0.07	0.07	0.07	1.26	969	0.10	1000	76	66	0	7	1	0
	FAIRBANKS	6	-12	34	-41	-3	7	0.00	-0.11	0.00	0.78	75	0.00	0	74	71	0	7	0	0
	JUNEAU	43	36	50	32	40	14	4.95	3.87	2.56	16.81	210	8.29	321	92	75	0	1	7	3
	KODIAK	41	29	46	18	35	5	2.41	0.53	0.81	9.94	83	5.50	127	92	83	0	5	7	2
	NOME	9	-4	33	-17	3	-3	0.40	0.21	0.20	2.69	184	0.68	151	73	64	0	7	2	0
AZ	FLAGSTAFF	52	18	59	14	35	5	0.00	-0.46	0.00	1.35	47	0.00	0	72	16	0	7	0	0
	PHOENIX	74	44	79	41	59	5	0.00	-0.19	0.00	0.39	28	0.00	0	51	25	0	0	0	0
	PRESCOTT	62	26	65	23	44	7	0.00	-0.33	0.00	0.31	15	0.00	0	53	12	0	6	0	0
	TUCSON	72	38	77	34	55	4	0.00	-0.22	0.00	0.83	53	0.00	0	45	24	0	0	0	0
AR	FORT SMITH	58	29	71	24	44	7	0.00	-0.52	0.00	4.89	106	0.79	65	73	28	0	6	0	0
	LITTLE ROCK	60	31	68	24	46	6	0.01	-0.79	0.01	9.28	141	2.34	125	71	21	0	5	1	0
CA	BAKERSFIELD	67	38	77	36	53	6	0.00	-0.25	0.00	0.10	8	0.00	0	70	54	0	0	0	0
	FRESNO	67	37	74	35	52	7	0.00	-0.48	0.00	0.15	6	0.00	0	79	61	0	0	0	0
	LOS ANGELES	81	51	87	46	66	9	0.00	-0.64	0.00	0.31	10	0.01	1	49	20	0	0	0	0
	REDDING	73	38	80	28	55	10	0.00	-1.47	0.00	0.46	6	0.08	2	53	34	0	3	0	0
	SACRAMENTO	67	33	71	30	50	4	0.00	-0.84	0.00	0.43	10	0.00	0	94	30	0	4	0	0
	SAN DIEGO	78	51	82	49	64	6	0.00	-0.51	0.00	0.46	19	0.00	0	52	31	0	0	0	0
	SAN FRANCISCO	68	45	73	42	57	8	0.00	-0.98	0.00	0.36	7	0.01	0	70	49	0	0	0	0
	STOCKTON	65	32	69	30	48	3	0.01	-0.58	0.01	0.35	11	0.01	1	88	67	0	5	1	0
CO	ALAMOSA	35	-6	39	-8	15	1	0.00	-0.06	0.00	0.17	36	0.00	0	82	64	0	7	0	0
	CO SPRINGS	50	19	58	14	34	6	0.00	-0.06	0.00	0.25	42	0.18	106	60	20	0	7	0	0
	DENVER INTL	49	23	55	17	36	8	0.04	-0.02	0.04	0.74	157	0.49	306	69	26	0	7	1	0
	GRAND JUNCTION	37	13	44	9	25	0	0.02	-0.12	0.02	1.00	118	0.04	12	83	64	0	7	1	0
	PUEBLO	54	16	61	10	35	6	0.00	-0.07	0.00	0.07	12	0.04	21	57	31	0	7	0	0
CT	BRIDGEPORT	44	30	49	25	37	7	0.72	-0.13	0.61	6.75	125	2.42	124	92	70	0	5	3	1
	HARTFORD	46	30	54	26	38	12	0.73	-0.15	0.65	7.21	129	3.29	165	88	65	0	5	2	1
DC	WASHINGTON	50	34	61	25	42	7	0.35	-0.39	0.35	7.90	166	2.37	139	83	48	0	3	1	0
DE	WILMINGTON	47	28	58	21	37	6	0.25	-0.54	0.25	11.17	214	5.95	327	91	54	0	5	1	0
FL	DAYTONA BEACH	65	43	77	34	54	-4	0.38	-0.33	0.37	3.00	70	1.31	82	90	37	0	0	2	0
	JACKSONVILLE	64	39	77	30	51	-2	1.64	0.81	0.96	6.63	149	5.77	319	88	41	0	1	2	2
	KEY WEST	73	65	80	56	69	-1	0.00	-0.50	0.00	5.75	173	4.66	392	83	66	0	0	0	0
	MIAMI	73	58	84	46	66	-2	0.30	-0.09	0.30	5.51	179	0.84	93	84	49	0	0	1	0
	ORLANDO	67	46	80	34	56	-5	0.06	-0.48	0.03	1.47	42	1.20	98	78	36	0	0	2	0
	PENSACOLA	60	38	67	28	49	-3	1.25	0.03	1.25	6.46	97	2.70	101	75	35	0	2	1	1
	TALLAHASSEE	64	33	69	26	49	-3	1.06	-0.18	0.93	7.43	108	2.54	92	82	28	0	3	2	1
	TAMPA	65	47	76	41	56	-5	0.29	-0.19	0.28	2.28	67	1.47	135	88	48	0	0	2	0
	WEST PALM BEACH	72	53	82	42	62	-4	0.19	-0.67	0.19	11.06	223	6.72	371	82	50	0	0	1	0
GA	ATHENS	56	31	66	24	44	2	0.26	-0.79	0.16	12.18	202	4.56	196	68	40	0	5	2	0
	ATLANTA	52	32	60	24	43	1	0.14	-0.99	0.12	10.92	174	3.12	128	76	43	0	4	2	0
	AUGUSTA	58	29	65	26	44	0	0.13	-0.88	0.07	9.12	170	2.22	99	85	43	0	5	2	0
	COLUMBUS	56	32	64	26	44	-2	0.24	-0.83	0.22	11.43	167	2.56	105	83	27	0	3	2	0
	MACON	57	30	64	24	43	-2	0.35	-0.77	0.33	11.72	183	2.68	108	88	32	0	5	2	0
	SAVANNAH	62	36	69	32	49	0	0.63	-0.28	0.59	4.48	93	2.10	104	76	38	0	1	2	1
HI	HILO	82	64	84	63	73	2	0.96	-1.24	0.96	21.40	139	1.20	25	93	76	0	0	1	1
	HONOLULU	79	67	80	65	73	0	0.14	-0.47	0.10	5.22	122	1.56	109	88	79	0	0	3	0
	KAHULUI	84	66	87	63	75	3	0.27	-0.58	0.24	3.42	68	1.37	70	91	81	0	0	3	0
	LIHUE	79	65	80	62	72	0	0.69	-0.37	0.32	6.29	87	1.01	41	93	87	0	0	6	0
ID	BOISE	43	27	48	22	35	5	0.02	-0.28	0.02	1.02	49	0.36	51	93	76	0	5	1	0
	LEWISTON	46	32	55	24	39	6	0.09	-0.16	0.09	1.06	66	0.33	59	79	68	0	5	1	0
	POCATELLO	39	24	42	15	31	7	0.00	-0.25	0.00	0.89	53	0.46	79	85	76	0	6	0	0
IL	CHICAGO/O'HARE	32	19	45	7	25	3	0.14	-0.24	0.12	4.28	129	2.34	260	75	63	0	7	3	0
	MOLINE	33	15	48	7	24	3	0.15	-0.20	0.12	2.14	70	0.92	110	81	65	0	7	2	0
	PEORIA	37	18	54	6	28	6	0.16	-0.16	0.09	3.12	98	1.63	209	77	59	0	6	3	0
	ROCKFORD	30	14	41	4	22	3	0.29	-0.01	0.22	3.28	118	1.59	221	85	74	0	7	3	0
	SPRINGFIELD	38	20	51	10	29	4	0.12	-0.23	0.05	2.81	82	1.21	136	88	55	0	7	3	0
IN	EVANSVILLE	44	24	55	15	34	3	0.07	-0.56	0.05	8.95	179	1.62	111	77	57	0	6	3	0
	FORT WAYNE	33	19	45	6	26	3	0.27	-0.17	0.14	4.99	130	2.13	199	86	67	0	6	2	0
	INDIANAPOLIS	37	20	50	11	28	2	0.29	-0.26	0.14	6.65	154	2.21	173	87	61	0	6	4	0
	SOUTH BEND	33	19	45	9	26	3	0.25	-0.25	0.12	4.67	109	2.34	195	81	70	0	7	5	0
IA	BURLINGTON	33	14	44	6	24	1	0.00	-0.24	0.00	1.41	51	0.33	51	86	57	0	6	0	0
	CEDAR RAPIDS	30	12	42	4	21	3	0.07	-0.15	0.06	0.80	40	0.12	23	86	63	0	7	2	0
	DES MOINES	39	17	51	6	28	8	0.16	-0.06	0.10	1.15	62	0.34	65	71	55	0	7	3	0
	DUBUQUE	28	9	38	-4	18	1	0.25	-0.03	0.13	1.60	69	0.36	56	91	80	0	7	3	0
	SIOUX CITY	43	14	47	-1	29	11	0.00	-0.14	0.00	0.35	35	0.17	52	72	53	0	7	0	0
	WATERLOO	30	10	40	2	20	4	0.15	-0.02	0.08	1.24	83	0.30	77	81	70	0	7	2	0
KS	CONCORDIA	48	25	53	17	37	11	0.00	-0.16	0.00	0.75	60	0.21	55	74	48	0	6	0	0
	DODGE CITY	54	26	58	19	40	10	0.00	-0.14	0.00	0.56	50	0.08	23	60	23	0	6	0	0
	GOODLAND	52	24	59	15	38	11	0.00	-0.10	0.00	0.16	25	0.11	44	63	34	0	7	0	0
	TOPEKA	48	25	64	16	37	10	0.00	-0.20	0.00	0.90	47	0.34	69	67	37	0	6	0	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 18, 2014

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	54	29	70	21	41	11	0.00	-0.19	0.00	0.71	38	0.11	22	68	43	0	4	0	0
KY	JACKSON	44	26	53	13	35	1	0.64	-0.14	0.28	9.61	158	2.52	138	90	45	0	4	3	0
	LEXINGTON	42	25	51	13	34	2	0.60	-0.15	0.53	7.63	131	2.05	114	87	61	0	5	3	1
	LOUISVILLE	44	26	54	16	35	2	0.31	-0.43	0.23	7.56	140	2.13	125	84	50	0	5	4	0
	PADUCAH	47	24	58	15	36	4	0.00	-0.72	0.00	10.08	166	1.94	115	85	43	0	6	0	0
LA	BATON ROUGE	63	35	69	27	49	-1	0.39	-1.00	0.39	5.20	62	1.48	48	88	26	0	2	1	0
	LAKE CHARLES	64	37	74	31	50	-1	0.94	-0.35	0.92	4.11	55	2.06	72	91	29	0	1	2	1
	NEW ORLEANS	61	41	67	33	51	-1	0.91	-0.36	0.91	5.24	67	2.03	74	80	41	0	0	1	1
	SHREVEPORT	64	33	71	29	48	2	0.09	-0.93	0.08	5.81	85	0.83	36	74	22	0	5	2	0
ME	CARIBOU	37	29	44	19	33	24	0.88	0.20	0.61	6.56	137	2.98	185	94	71	0	5	5	1
	PORTLAND	42	30	51	25	36	14	1.30	0.36	0.93	8.27	129	3.92	182	94	71	0	5	3	1
MD	BALTIMORE	47	27	58	20	37	5	0.28	-0.52	0.28	7.53	145	2.26	123	81	54	0	7	1	0
MA	BOSTON	47	35	54	31	41	12	1.58	0.70	0.79	7.69	134	3.07	154	90	64	0	2	2	2
	WORCESTER	42	31	51	28	36	12	1.05	0.11	0.71	7.35	124	2.93	137	96	66	0	6	3	1
MI	ALPENA	31	22	39	15	27	9	0.29	-0.11	0.16	3.29	119	1.15	122	89	70	0	7	5	0
	GRAND RAPIDS	34	21	43	12	27	5	0.11	-0.33	0.05	4.47	120	1.77	172	83	64	0	7	5	0
	HOUGHTON LAKE	30	21	39	15	26	8	0.33	-0.03	0.14	3.16	122	0.96	116	85	75	0	7	5	0
	LANSING	33	21	44	11	27	5	0.09	-0.24	0.07	3.58	121	1.70	218	77	68	0	7	2	0
	MUSKEGON	34	24	43	16	29	5	0.36	-0.14	0.22	4.54	119	1.84	159	81	70	0	6	5	0
	TRAVERSE CITY	32	24	42	19	28	7	0.35	-0.33	0.29	3.23	77	0.64	42	88	66	0	6	3	0
MN	DULUTH	23	5	34	-5	14	6	0.32	0.08	0.12	3.58	249	0.70	140	80	67	0	7	5	0
	INT'L FALLS	22	-6	39	-19	8	6	0.39	0.21	0.28	3.56	330	2.12	558	87	63	0	7	3	0
	MINNEAPOLIS	28	10	40	-1	19	6	0.55	0.33	0.28	2.15	142	0.69	135	86	69	0	7	5	0
	ROCHESTER	27	8	37	-3	17	6	0.28	0.08	0.14	1.49	101	0.39	87	81	71	0	7	4	0
	ST. CLOUD	27	7	39	-6	17	9	0.70	0.53	0.39	2.62	247	0.85	230	86	62	0	7	4	0
MS	JACKSON	59	30	67	22	44	-1	0.43	-0.86	0.43	6.04	73	1.54	53	79	30	0	5	1	0
	MERIDIAN	57	29	64	19	43	-3	0.52	-0.82	0.52	9.58	115	2.23	75	90	36	0	5	1	1
	TUPELO	54	28	62	19	41	1	0.38	-0.79	0.36	8.00	90	1.82	65	83	42	0	6	3	0
MO	COLUMBIA	44	22	65	14	33	5	0.03	-0.33	0.02	2.61	79	0.90	107	74	43	0	7	2	0
	KANSAS CITY	45	21	61	14	33	6	0.00	-0.25	0.00	1.15	51	0.35	58	67	34	0	7	0	0
	SAINT LOUIS	45	24	59	15	34	5	0.10	-0.37	0.06	3.14	79	1.18	108	68	47	0	7	3	0
	SPRINGFIELD	48	24	67	17	36	5	0.00	-0.44	0.00	3.32	79	0.76	75	64	42	0	7	0	0
MT	BILLINGS	46	30	54	28	38	14	0.03	-0.16	0.02	2.57	234	0.59	137	73	41	0	7	2	0
	BUTTE	42	19	47	9	31	14	0.00	-0.11	0.00	0.32	41	0.10	38	77	38	0	7	0	0
	CUT BANK	46	22	53	6	34	15	0.10	0.02	0.05	0.55	104	0.11	55	85	44	0	7	2	0
	GLASGOW	39	21	42	14	30	20	0.01	-0.06	0.01	0.93	166	0.06	32	86	73	0	7	1	0
	GREAT FALLS	49	25	58	13	37	16	0.18	0.03	0.13	1.39	132	0.45	118	81	35	0	6	2	0
	HAVRE	44	27	48	16	36	22	0.02	-0.09	0.01	1.54	200	0.25	96	76	59	0	6	2	0
	MISSOULA	43	26	48	19	35	12	0.06	-0.18	0.03	1.49	87	0.37	65	89	75	0	7	2	0
NE	GRAND ISLAND	48	23	52	12	35	13	0.00	-0.11	0.00	0.25	27	0.14	54	66	43	0	6	0	0
	LINCOLN	45	19	51	10	32	10	0.00	-0.16	0.00	0.42	34	0.20	53	61	37	0	7	0	0
	NORFOLK	46	18	50	7	32	12	0.00	-0.11	0.00	0.27	30	0.13	50	64	46	0	6	0	0
	NORTH PLATTE	48	16	57	8	32	9	0.00	-0.08	0.00	0.23	38	0.07	35	82	34	0	7	0	0
	OMAHA	43	18	52	9	31	10	0.02	-0.15	0.01	0.31	24	0.11	28	69	45	0	7	2	0
	SCOTTSBLUFF	48	25	54	20	37	13	0.00	-0.11	0.00	0.93	113	0.30	115	68	41	0	7	0	0
	VALENTINE	45	23	51	15	34	14	0.01	-0.05	0.01	0.77	164	0.06	43	77	49	0	7	1	0
NV	ELY	48	16	55	14	32	7	0.00	-0.17	0.00	0.99	114	0.00	0	82	50	0	7	0	0
	LAS VEGAS	68	42	71	39	55	9	0.00	-0.11	0.00	0.05	8	0.00	0	32	21	0	0	0	0
	RENO	54	22	56	19	38	5	0.00	-0.22	0.00	0.41	30	0.00	0	72	54	0	7	0	0
	WINNEMUCCA	50	16	52	12	33	4	0.00	-0.19	0.00	0.63	50	0.02	4	87	64	0	7	0	0
NH	CONCORD	42	27	48	22	35	15	0.87	0.21	0.60	6.49	145	3.10	204	95	67	0	5	2	1
NJ	NEWARK	47	31	54	26	39	8	0.47	-0.46	0.35	6.99	124	2.37	114	84	68	0	6	3	0
NM	ALBUQUERQUE	54	29	59	25	42	7	0.00	-0.11	0.00	0.40	53	0.00	0	47	19	0	6	0	0
NY	ALBANY	42	25	47	18	34	12	0.56	0.01	0.45	5.62	143	2.24	176	87	61	0	7	3	0
	BINGHAMTON	37	25	46	16	31	9	0.48	-0.07	0.31	6.25	145	2.81	220	89	76	0	7	5	0
	BUFFALO	38	26	51	17	32	7	0.37	-0.34	0.26	7.17	131	2.25	135	90	62	0	6	5	0
	ROCHESTER	40	27	53	17	33	9	0.04	-0.48	0.02	3.86	98	0.87	72	80	59	0	6	2	0
	SYRACUSE	41	26	52	20	34	11	0.29	-0.29	0.28	4.37	98	1.48	111	86	61	0	7	2	0
NC	ASHEVILLE	46	24	54	17	35	0	0.12	-0.78	0.12	9.86	183	2.19	110	85	43	0	7	1	0
	CHARLOTTE	53	30	60	23	42	1	0.16	-0.75	0.08	9.93	191	2.80	138	84	38	0	4	2	0
	GREENSBORO	51	30	58	26	40	3	0.34	-0.46	0.27	8.89	183	3.70	207	76	42	0	5	3	0
	HATTERAS	59	40	67	35	49	3	0.84	-0.54	0.83	8.00	105	4.10	133	93	57	0	0	2	1
	RALEIGH	54	32	62	27	43	4	0.37	-0.55	0.30	7.61	150	1.70	84	81	54	0	3	2	0
	WILMINGTON	59	35	67	28	47	1	0.34	-0.70	0.29	3.83	63	2.10	91	91	46	0	3	3	0
ND	BISMARCK	38	13	43	2	25	15	0.01	-0.07	0.01	1.32	206	0.06	30	78	64	0	7	1	0
	DICKINSON	36	20	41	16	28	14	0.00	-0.06	0.00	0.40	83	0.02	14	84	63	0	7	0	0
	FARGO	30	4	40	-13	17	11	0.59	0.42	0.23	2.15	224	0.94	241	85	70	0	7	6	0
	GRAND FORKS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	JAMESTOWN	35	7	41	-6	21	13	0.08	-0.06	0.04	0.74	100	0.11	37	93	68	0	7	4	0
	WILLISTON	39	19	44	10	29	22	0.02	-0.09	0.02	1.23	148	0.16	62	78	61	0	7	1	0
OH	AKRON-CANTON	37	23	49	10	30	5	0.11	-0.44	0.08	4.89	114	1.40	108	79	63	0	5	3	0
	CINCINNATI	39	23	52	10	31	2	0.32	-0.33	0.16	7.15	149	2.23	146	84	67	0	5	5	0
	CLEVELAND	37	26	49	11	32	6	0.30	-0.25	0.13	5.59	126	1.49	116	80	56	0	4	4	0
	COLUMBUS	38	25	50	11	31	3	0.45	-0.10	0.24	6.23	148	1.93	151	79	62	0	4	4	0
	DAYTON	37	21	51	6	29	3	0.32	-0.26	0.13	6.63	150	2.05	152	86	62	0	6	4	0
	MANSFIELD	35	21	49	5	28	4	0.35	-0.23	0.20	5.65	122	1.58	115	92	62	0	6	4	0

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

Weather Data for the Week Ending January 18, 2014

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	33	20	47	3	27	3	0.32	-0.09	0.21	10.50	289	7.43	751	85	69	0	6	5	0
	YOUNGSTOWN	36	24	49	9	30	5	0.51	-0.01	0.24	5.50	132	1.98	162	77	63	0	5	6	0
OK	OKLAHOMA CITY	60	33	75	25	47	11	0.00	-0.29	0.00	1.32	50	0.06	8	53	22	0	2	0	0
	TULSA	57	32	72	24	45	9	0.00	-0.35	0.00	1.92	59	0.14	17	52	35	0	4	0	0
OR	ASTORIA	52	41	54	35	46	4	0.47	-1.70	0.41	9.20	60	4.20	85	91	81	0	0	2	0
	BURNS	47	17	51	10	32	8	0.00	-0.25	0.00	0.41	21	0.20	33	87	70	0	7	0	0
	EUGENE	43	35	56	32	39	0	0.18	-1.53	0.18	3.22	26	1.74	45	98	94	0	2	1	0
	MEDFORD	40	33	45	28	36	-2	0.03	-0.52	0.02	0.89	21	0.53	42	98	89	0	4	2	0
	PENDLETON	48	32	58	22	40	7	0.00	-0.31	0.00	1.18	54	0.38	54	81	70	0	4	0	0
	PORTLAND	48	38	56	29	43	3	0.30	-0.83	0.30	3.62	44	2.00	77	96	89	0	1	1	0
	SALEM	45	36	54	32	40	0	0.41	-0.89	0.41	2.89	31	1.62	55	95	91	0	2	1	0
PA	ALLENTOWN	43	25	55	18	34	7	0.46	-0.34	0.38	13.82	266	9.78	540	88	64	0	6	2	0
	ERIE	39	26	51	12	32	5	0.54	-0.02	0.24	7.92	156	1.96	144	74	56	0	6	4	0
	MIDDLETOWN	42	23	50	18	32	3	0.29	-0.32	0.24	5.84	126	2.10	150	90	54	0	7	2	0
	PHILADELPHIA	47	29	57	23	38	6	0.17	-0.63	0.17	7.47	145	2.27	124	82	57	0	5	1	0
	PITTSBURGH	39	23	55	11	31	4	0.48	-0.13	0.30	4.73	112	1.47	107	88	57	0	7	4	0
	WILKES-BARRE	42	26	51	20	34	8	0.41	-0.13	0.26	5.34	142	2.00	164	89	62	0	6	3	0
	WILLIAMSPORT	40	24	49	16	32	7	0.23	-0.39	0.14	4.82	111	1.18	85	85	59	0	7	4	0
RI	PROVIDENCE	47	32	53	28	40	11	1.41	0.42	0.78	8.26	129	3.44	153	90	66	0	5	3	2
SC	BEAUFORT	61	36	68	33	48	0	0.47	-0.46	0.44	4.61	89	1.83	88	83	34	0	0	2	0
	CHARLESTON	62	36	68	31	49	1	0.60	-0.34	0.60	4.23	79	2.08	99	81	36	0	2	1	1
	COLUMBIA	60	32	78	28	46	2	0.20	-0.86	0.12	9.11	159	3.23	137	83	44	0	5	2	0
	GREENVILLE	53	30	62	23	42	1	0.25	-0.74	0.15	9.77	160	3.10	137	78	37	0	5	2	0
SD	ABERDEEN	36	5	42	-11	21	11	0.03	-0.08	0.01	0.93	145	0.05	19	84	71	0	7	3	0
	HURON	38	12	41	1	25	11	0.06	-0.05	0.05	1.20	194	0.17	74	83	64	0	7	2	0
	RAPID CITY	46	22	54	16	34	12	0.12	0.05	0.09	0.75	127	0.19	100	77	43	0	7	2	0
	SIOUX FALLS	37	11	40	-2	24	10	0.13	0.02	0.13	1.32	171	0.19	76	79	65	0	6	1	0
TN	BRISTOL	44	24	53	18	34	0	0.22	-0.56	0.17	7.93	154	1.59	90	81	40	0	7	3	0
	CHATTANOOGA	50	28	59	20	39	0	0.44	-0.78	0.36	10.25	136	2.27	83	78	45	0	5	2	0
	KNOXVILLE	47	28	55	20	38	1	0.46	-0.59	0.34	11.09	161	2.87	120	80	42	0	5	2	0
	MEMPHIS	54	29	62	20	41	2	0.49	-0.43	0.49	7.98	102	3.16	146	74	37	0	5	1	0
	NASHVILLE	49	28	58	16	39	3	0.93	0.04	0.89	10.58	160	2.60	126	84	36	0	5	3	1
TX	ABILENE	65	35	77	25	50	7	0.00	-0.20	0.00	1.11	62	0.00	0	51	24	0	2	0	0
	AMARILLO	57	29	71	21	43	8	0.00	-0.14	0.00	0.35	36	0.03	9	62	20	0	6	0	0
	AUSTIN	68	30	74	25	49	-1	0.00	-0.41	0.00	1.27	37	0.41	40	60	28	0	5	0	0
	BEAUMONT	67	37	75	34	52	0	0.29	-1.04	0.26	2.30	28	1.01	33	90	26	0	0	2	0
	BROWNSVILLE	76	48	83	43	62	3	0.03	-0.25	0.03	3.69	217	0.17	29	92	58	0	0	1	0
	CORPUS CHRISTI	74	41	78	35	58	2	0.01	-0.32	0.01	0.94	37	0.65	81	85	41	0	0	1	0
	DEL RIO	71	37	76	29	54	3	0.00	-0.09	0.00	0.48	49	0.00	0	60	26	0	2	0	0
	EL PASO	63	32	68	27	48	3	0.00	-0.08	0.00	0.26	26	0.00	0	37	15	0	5	0	0
	FORT WORTH	65	37	74	32	51	7	0.00	-0.41	0.00	3.10	85	0.34	32	62	21	0	1	0	0
	GALVESTON	65	47	73	43	56	0	0.73	-0.21	0.65	1.55	28	0.90	43	95	43	0	0	2	1
	HOUSTON	68	37	74	32	52	1	0.24	-0.59	0.24	2.23	40	0.57	30	79	29	0	1	1	0
	LUBBOCK	61	25	76	18	43	5	0.00	-0.08	0.00	0.60	67	0.00	0	60	25	0	6	0	0
	MIDLAND	65	34	78	26	49	6	0.00	-0.11	0.00	1.44	158	0.00	0	55	28	0	3	0	0
	SAN ANGELO	67	32	74	26	49	4	0.00	-0.15	0.00	1.15	88	0.00	0	54	26	0	5	0	0
	SAN ANTONIO	71	38	76	34	55	5	0.00	-0.36	0.00	0.67	24	0.12	14	71	26	0	0	0	0
	VICTORIA	72	39	77	36	56	3	0.00	-0.55	0.00	1.25	33	0.80	63	84	40	0	0	0	0
	WACO	66	31	71	28	49	3	0.00	-0.39	0.00	1.62	43	0.28	28	72	28	0	5	0	0
	WICHITA FALLS	64	34	80	29	49	9	0.00	-0.23	0.00	1.30	57	0.01	2	49	25	0	3	0	0
UT	SALT LAKE CITY	43	25	52	18	34	5	0.14	-0.16	0.14	2.25	117	0.58	84	87	55	0	5	1	0
VT	BURLINGTON	44	28	53	19	36	18	0.38	-0.12	0.26	4.73	142	2.19	196	85	63	0	5	3	0
VA	LYNCHBURG	48	25	57	18	36	2	0.38	-0.42	0.27	8.90	177	3.21	177	80	45	0	7	3	0
	NORFOLK	54	33	62	24	43	3	0.37	-0.52	0.36	7.09	141	2.34	118	86	52	0	3	2	0
	RICHMOND	52	32	61	24	42	6	1.05	0.23	0.98	9.02	180	2.91	155	85	62	0	3	3	1
	ROANOKE	47	26	54	21	37	2	0.14	-0.57	0.13	6.04	136	1.66	104	77	47	0	7	2	0
	WASH/DULLES	46	28	56	20	37	5	0.18	-0.51	0.16	7.70	166	2.12	134	80	62	0	5	3	0
WA	OLYMPIA	47	38	51	31	42	4	0.59	-1.10	0.41	5.59	48	3.57	93	99	94	0	1	2	0
	QUILLAYUTE	55	38	64	33	47	7	0.92	-2.12	0.80	15.52	72	9.36	135	89	83	0	0	2	1
	SEATTLE-TACOMA	49	41	52	33	45	4	0.06	-1.09	0.06	4.05	49	2.39	92	88	82	0	0	1	0
	SPOKANE	39	29	46	25	34	7	0.00	-0.40	0.00	1.12	35	0.44	47	93	73	0	4	0	0
	YAKIMA	52	28	61	18	40	11	0.00	-0.25	0.00	0.42	21	0.10	16	77	67	0	5	0	0
WV	BECKLEY	45	25	66	12	35	5	0.37	-0.35	0.17	7.74	164	1.38	84	72	52	0	5	5	0
	CHARLESTON	45	25	58	16	35	2	0.49	-0.23	0.22	8.22	166	1.98	122	92	46	0	6	4	0
	ELKINS	41	20	59	9	31	2	0.40	-0.37	0.18	7.91	152	1.64	94	87	50	0	7	5	0
	HUNTINGTON	44	27	53	15	35	3	0.46	-0.26	0.27	7.45	148	1.90	115	82	47	0	4	3	0
WI	EAU CLAIRE	27	7	41	-5	17	6	0.15	-0.07	0.13	1.72	113	0.19	39	89	64	0	7	3	0
	GREEN BAY	28	14	39	-5	21	6	0.41	0.15	0.31	2.61	131	0.72	122	89	73	0	7	3	0
	LA CROSSE	29	10	43	-1	20	5	0.37	0.12	0.19	1.99	112	0.47	85	87	59	0	7	3	0
	MADISON	29	14	41	1	22	5	0.20	-0.05	0.09	1.98	88	0.36	61	83	70	0	7	3	0
	MILWAUKEE	31	17	44	8	24	4	0.11	-0.28	0.05	2.60	83	0.81	90	84	71	0	7	3	0
WY	CASPER	38	19	43	11	28	6	0.26	0.15	0.26	1.82	207	0.62	238	73	57	0	7	1	0
	CHEYENNE	43	24	49	20	34	8	0.04	-0.04	0.04	0.69	105	0.19	95	57	39	0	7	1	0
	LANDER	44	21	51	19	33	13	0.00	-0.11	0.00	1.16	133	0.47	181	77	33	0	7	0	0
	SHERIDAN	43	22	50	19	33	12	0.17	0.00	0.12	1.56	146	0.44	113	73	50	0	7	2	0

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

December U.S. Weather in Historical Perspective

Summary provided by USDA/WAOB from information issued by NOAA's National Climatic Data Center

According to preliminary information provided by NOAA's National Climatic Data Center, the nation experienced its 21st-coldest, 54th-driest December during the 119-year period of record. The nation's average temperature of 30.9°F was 2.0°F below the 1901-2000 mean, while the average precipitation of 2.17 inches was 97 percent of normal. It was the nation's coldest December since 2009, and driest December since 2005.

Cold weather covered the western and central U.S., with Minnesota (eighth-coldest December) and North Dakota (ninth) ranking in the top ten. Florida, in contrast, experienced its sixth-warmest December (figure 1). Meanwhile, acute dryness in the Pacific Coast States led to the second-driest December in California, third driest in Oregon, and sixth driest in Washington (figure 2). On the flip side, top-ten December wetness affected six states (AL, GA, ND, OH, VA, and WV).

Figure 1

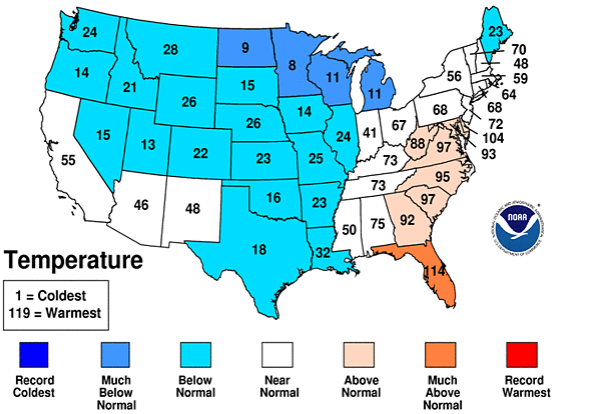
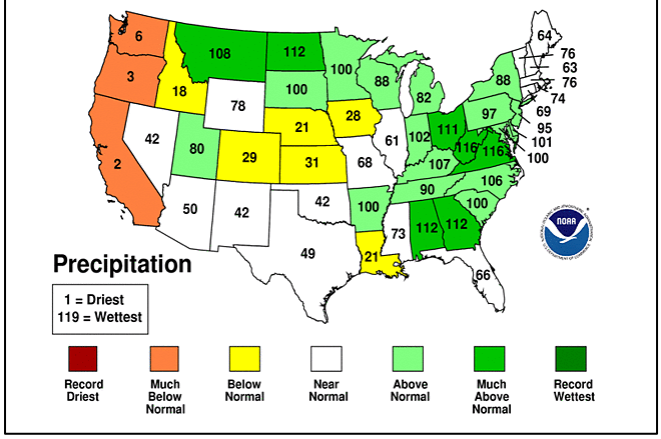
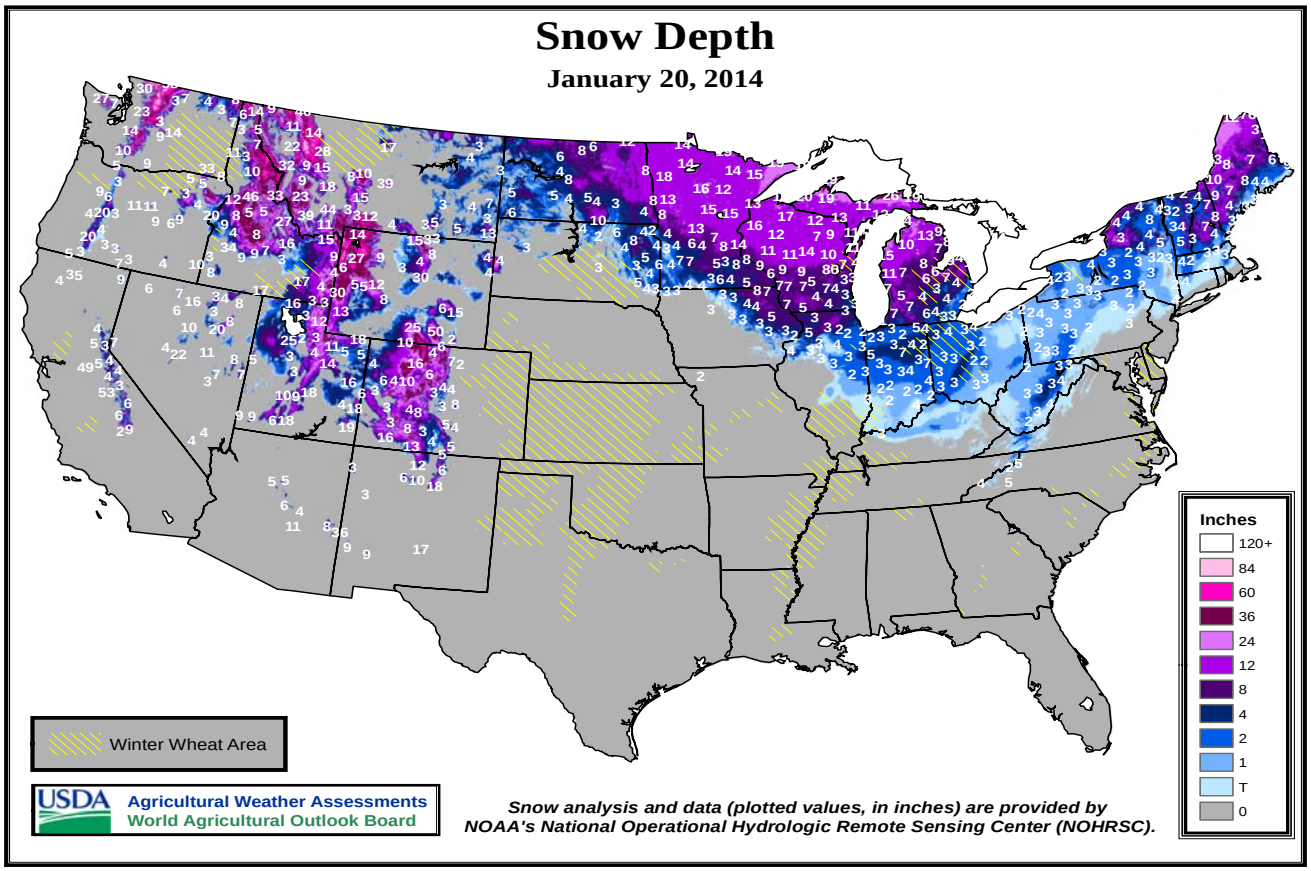


Figure 2





National Agricultural Summary

January 13 - 19, 2014

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Precipitation was very light across the nation, with most locations recording less than an inch. Temperatures were generally mild, except in the Southeast, where readings averaged as much as 5°F below normal.

A stubborn ridge of high pressure maintained its grip on the West Coast, resulting in dry, unseasonably warm weather in California. This pattern, combined with a surface based high-pressure center located over the Great Bsin, resulted in an offshore wind pattern that developed into a moderate Santa Ana wind episode across southern California. Grain growers reported crop loss due to the December freeze and have no plans to replant. Small grains were irrigated and treated with herbicides. Non-irrigated silage and wheat plantings continue to suffer from drought and have not germinated. Alfalfa fields remained dormant. Navel orange and lemon harvest was ongoing. Farmers continued to prune kiwi and grape vines. Pre-emergent sprays were applied to stone fruit trees. The irrigation of permanent crops continued. Almond buds began to swell. Almond, walnut, and pistachio orchards needed irrigation due to existing drought. Tree removals were ongoing and land was prepared for tree planting. Range and non-irrigated pasture remained in poor to fair condition. Drought persisted across most of the state, with extreme conditions in much of the San Joaquin Valley and Central Coast. Livestock supplemental feeding of hay and grain continued. Sheep grazed some alfalfa fields. Bees were moved in preparation for the imminent almond pollination.

In Arizona, the cotton harvest was virtually complete. Alfalfa condition was rated very poor to good, depending on location. Central Arizona growers shipped Bok Choy, broccoli, red and green cabbage, Chinese cabbage, kale, lemons, cilantro, and parsley. Western Arizona growers shipped anise, arugula, broccoli, Bok Choy, green and red cabbage, cauliflower, celery, Chinese cabbage, cilantro, endive, escarole, frisee, kale, parsley, radicchio, spinach, and various lettuce including Boston, iceberg, romaine, and green and red leaf lettuce. Warm weather continues but is depleting moisture. Range and pastures were rated very poor to good, depending on location.

Warmer weather returned Texas. Small areas of the Northern High Plains, Blacklands, and South East Texas received traces of precipitation, but most of the state remained dry. Areas from North East Texas to the Upper Coast are 1 to 2 inches below normal precipitation levels for the year to date. Producers in the Cross Timbers reported frost damage to a number of oat fields during the last hard freeze. The remaining oat crop needs more moisture and warmer days and nights for adequate development. Winter wheat is starting to show some signs of becoming dormant due to cold weather. Preparations for corn and sorghum plantings were underway. Producers were beginning the cultivation and pre-plant fertilization in fields. Most of the cotton harvest was completed and the majority had been ginned. Producers in South Texas resumed cabbage harvest, as additional fields matured. Farmers in the Lower Valley continued to harvest vegetables and citrus. Ranchers on the Northern High Plains reported cattle getting good gains off of winter wheat. Range and pasture conditions continued to deteriorate; without any rain in coming weeks, fire danger will become a concern.

The majority of Florida reported less than an inch of rain. Maximum temperatures ranged from the 60s into the 80s degrees F. Farmers in the Panhandle were planting winter cover crops. Rain was beneficial to earlier plantings. Sugarcane harvest proceeded as scheduled in Hendry, Palm Beach, and Glades counties. Potatoes were being planted in Saint Johns County. Cabbage was harvested in Okeechobee County. Some losses on vegetables and strawberries were reported in Bradford County due to frost and low temperatures. The southern part of the state reported some damage in colder areas with frosted tops on plants. Rain was light in most of the citrus area last week. Growers and caretakers continued to irrigate due to dry conditions. Field workers reported small sizes on all 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. Cattle condition was fair to good, as was the pasture condition. Cattlemen were feeding hay and supplements across the state. Cold weather and frost contributed to the pasture decline. Drought was the main contributing factor for the poor pasture condition in central and southern parts of the state.

January 9 ENSO Update

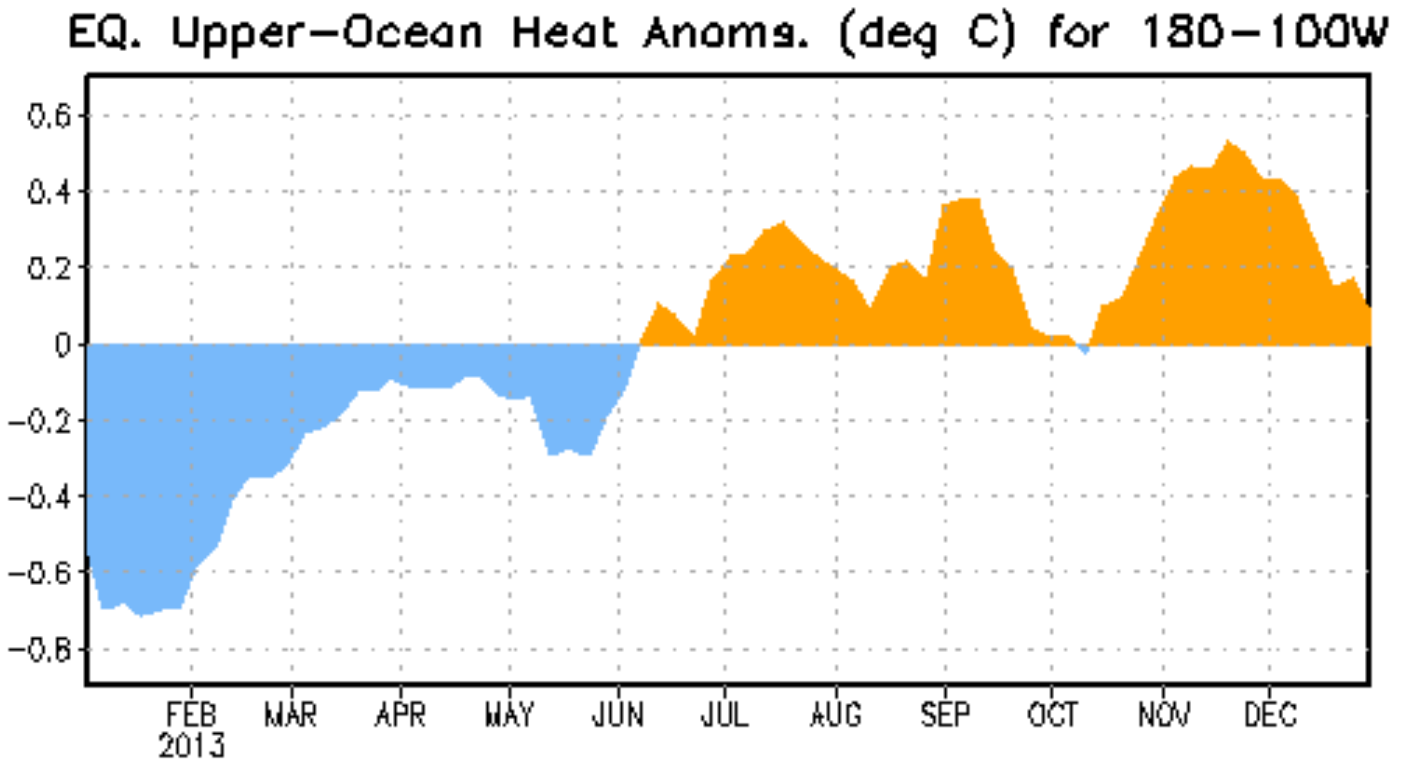


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180º-100ºW). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

Synopsis: ENSO-neutral is expected to continue into the Northern Hemisphere summer 2014.

During December, ENSO-neutral persisted, as reflected by near-average sea surface temperatures (SST) across much of the equatorial Pacific Ocean. The Nino indices in all of the regions were within ±0.5°C and showed only small changes during the month. The oceanic heat content (average temperature in the upper 300m of the ocean) decreased but remained above average (Fig. 1), following the passing of a downwelling oceanic Kelvin wave that had raised the sub-surface temperatures in November. Also in December, slightly enhanced low-level trade winds were observed in the western tropical Pacific Ocean, while enhanced upper level westerly winds prevailed in portions of the eastern half of the basin. Convection was suppressed in the central equatorial Pacific and enhanced over Indonesia. Collectively, these atmospheric and oceanic conditions reflect ENSO-neutral.

The majority of models predict that ENSO-neutral (Niño-3.4 index between -0.5°C and 0.5°C) will persist into the Northern Hemisphere summer 2014. While current forecast probabilities are still greatest for ENSO-neutral during summer, there is an increasing chance for the development of El Niño. The consensus forecast is for ENSO-neutral to continue into the Northern Hemisphere summer 2014 (see CPC/IRI consensus forecast).

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 for the evolution of El Niño/La Niña are updated monthly in the Forecast Forum section of CPC's Climate Diagnostics Bulletin. The next ENSO Diagnostics Discussion is scheduled for 6 February 2014. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

International Weather and Crop Summary

January 12-18, 2014

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

HIGHLIGHTS

EUROPE: Warm, showery weather persisted over the continent, keeping primary northern growing areas devoid of a protective snow cover but maintaining otherwise favorable conditions for winter crops.

WESTERN FSU: Spring-like warmth lingered, keeping key crop areas devoid of snow cover, although colder weather along with some snow arrived by week's end.

MIDDLE EAST: Unfavorable dryness maintained concerns for poorly-established Turkish winter grains, while unseasonably wet conditions prevailed in the south.

NORTHWEST AFRICA: Moderate to locally heavy rain returned to the region, boosting soil moisture reserves for vegetative winter wheat and barley.

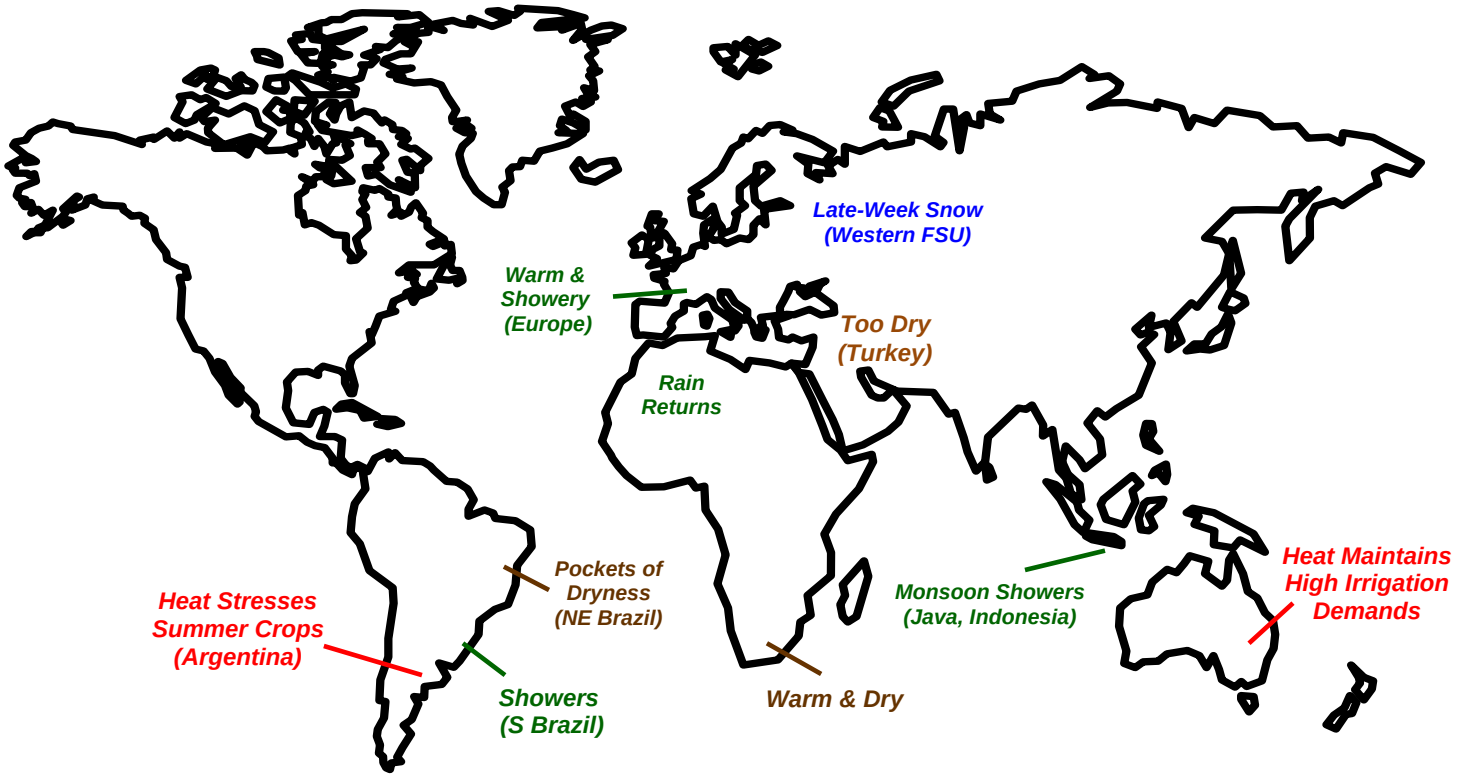
SOUTHEAST ASIA: Monsoon showers maintained favorable moisture supplies for reproductive rice in Java, Indonesia, although flooding persisted in western areas.

AUSTRALIA: Major cotton and sorghum areas escaped the extreme heat that impacted southern Australia, but hot, unfavorably dry weather maintained high irrigation demands nevertheless.

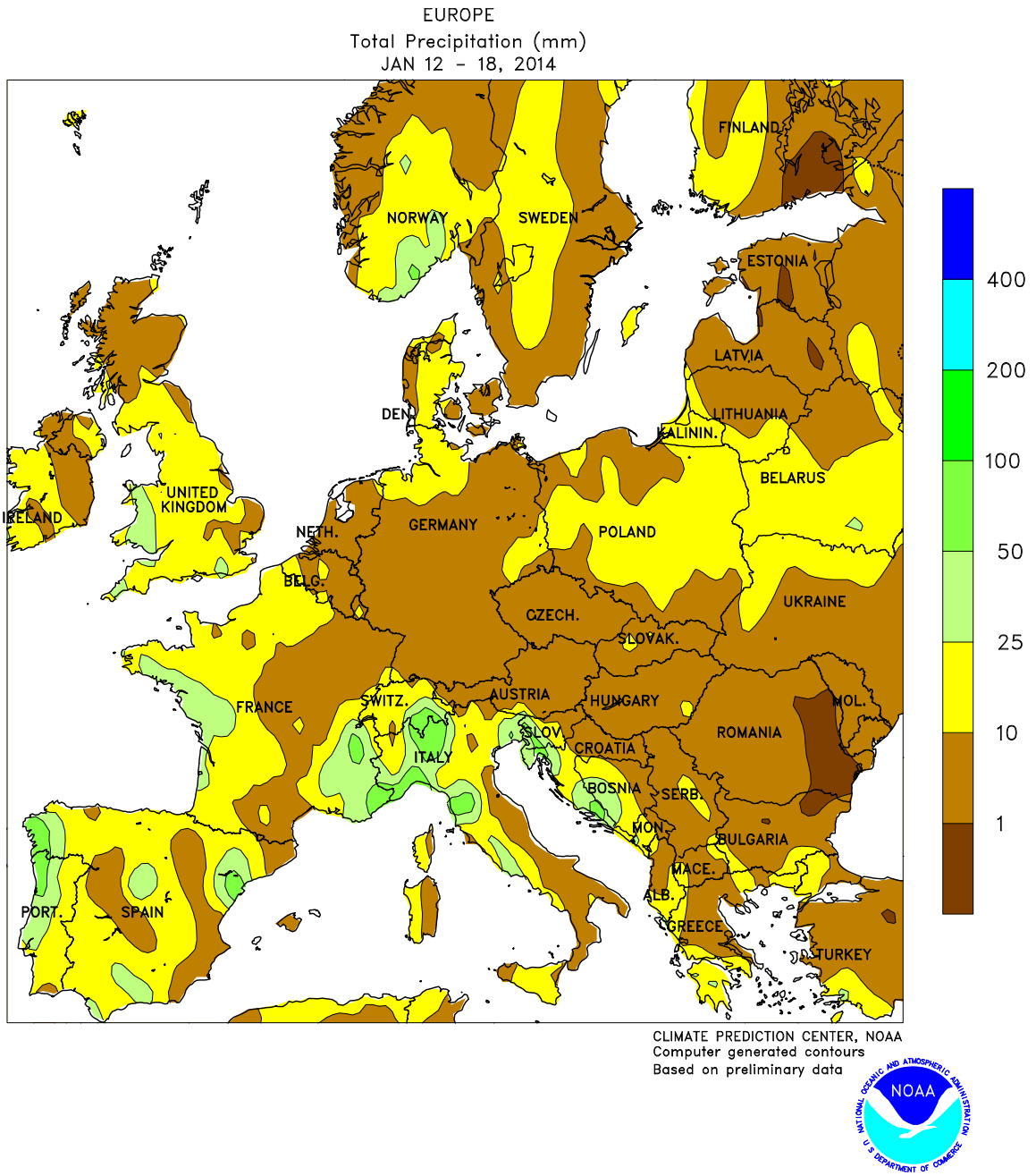
SOUTH AFRICA: Unseasonable warmth and dryness reduced moisture for vegetative to reproductive corn.

ARGENTINA: Heat and dryness stressed summer row crops in or nearing reproduction.

BRAZIL: Showers improved moisture levels for southern corn and soybeans, but pockets of dryness lingered in cotton and soybean areas of northeastern Brazil.



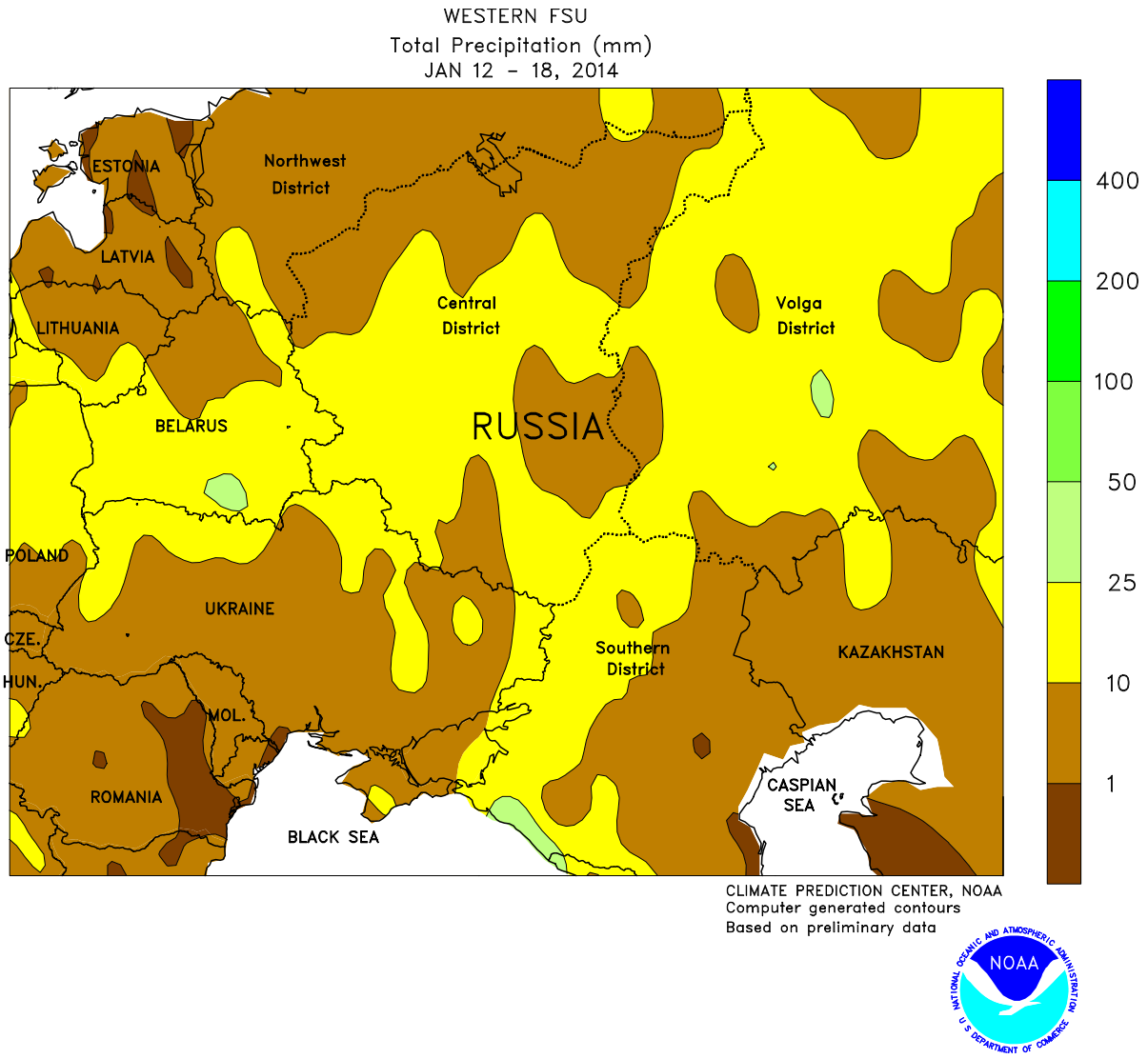
For additional information contact: mbrusberg@oce.usda.gov



EUROPE

Unseasonably warm, showery weather prevailed across the continent, providing mostly favorable conditions for dormant to vegetative winter crops. A series of Atlantic disturbances generated light to moderate rain (2-30 mm) across northern Europe, maintaining adequate to abundant moisture reserves for dormant winter wheat and rapeseed but keeping crops devoid of a protective snow cover. By week's end, however, colder weather returned to Poland and the Baltic States, causing some of the precipitation to fall as snow. In contrast, unfavorable dryness persisted across the Balkans, where precipitation over the past 90 days has totaled less than 50 percent of normal (locally less than 25 percent). Meanwhile, increasingly stormy weather developed across Spain and Italy, where locally heavy rain and mountain snow (10-50 mm liquid equivalent, with locally higher totals in the mountains) boosted soil moisture for vegetative winter grains and increased reservoir levels for irrigated summer crops. Temperatures averaged 2 to 5°C above normal across much of central and southern Europe, while temperatures averaged closer to normal in northern-most crop districts.

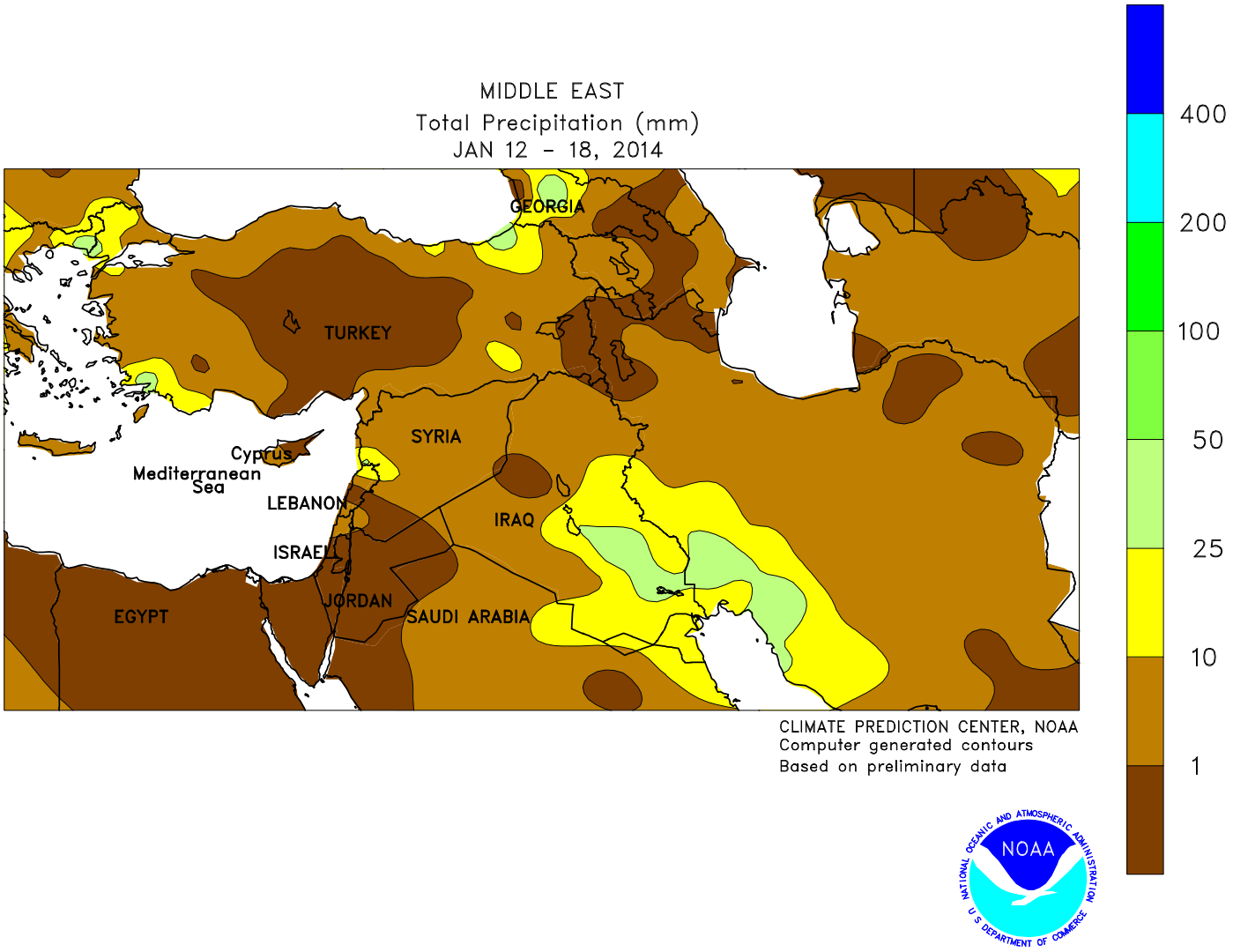
For additional information contact: mbrusberg@oce.usda.gov



WESTERN FSU

Spring-like warmth lingered, maintaining favorable conditions for winter wheat but leaving the region uncharacteristically devoid of snow cover. Temperatures averaged 2 to 6°C above normal, with daytime highs reaching 5 to 10°C from southern Ukraine into southern Russia; these values represent high temperatures typically observed in mid- to late-March. By week's end, notably colder weather arrived in the region, with snow falling in northern-most winter wheat districts. However, precipitation continued to mostly bypass key southern wheat areas, depleting soil moisture reserves.

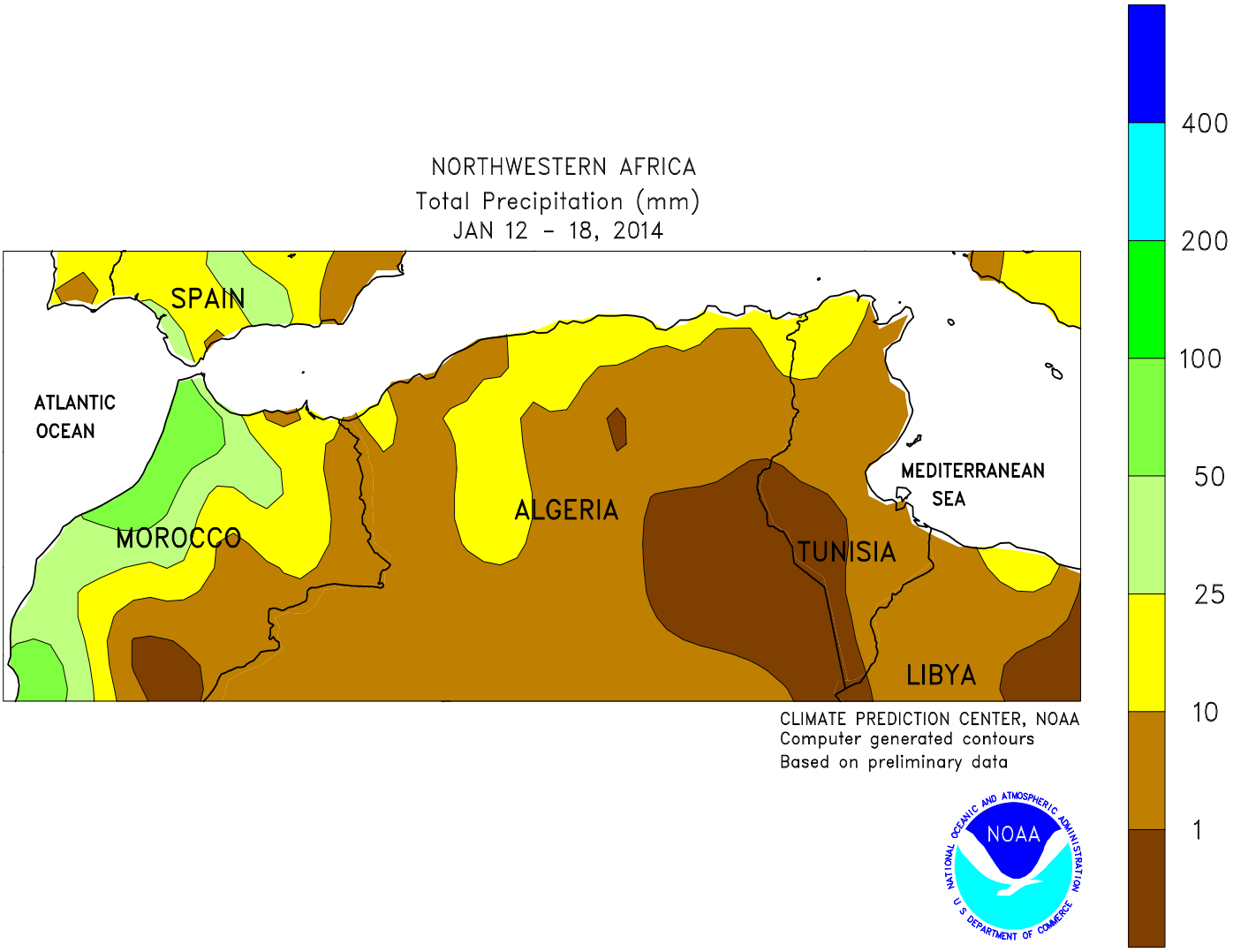
For additional information contact: mbrusberg@oce.usda.gov



MIDDLE EAST

Stormy weather across southern growing areas contrasted with unfavorably dry, warm conditions in the north. A pair of storms generated widespread rain and mountain snow (10-50 mm liquid equivalent, locally more) from central and southern Iraq into central and southwestern Iran. The moisture was beneficial for winter wheat and barley and further recharged irrigation reserves for warm-season crops. Meanwhile, dry, mild weather (2-4°C above normal) prevailed in Turkey, melting the remnants of the protective snow cover on the Anatolian Plateau. Concerns continued in this key Turkish winter grain area, where wheat and barley were poorly established following an unfavorably dry autumn and an abrupt cold snap in early December. In addition, precipitation in central Turkey has totaled locally less than 25 percent of normal since early September, depleting soil moisture reserves for spring growth.

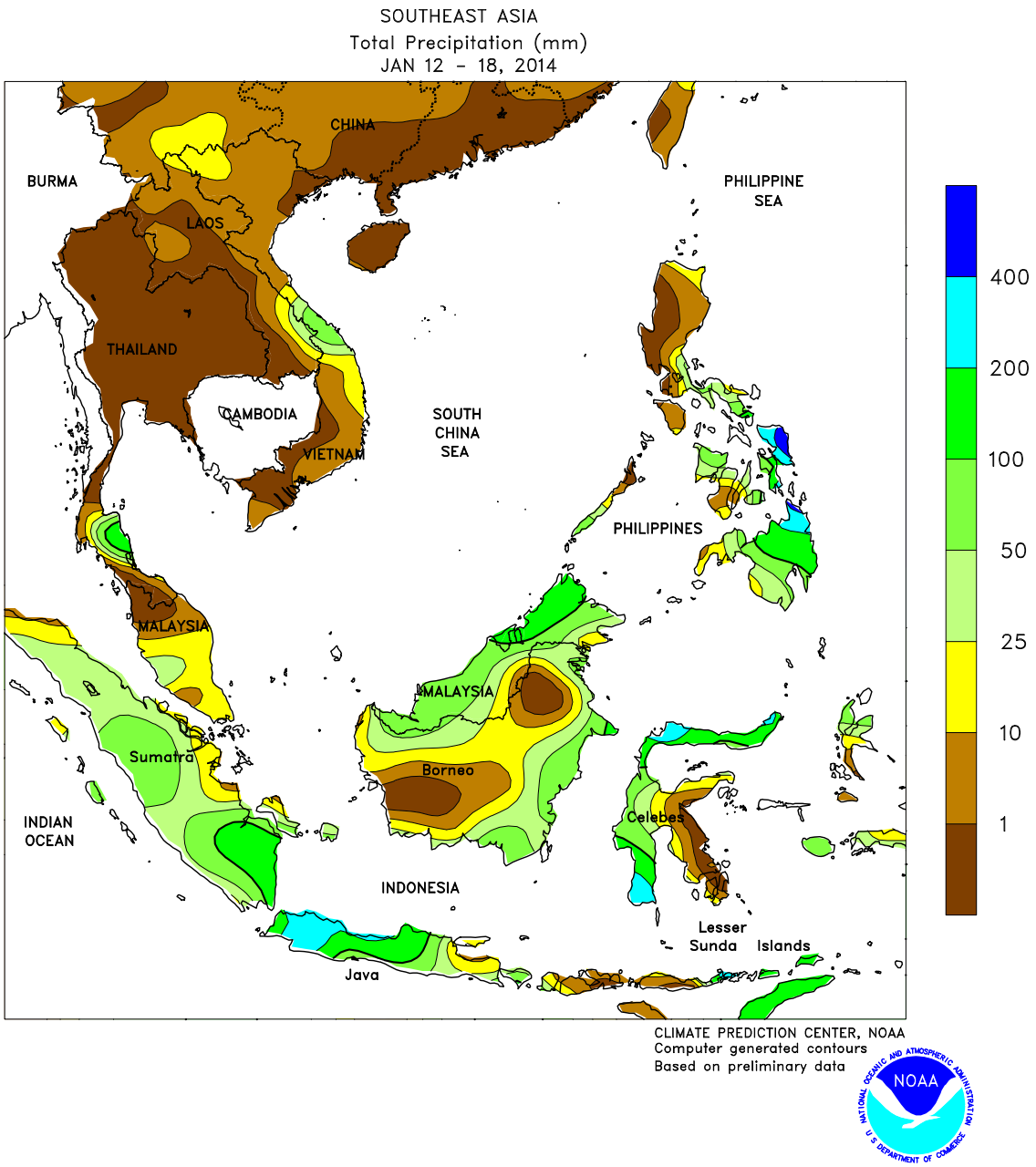
For additional information contact: mbrusberg@oce.usda.gov



NORTHWESTERN AFRICA

Wet weather returned to the region, maintaining mostly favorable conditions for vegetative winter crops. In Morocco, a late-week storm generated 10 to locally more than 50 mm of rain, maintaining favorable moisture in the north and improving crop prospects in the previously-dry southern portions of the country. Meanwhile, showers (10-25 mm) returned to Algeria and Tunisia, maintaining adequate to abundant soil moisture for vegetative wheat and barley.

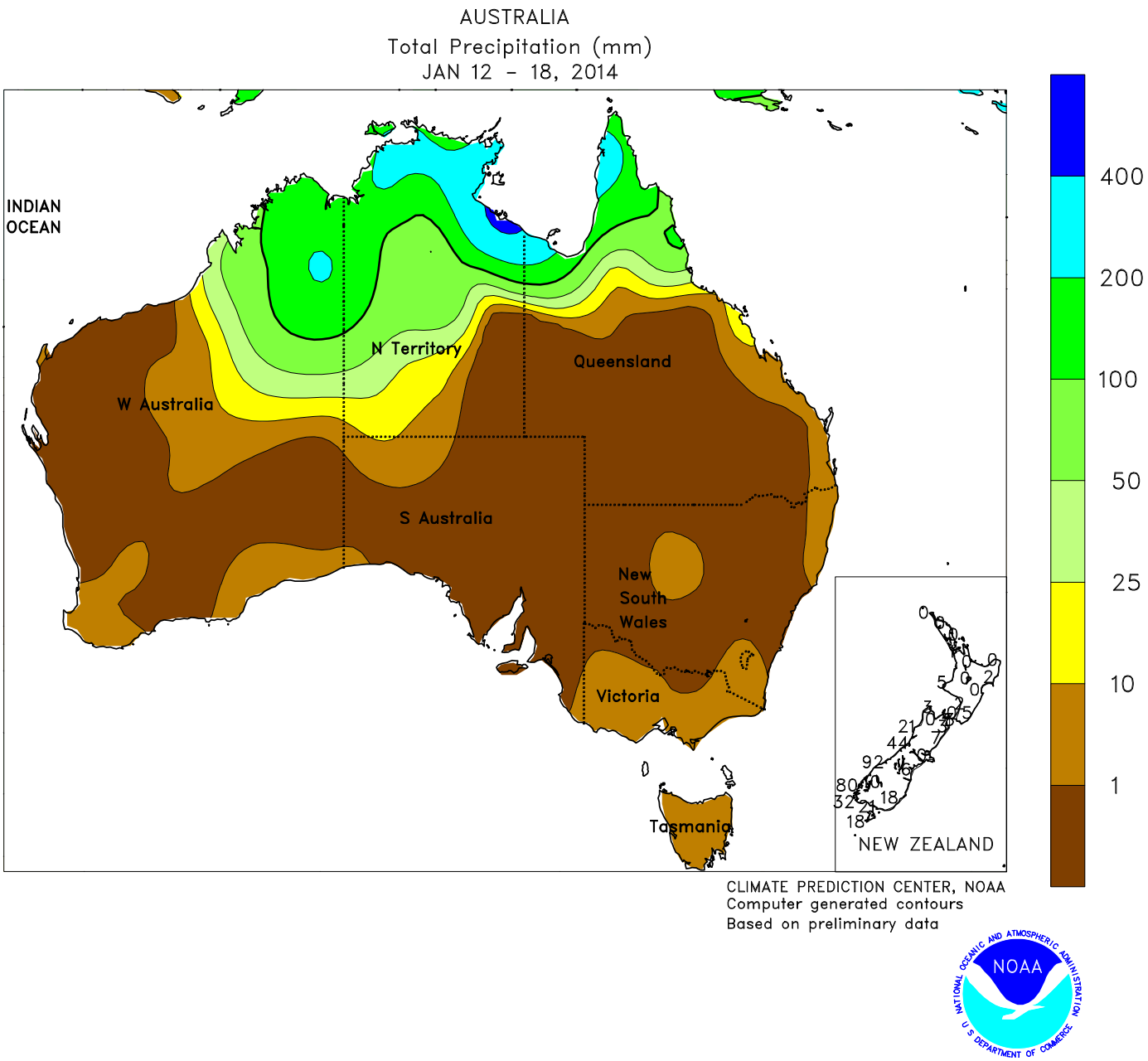
For additional information contact: mbrusberg@oce.usda.gov



SOUTHEAST ASIA

Heavy showers (100-400 mm) continued across western Java, Indonesia, maintaining localized flooding in areas that have received nearly 500 mm of rain since January 1. Rice in the remainder of Java benefited from consistent monsoon rains, with moisture surpluses existing in most major growing areas. In neighboring oil palm areas in Indonesia and Malaysia, lighter showers (25-125 mm) eased excessive wetness and allowed harvest activities to resume, particularly in parts of Sumatra, Indonesia. In the Philippines, more seasonable rainfall (100-200 mm) prevailed in Mindanao, easing the flooding but still maintaining excessive soil moisture for corn. The heavy showers moved northward, bringing upwards of 500 mm to the east-central islands which renewed flooding in some minor rice areas. The northern Philippines were seasonably drier than in previous weeks, aiding fieldwork and promoting rice development.

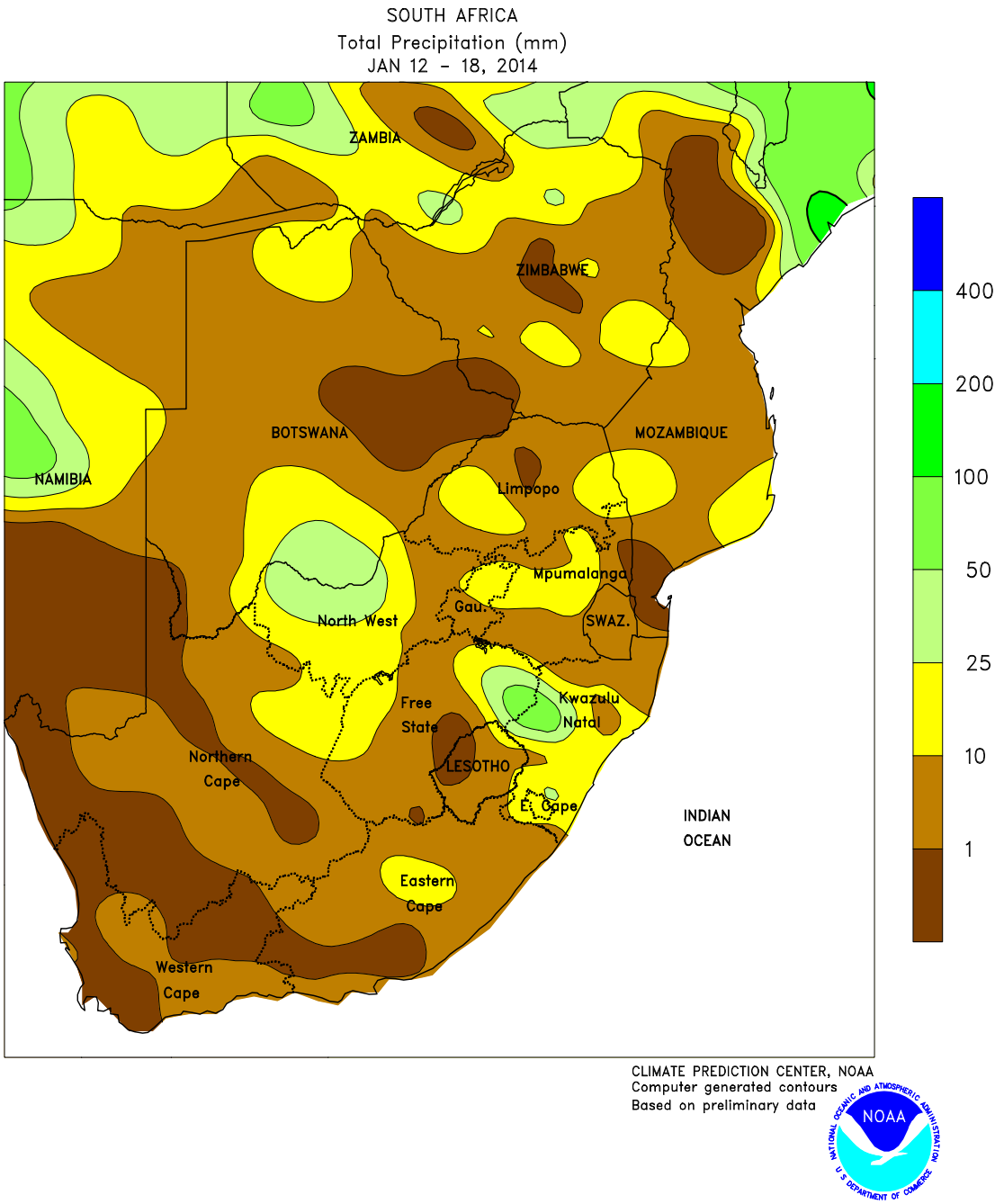
For additional information contact: mbrusberg@oce.usda.gov



AUSTRALIA

Major summer crop areas in northern New South Wales and southern Queensland escaped the extreme heat that baked southern Australia, but seasonably hot, unfavorably dry weather maintained high irrigation demands. Temperatures averaged near normal in northern New South Wales and southern Queensland, with maximum temperatures generally in the lower to middle 30s degrees C. More rain is needed across portions of this region to maintain yield prospects for dryland crops. Elsewhere, very hot weather enveloped southern and western Australia, where daily maximum temperatures ranged from 40 to 45°C in many locations throughout the week. Although the hottest weather remained south of major cotton and sorghum growing areas in eastern Australia, summer crop growing areas in southern New South Wales and western Victoria were impacted by the extreme heat, potentially reducing local crop prospects.

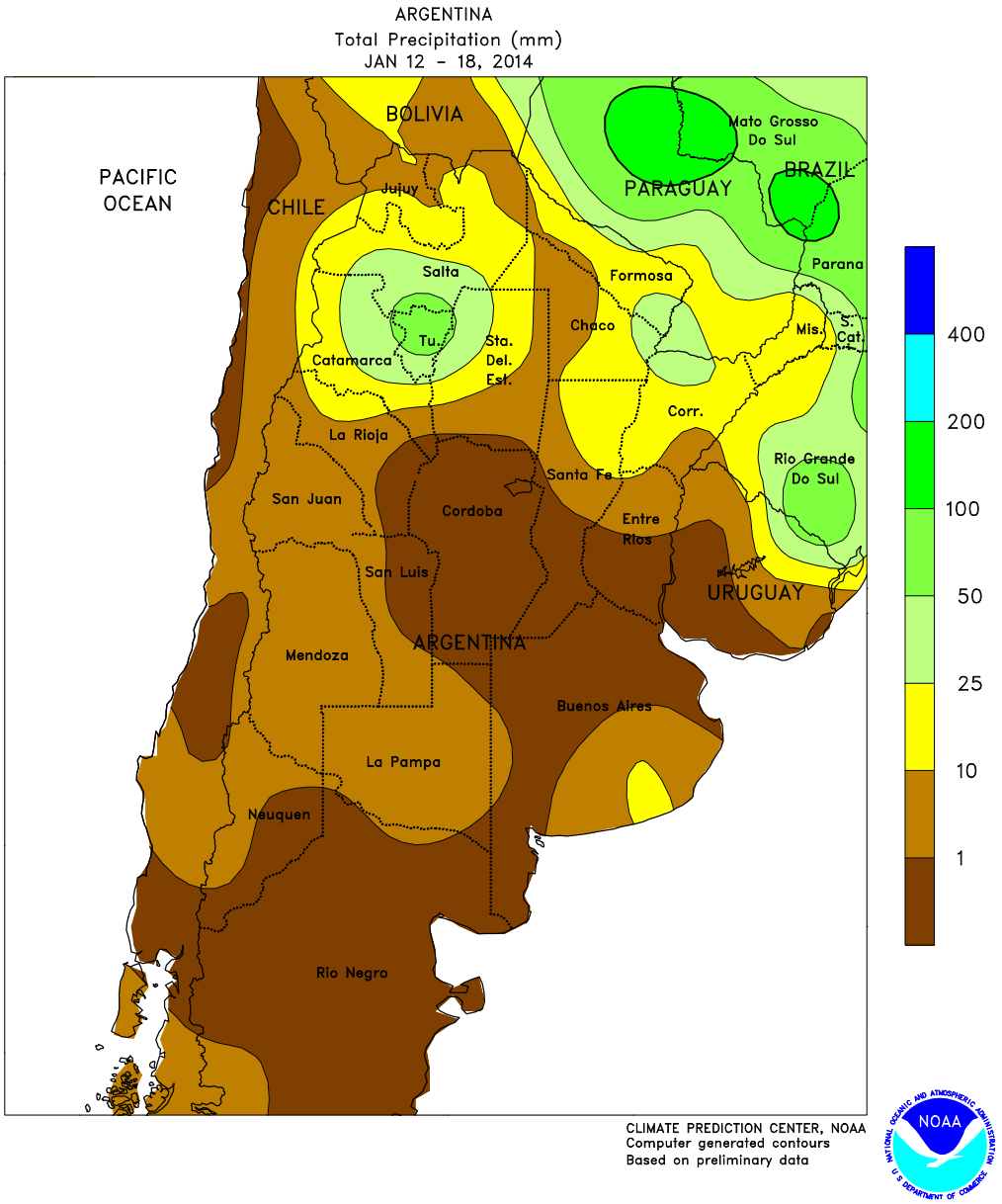
For additional information contact: mbrusberg@oce.usda.gov



SOUTH AFRICA

For a third week, warm, mostly dry weather dominated the corn belt, reducing moisture for vegetative to reproductive summer crops. Most of the region reported less than 10 mm of rainfall, although a few isolated showers in excess of 25 mm were recorded. Weekly temperatures averaging 1 to 3°C above normal exacerbated the impact of the dryness on evapotranspiration rates, with daytime highs reaching the lower 30s (degrees C) in the east (Mpumalanga) and the upper 30s farther west (North West and Free State). Corn typically advances through reproduction from mid-January through February, necessitating the return of more seasonable rain and temperatures. Similar conditions prevailed in sugarcane areas of eastern Mpumalanga and Kwazulu-Natal, although somewhat heavier rainfall (greater than 10 mm) increased moisture for predominantly rain-fed sugarcane in southern production areas. In the Cape Provinces, mostly dry, locally hot weather (daytime highs reaching the upper 30s) promoted rapid development of irrigated summer row crops as well as tree and vine crops, including harvesting of early-maturing fruit varieties.

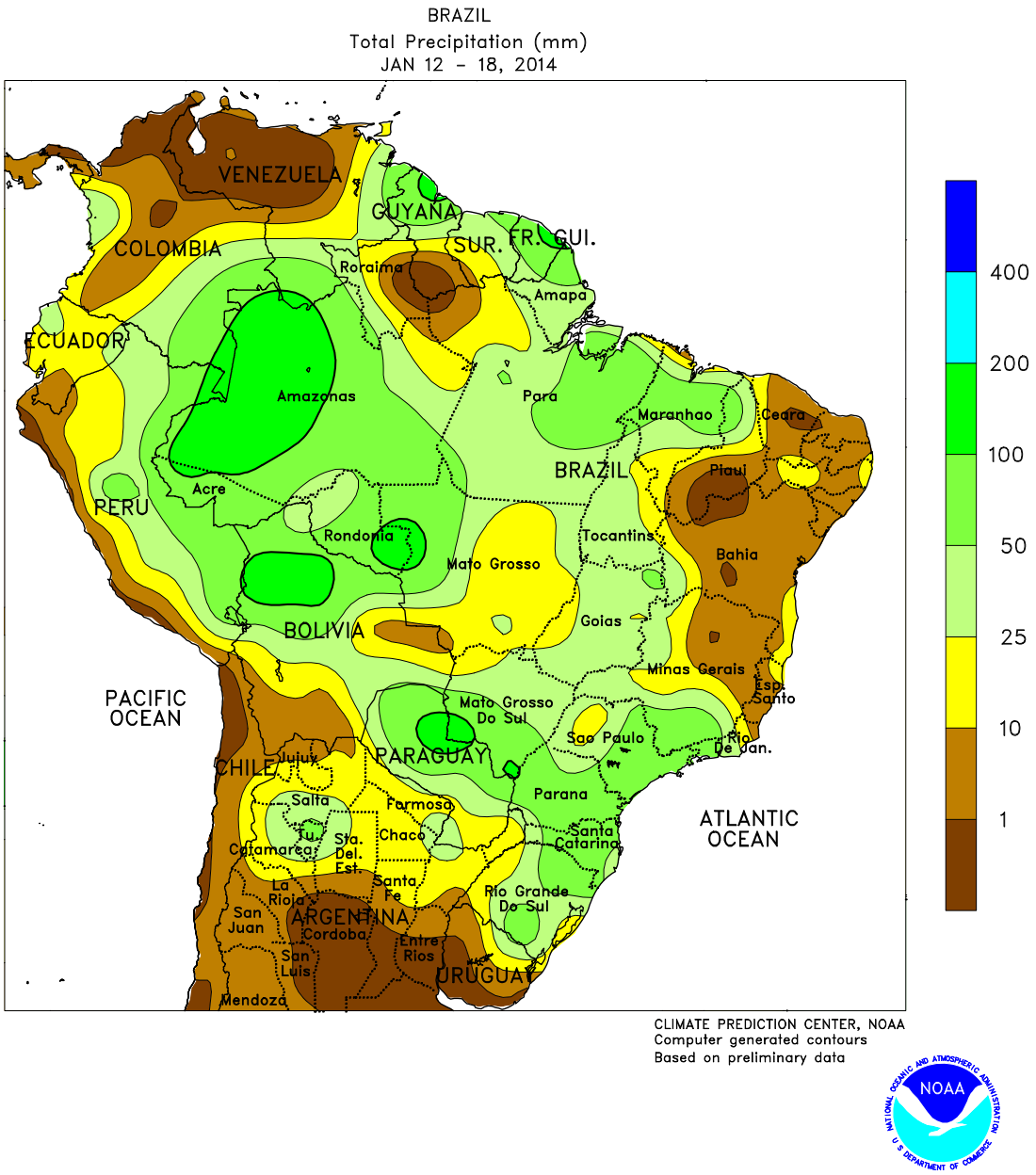
For additional information contact: mbrusberg@oce.usda.gov



ARGENTINA

Hot, mostly dry weather renewed stress on summer crops, which are in various stages of development depending upon location and time of planting. Virtually no rain fell in central Argentina (La Pampa, Buenos Aires, Cordoba, southern Santa Fe, and Entre Rios), after a brief period of showers recorded at the end of last week. Consequently, unseasonably warm weather (weekly temperatures averaging 2-6°C above normal) returned to the region, with daytime highs reaching the upper 30s (degrees C) for at least several days, particularly toward the end of the week. The hottest weather was recorded in the country's traditionally warmer southwestern farming areas, with highs in excess of 40°C in La Pampa, southern Cordoba, and southwestern Buenos Aires. Locally heavy showers (10-50 mm) lingered over northern agricultural areas as the week began, but drier weather dominated for the remainder of the week and — as in central Argentina — temperatures rose to unfavorably high levels (upper 30s) by week's end. A return to a more normal pattern of rainfall and temperatures are needed to prevent further declines in yield potential, particularly as more crops reach moisture- and temperature-sensitive stages of development. According to Argentina's Ministry of Agriculture, corn and soybeans were 88 and 92 percent planted, respectively, as of January 16, still lagging last year's pace for both crops.

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

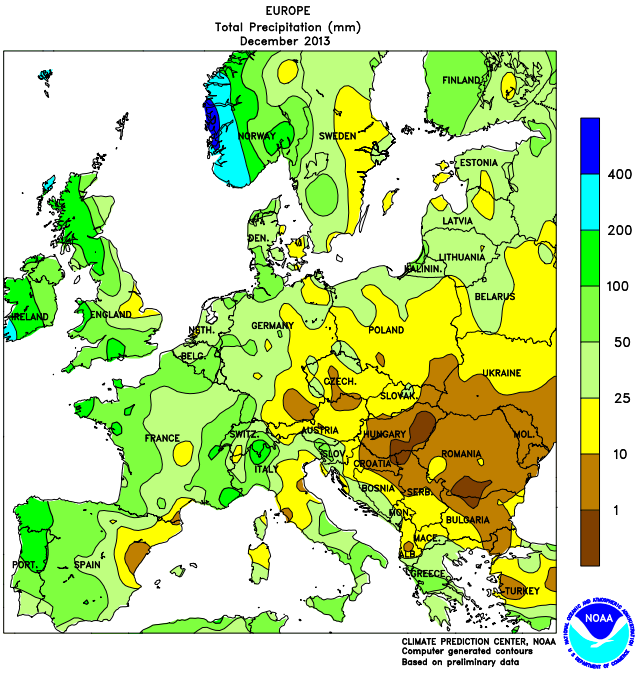


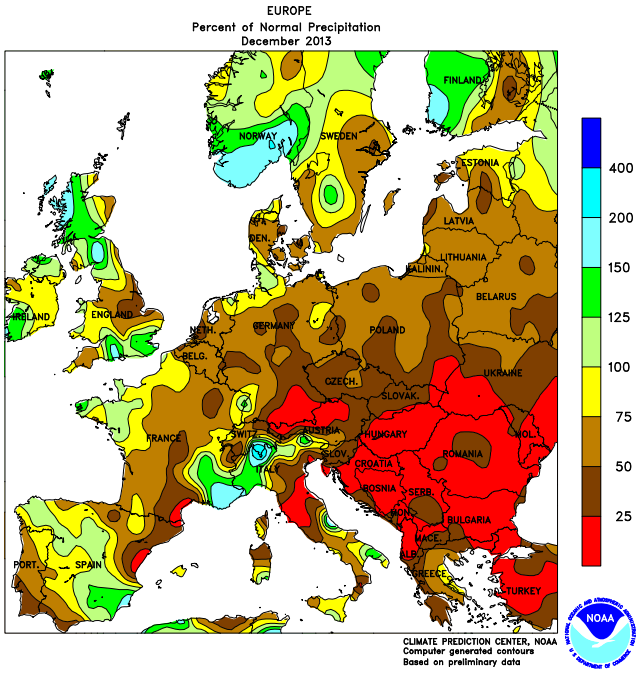
BRAZIL

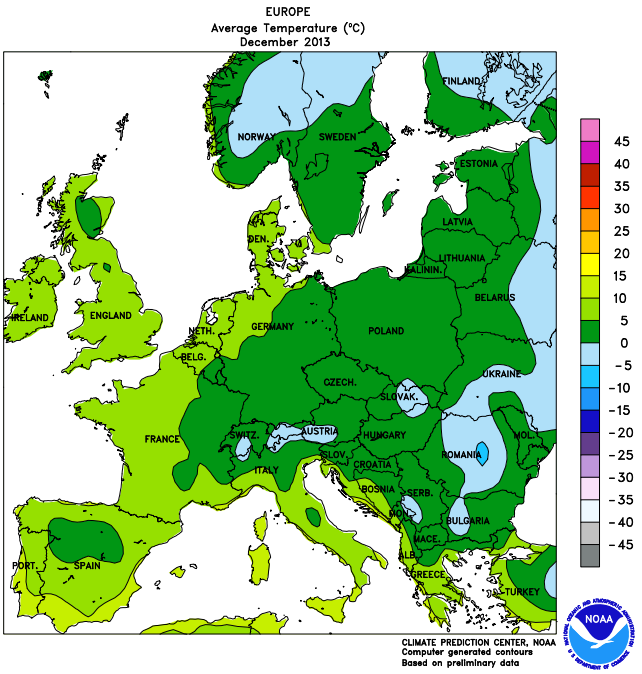
Beneficial rain continued in southern soybean and corn areas, but pockets of untimely dryness lingered over the northeastern interior. Rainfall totaling 25 to 100 mm from Mato Grosso do Sul and Sao Paulo southward increased moisture for immature summer crops, although in some locations the amounts were below normal. The showers were accompanied by near-normal temperatures but daytime highs reached the lower 30s (degrees C) as drier weather returned to the region at week's end. Similarly, scattered showers continued in the Center-West Region (Mato Grosso, Goias, and northern Mato Grosso do Sul) though amounts were mostly below normal. The rain extended eastward into Tocantins but pockets of dryness lingered in the vicinity of western Bahia, further limiting moisture for normal development of soybeans and cotton. Summer warmth (daytime highs occasionally reaching the middle 30s) exacerbated the effects of dryness on crops. In contrast, dryness along the northeastern coast was seasonable and summer warmth (daytime highs in the lower and middle 30s) spurred development of irrigated crops, including sugarcane and cocoa.

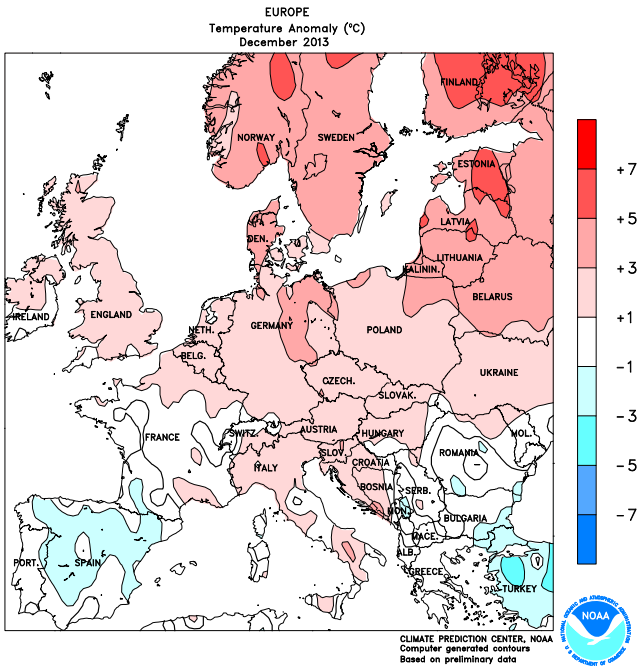
For additional information contact: mbrusberg@oce.usda.gov

December International Temperature and Precipitation Maps



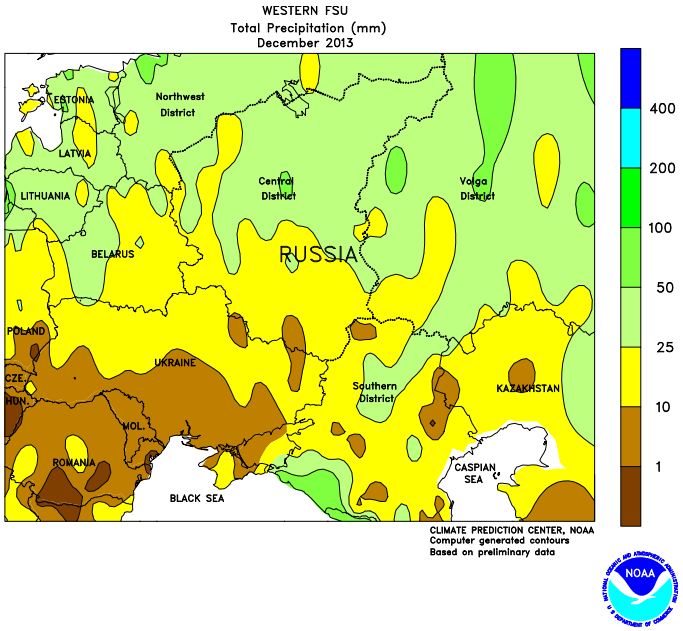


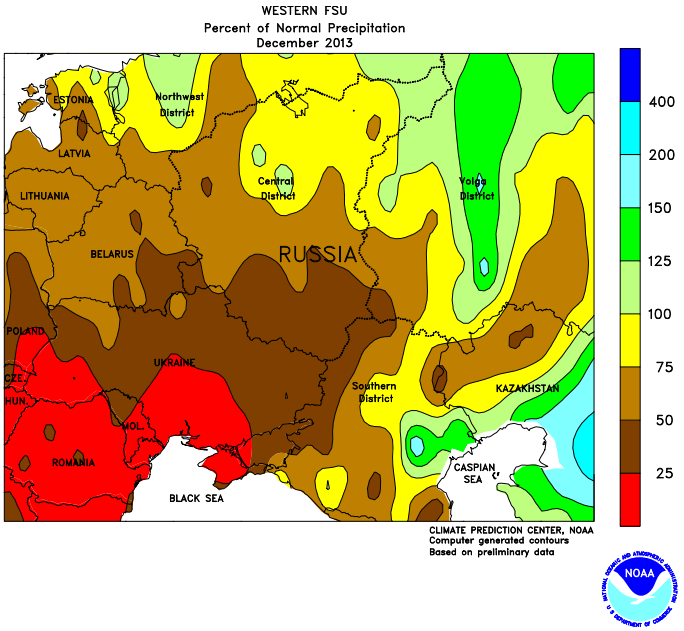


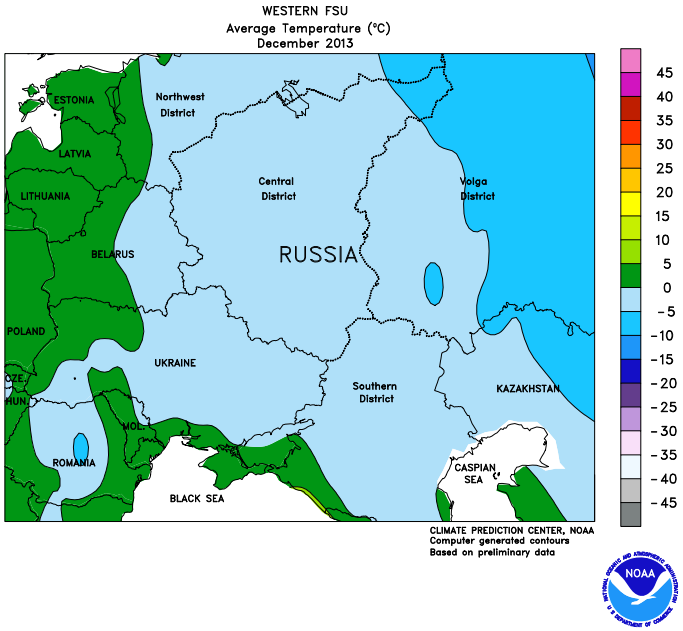


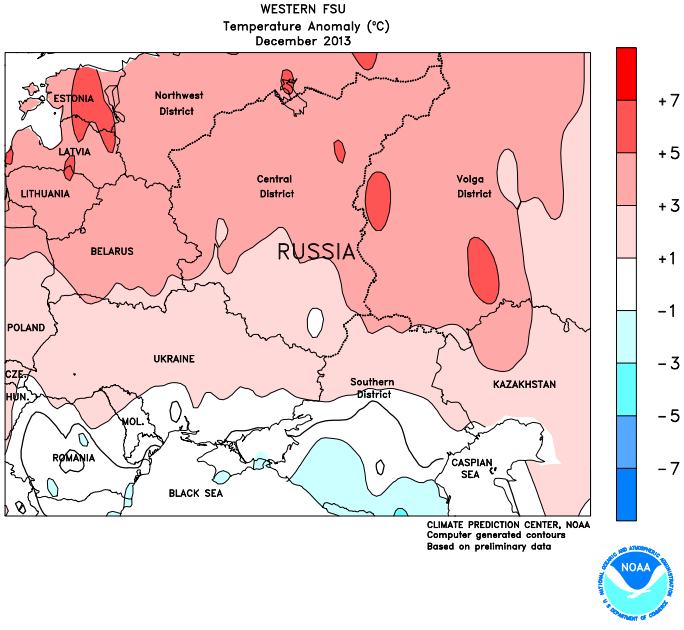
EUROPE

Unseasonably warm, dry weather prevailed across the continent during December. Temperatures averaged 2 to 4°C above normal over most major growing areas, keeping typically-colder northern and eastern crop regions devoid of protective snow cover. In addition, drier-than-normal weather prevailed across most of the continent, reducing soil moisture reserves for dormant winter crops. Dryness was most pronounced in the Balkans, where little — if any — precipitation was reported during the month, continuing a dry trend which began in early November.



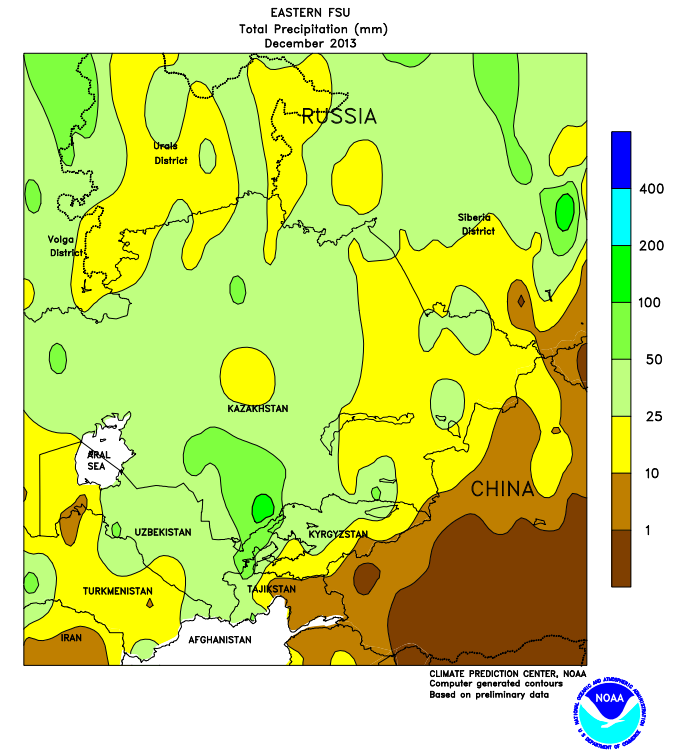


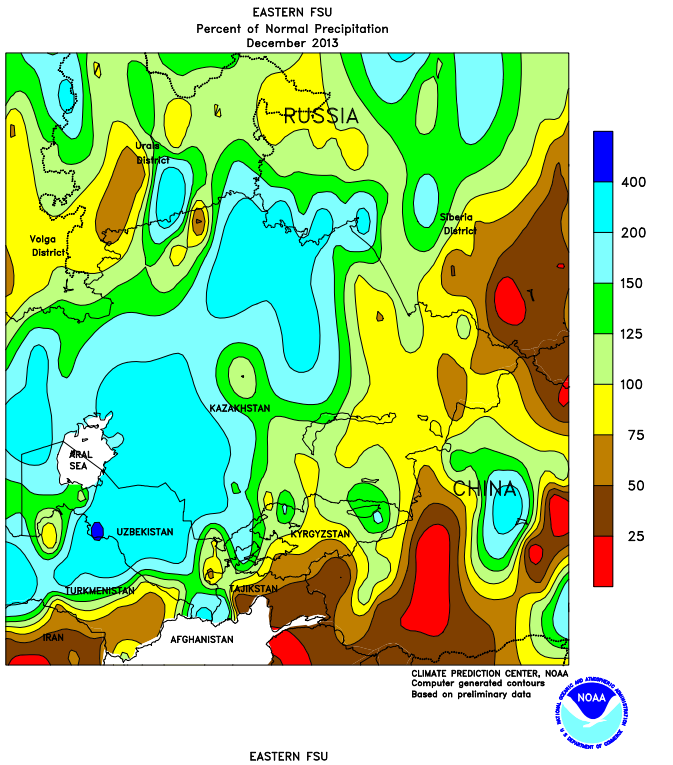


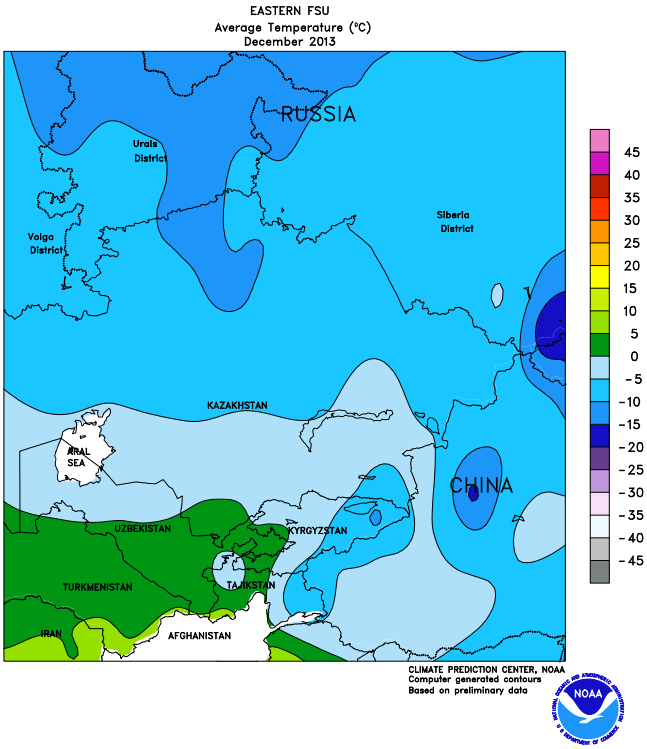


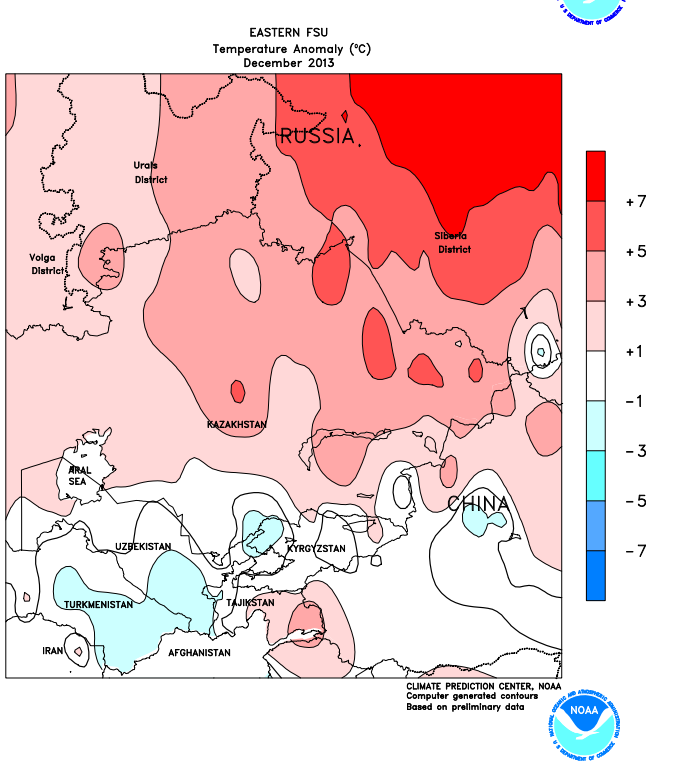
WESTERN FSU

In December, unseasonably warm, dry weather kept many of the region's primary winter wheat areas devoid of a protective snow cover. Temperatures averaged 1 to 4°C above normal from Belarus and central Ukraine into central and northern Russia, with near- to below-normal temperatures confined to southern-most portions of Russia's Southern District. The warmth was generally favorable for winter crops, minimizing the risk of freeze damage and winterkill. Short-term dryness accompanied the above-normal temperatures, as monthly precipitation averaged less than 50 percent of normal over the western half of the region.



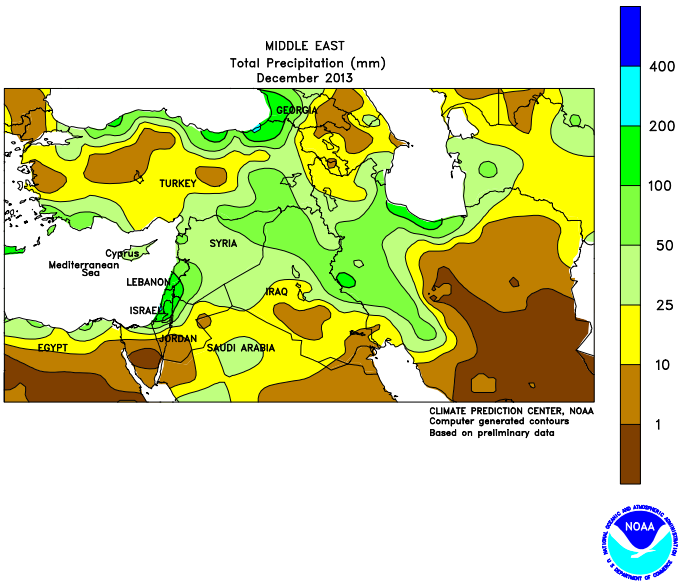


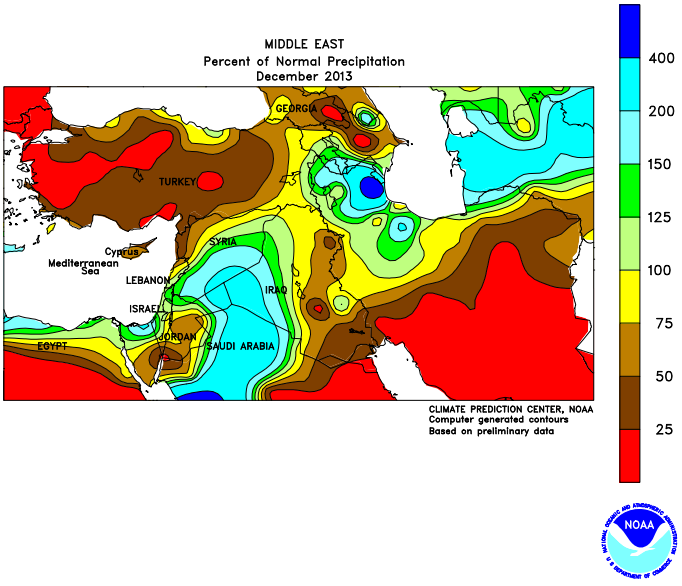


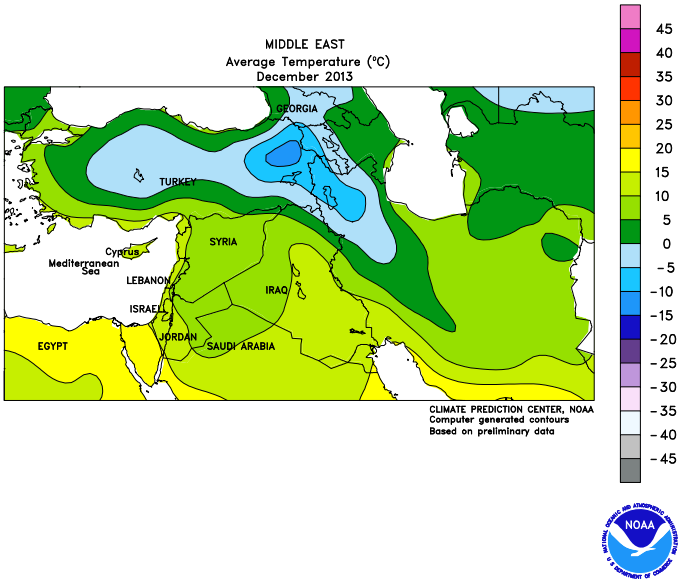


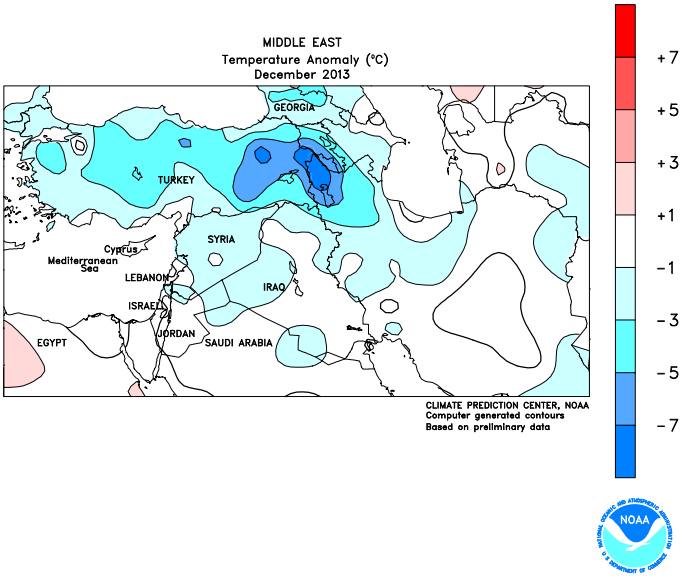
EASTERN FSU

During December, unseasonably warm weather lingered over northern portions of the region. Temperatures averaged 3 to 7°C above normal in Russia and northern Kazakhstan, although seasonably colder conditions gradually returned to the region by month's end. In the south, locally heavy rain and mountain snow boosted irrigation reserves for the upcoming summer growing season.





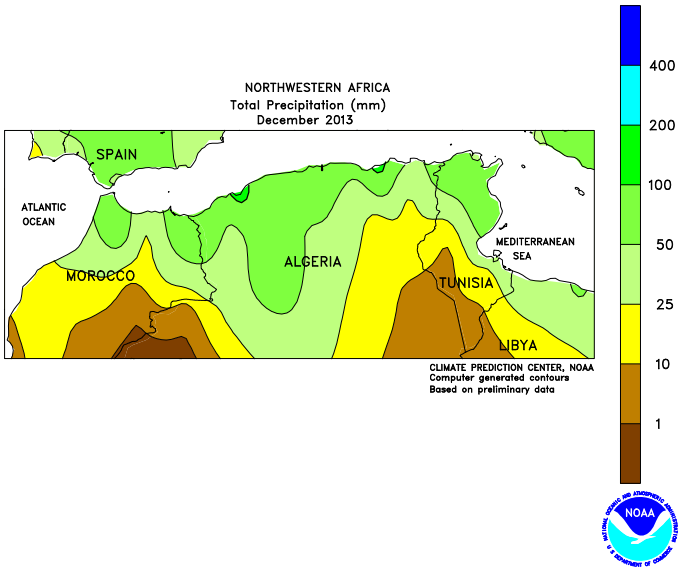


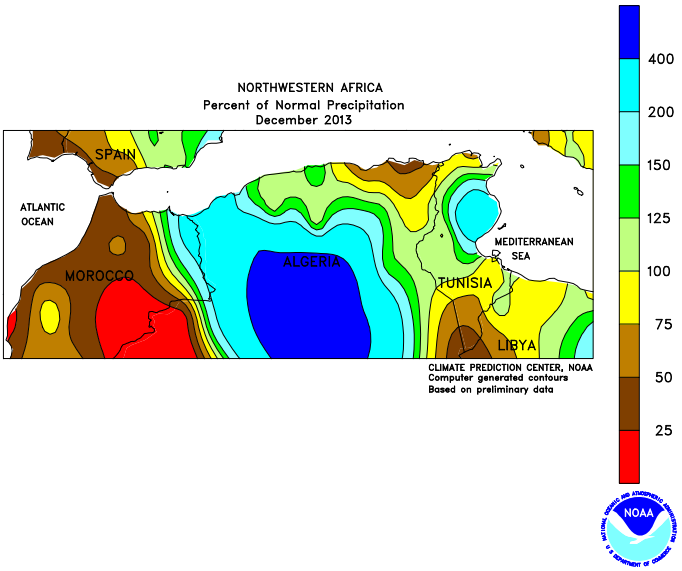


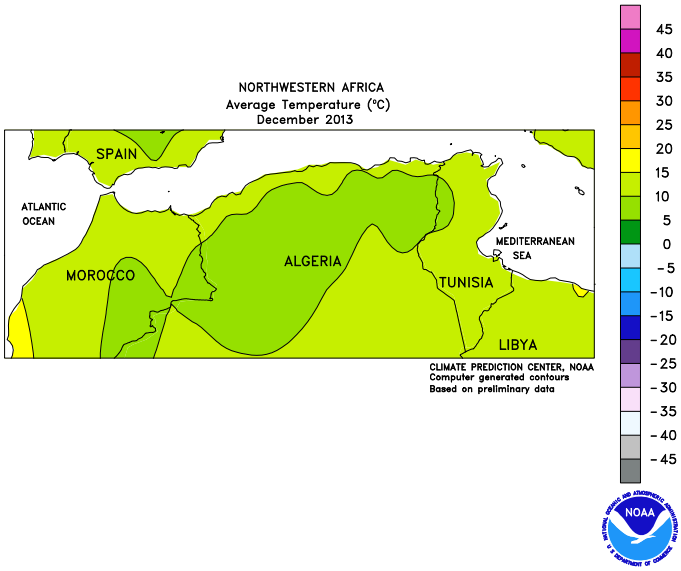
MIDDLE EAST

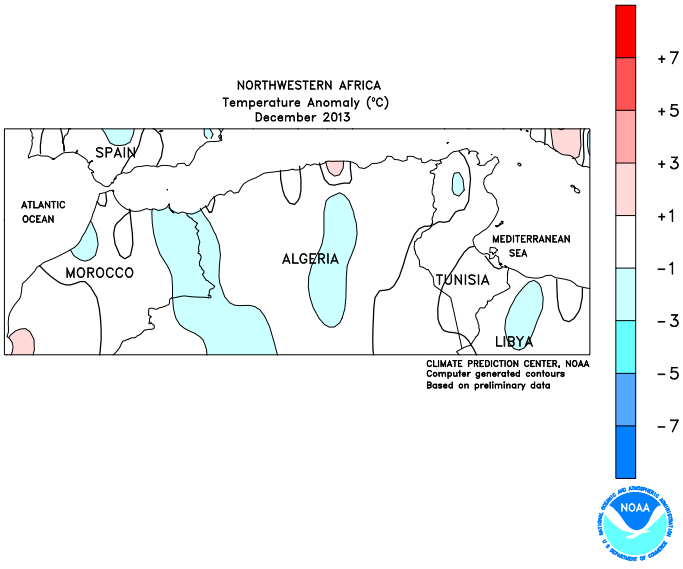
During December, sharply colder weather brought an abrupt end to the growing season in Turkey, resulting in poor winter wheat establishment. Precipitation across much of Turkey tallied less than 25 mm, locally less than 25 percent of normal. In contrast, periods of rain and snow (25-70 mm liquid equivalent) from Syria into Iran maintained favorable conditions for winter grain establishment.

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



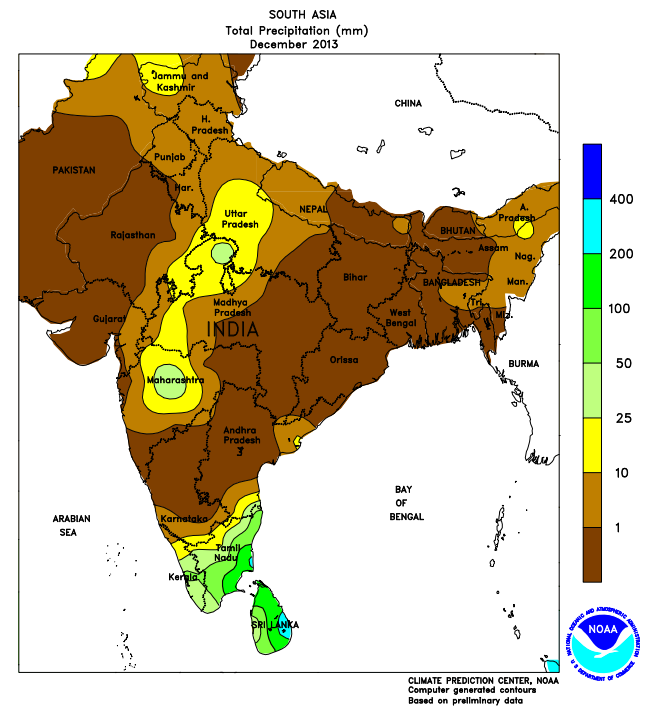


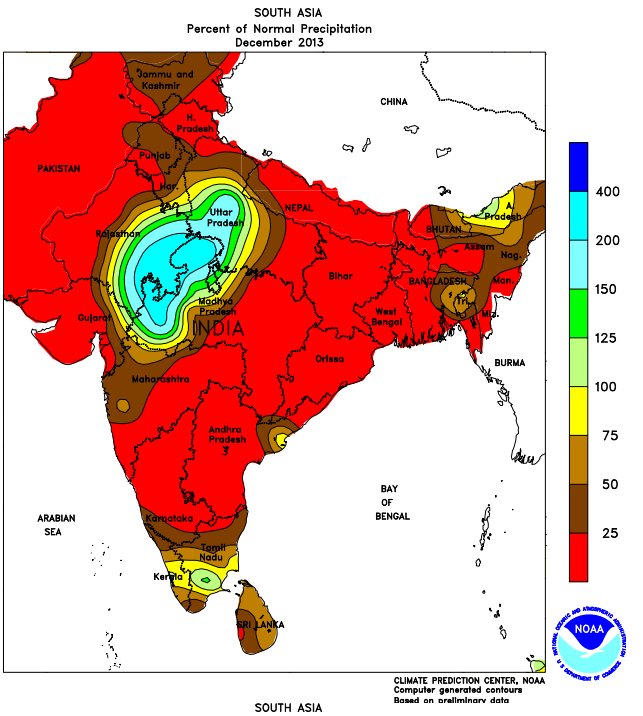


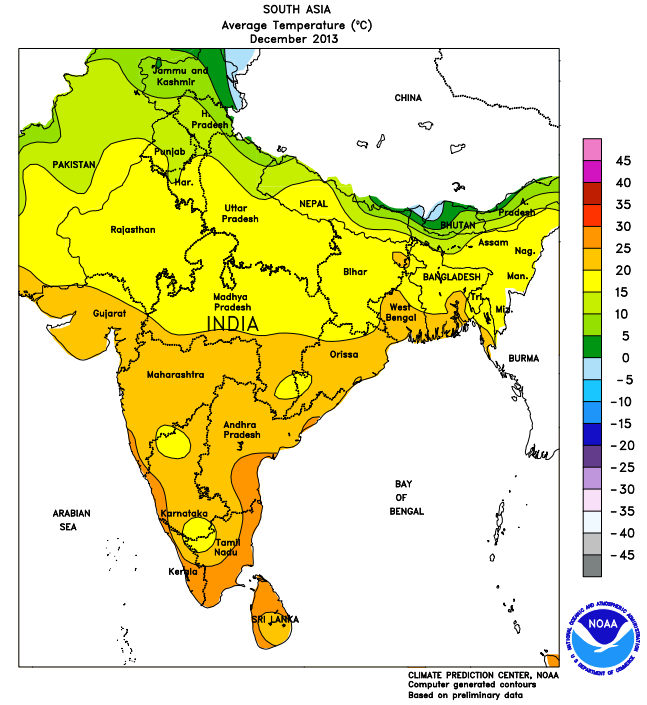


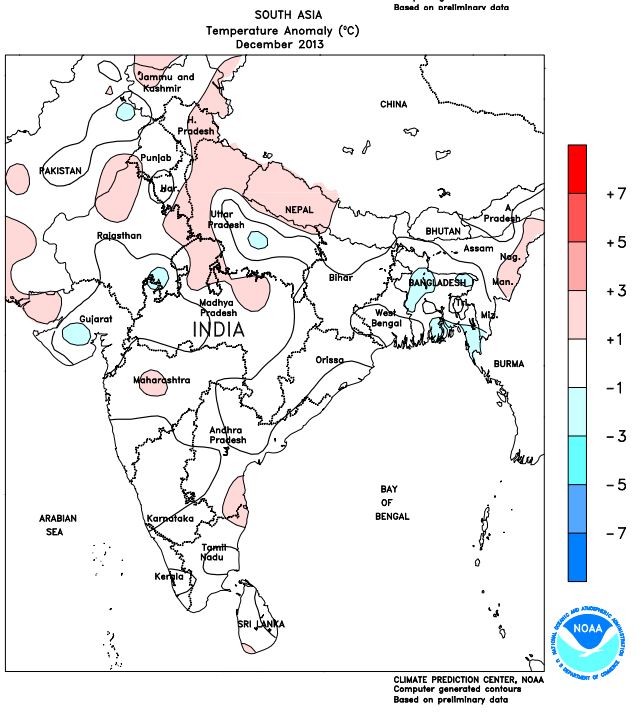
NORTHWESTERN AFRICA

Widespread rain during December boosted soil moisture for winter grain growth in the east, while areas of dryness persisted in the west. In Morocco, concerns over developing short-term dryness were eased somewhat by a round of rain during the latter half of the month. However, soil moisture remained limited for wheat and barley establishment in southern Morocco. Temperatures were nearly ideal for winter wheat and barley development.



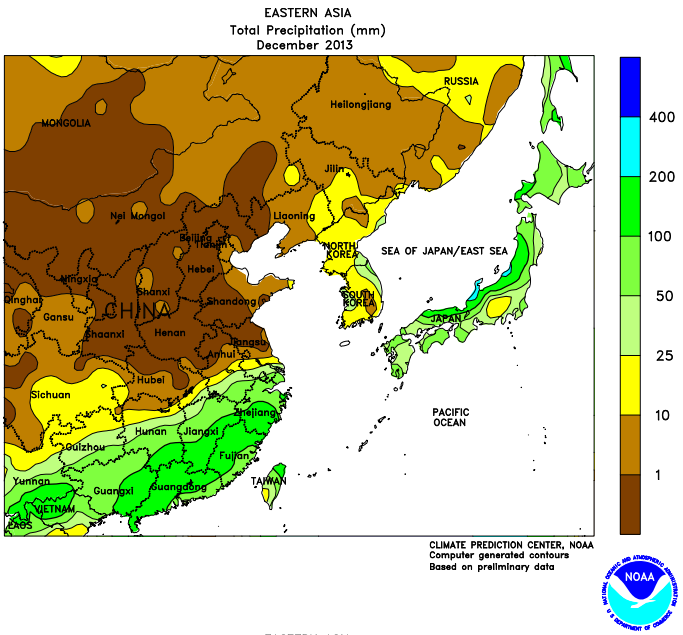


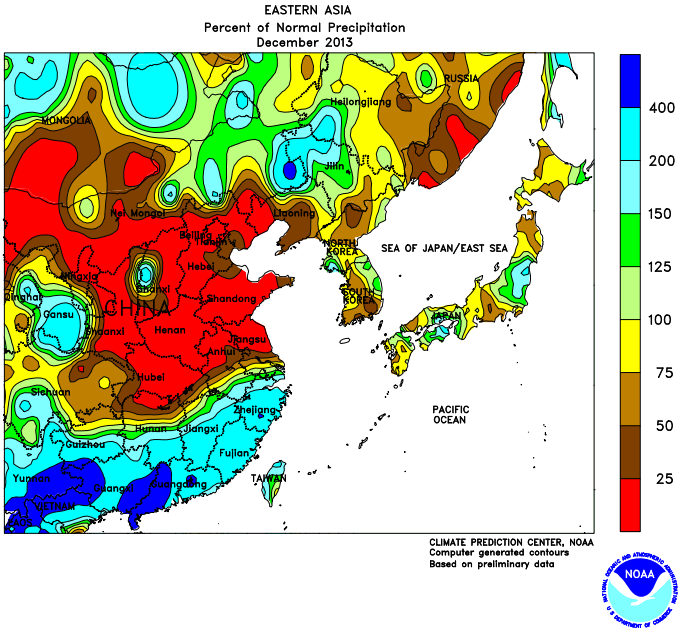


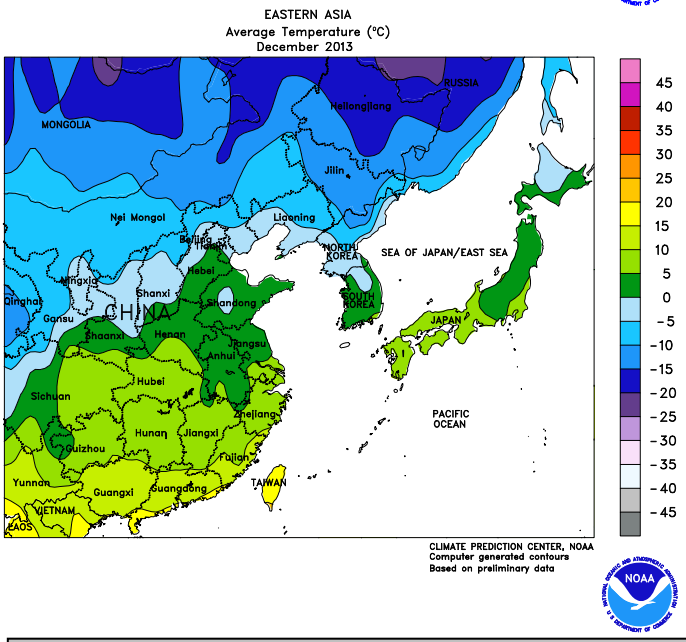


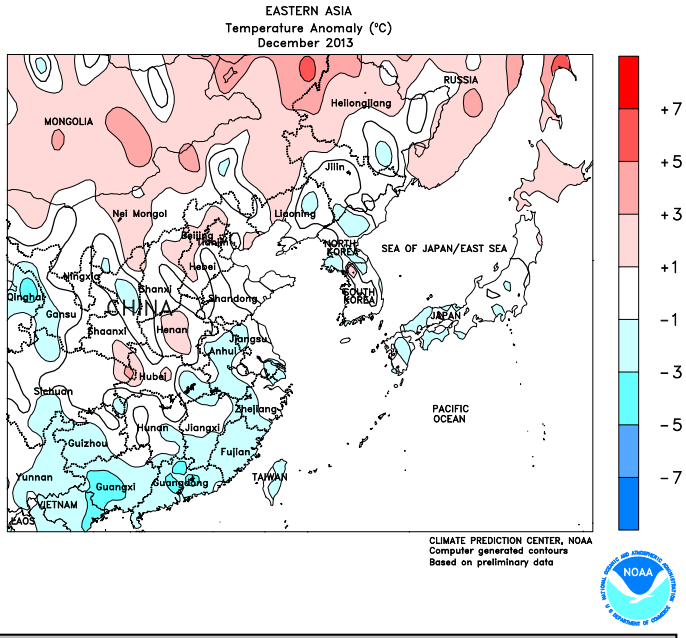
SOUTH ASIA

Seasonably warm, sunny weather prevailed during December, promoting wheat and rapeseed development in northern India and cotton harvesting in western India. Tropical Cyclone Madi formed early in the month and brought moderate showers to southern India before dissipating off the southeastern coast. The moisture was beneficial to rabi crops (cotton, rice, and groundnuts) in Tamil Nadu, where the highest rainfall amounts occurred. Elsewhere in the region, mild weather favored irrigated wheat in Pakistan and irrigated rice in Bangladesh. In Sri Lanka, monthly rainfall was about 25 to 50 mm below normal for main-season (maha) rice, and while rainfall for the season was sufficient for rice in western growing areas, eastern areas required supplemental irrigation for normal development.



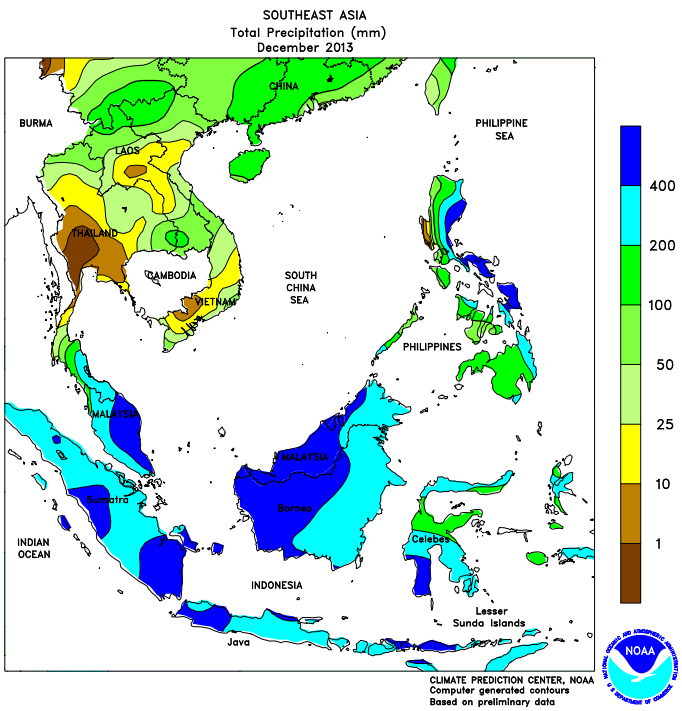


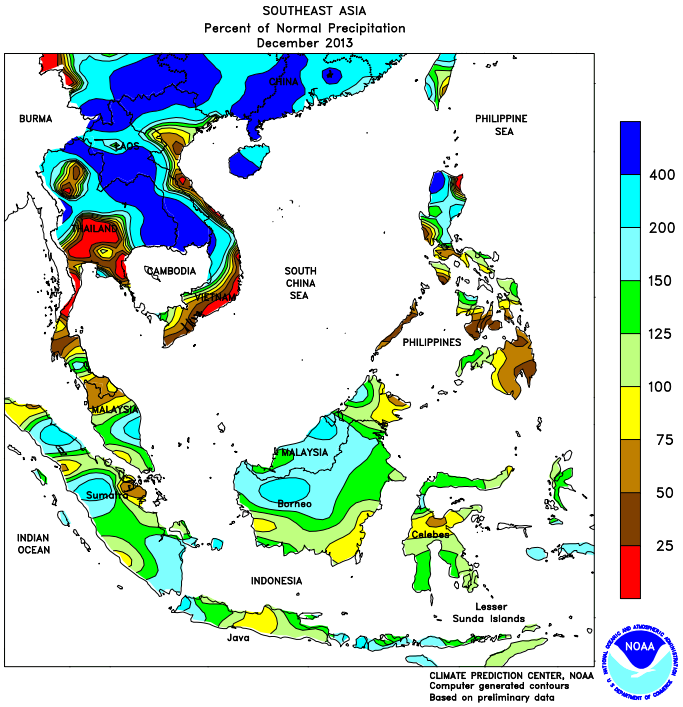


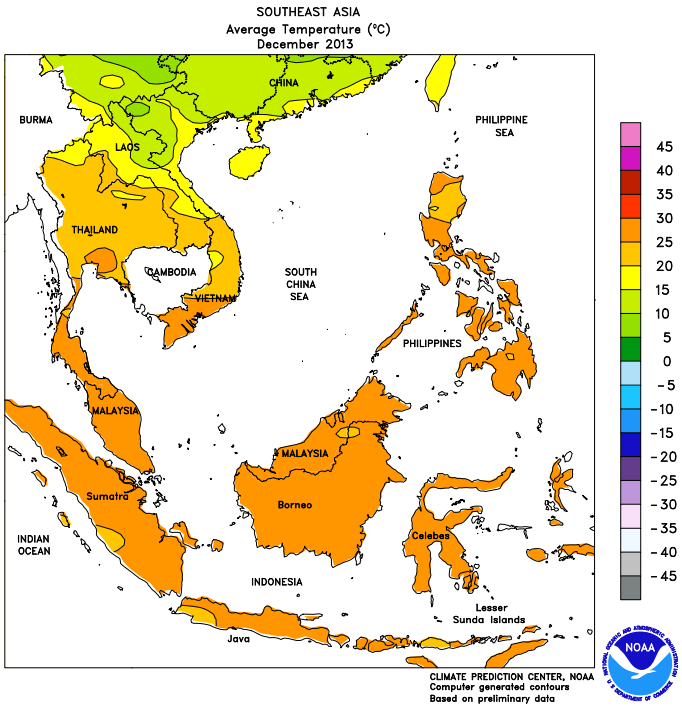


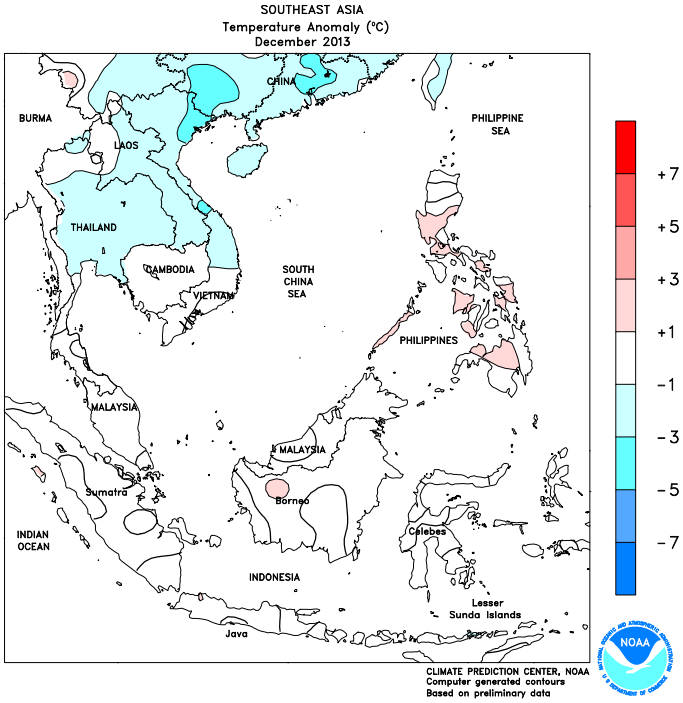
EASTERN ASIA

December rainfall and temperatures were generally near normal across winter crop areas. Seasonably dry weather prevailed for dormant winter wheat on the North China Plain, with rainfall totals slightly lower than last year and similar to 2010. In addition, mild weather eased wheat into dormancy during the month, with maximum hardening occurring at month's end when colder weather settled over the area. In the Yangtze Valley, monthly rainfall was slightly below normal for winter rapeseed in the east, requiring additional irrigation prior to the crop going into dormancy around the middle part of the month. Meanwhile, in Sichuan, where rapeseed does not fully go dormant, rainfall and temperatures were near normal. Farther south, above-normal rainfall slowed sugarcane harvesting but boosted soil moisture for vegetables and other seasonal crops.





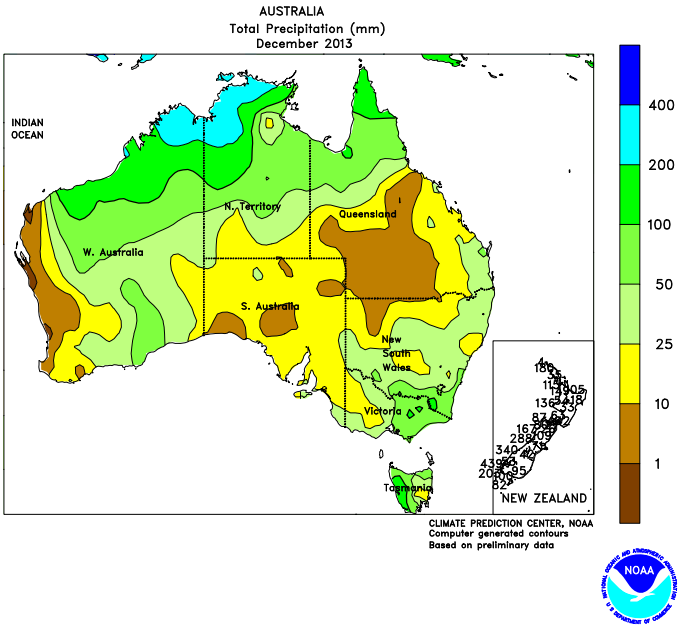


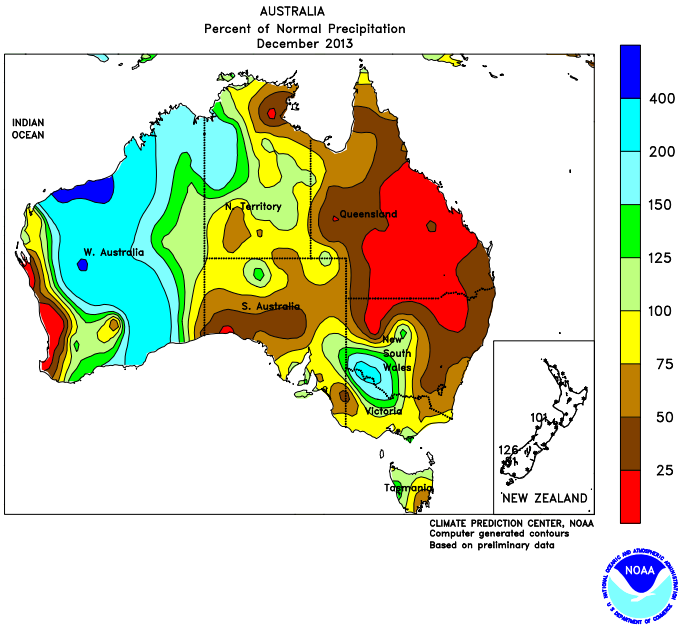


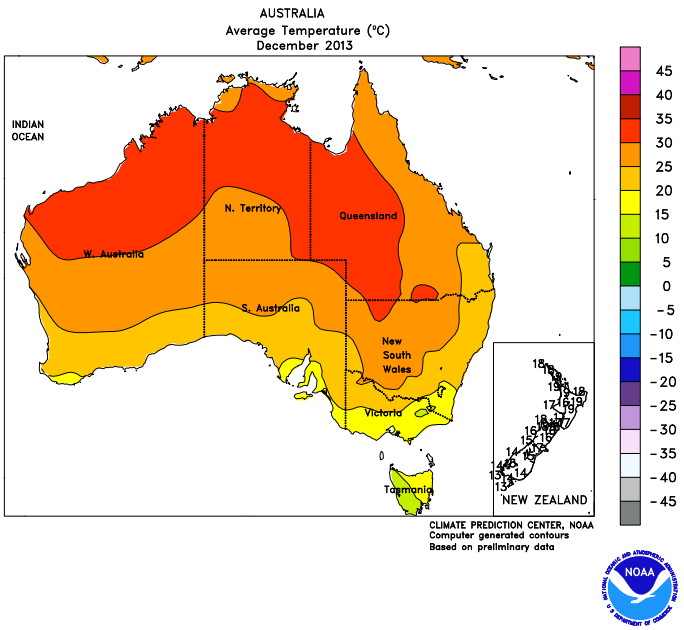
SOUTHEAST ASIA

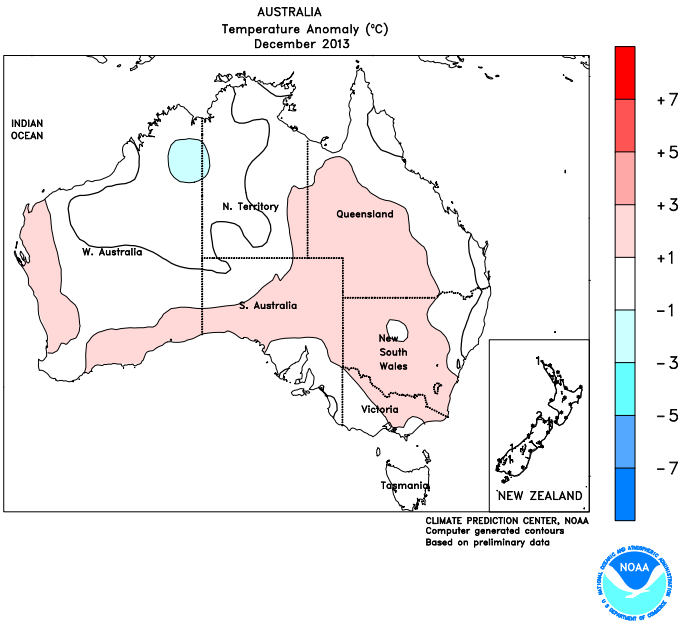
December rainfall was near to above normal across Java, Indonesia, providing abundant to locally excessive moisture to vegetative rice. Moreover, flooding occurred in western Java where monthly totals were over 500 mm. Similar conditions existed for oil palm, with flooding occurring in peninsular Malaysia and harvest activities slowing across most of Malaysia and Indonesia. Excessively heavy rainfall was also reported in the northeastern Philippines, slowing fieldwork and causing some localized flooding.

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



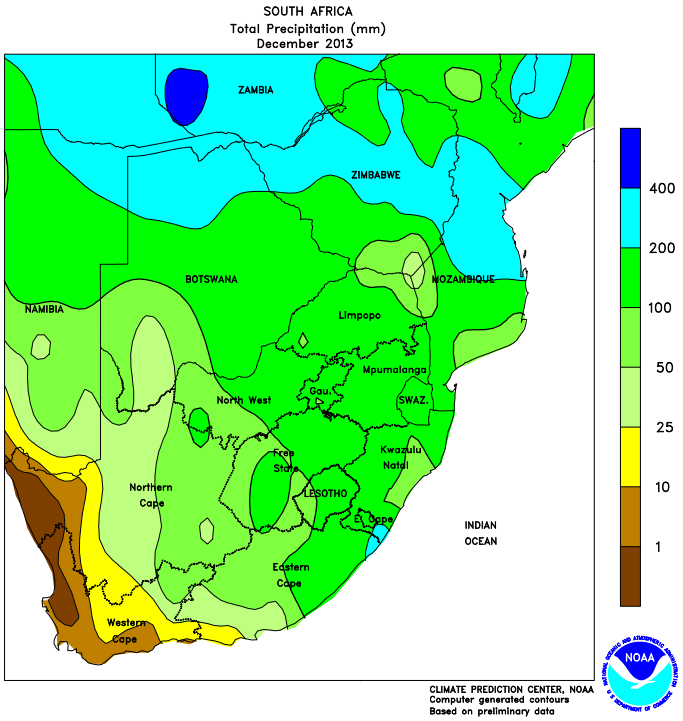


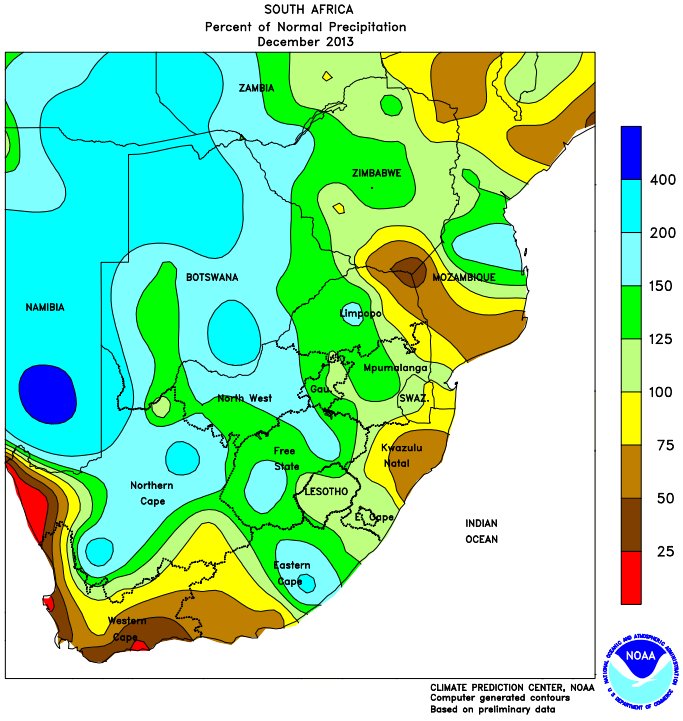


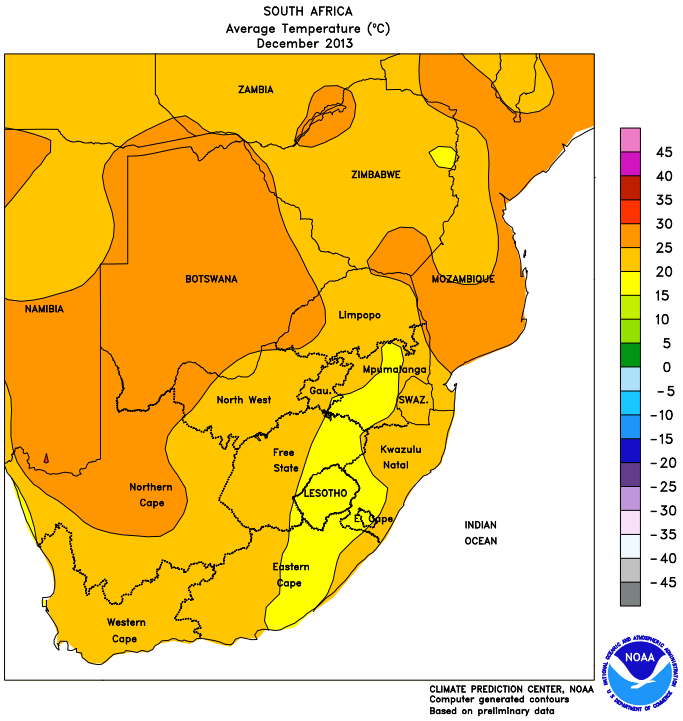


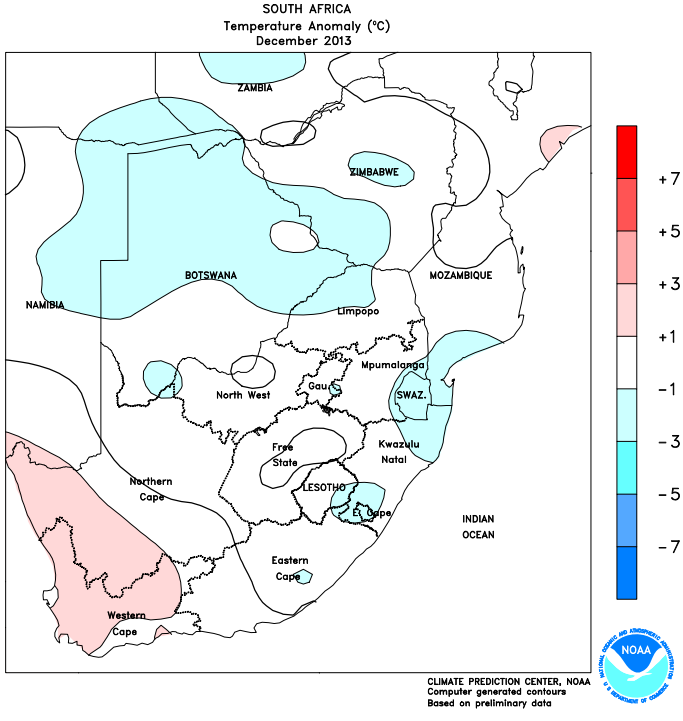
AUSTRALIA

In Queensland and northern New South Wales, seasonal showers in early December favored cotton and sorghum development. Mostly dry, increasingly hot weather during the latter half of the month, however, increased irrigation demands and likely stressed some dryland crops, potentially reducing yield prospects. In western and southeastern Australia, near- to below-normal December rainfall favored winter grain and oilseed harvesting.



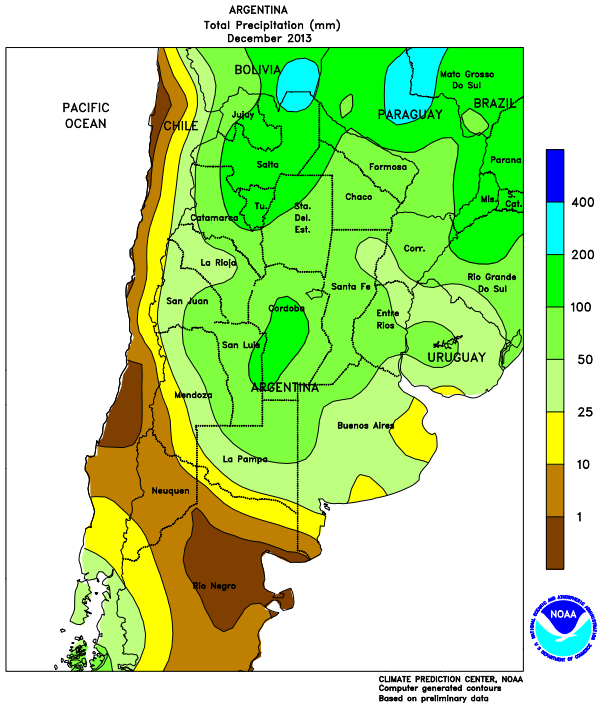


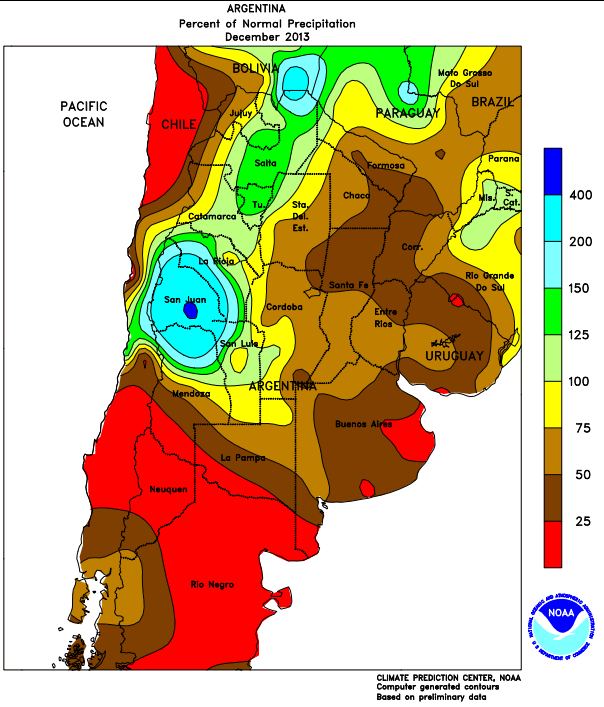


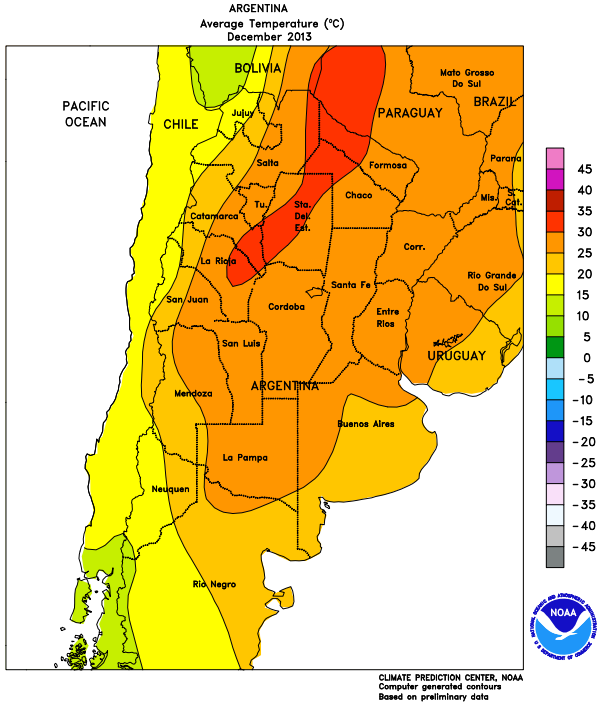


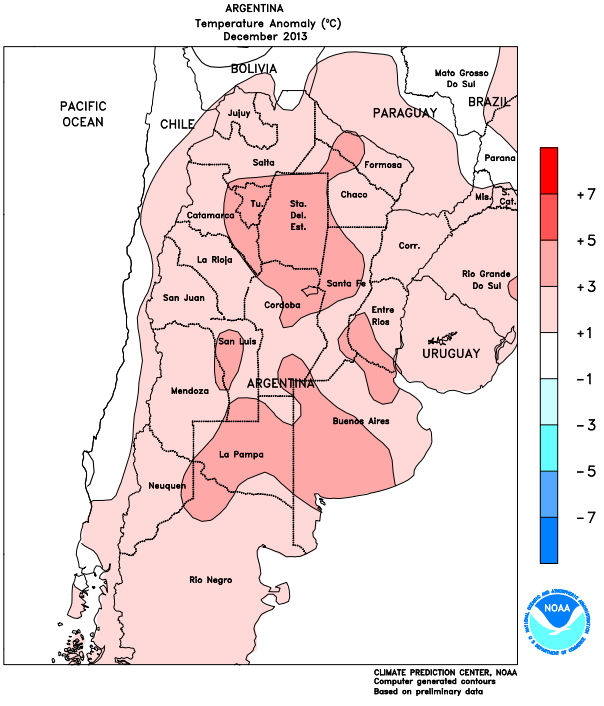
SOUTH AFRICA

During December, near- to above-normal rainfall provided timely moisture for rain-fed summer crops. Frequent, occasionally heavy showers continued across the corn belt, with some locations accumulating more than 200 mm for the month. Monthly temperatures averaged within 1°C of normal, with daytime highs occasionally reaching 35°C in traditionally warmer western production areas (North West and Free State). Monthly rainfall was also near to above normal in KwaZulu-Natal and the main agricultural areas of Northern and Eastern Cape Provinces, although most of the rain fell during the first half of the month. As in the corn belt, monthly average temperatures were within 1°C of normal in these areas but warmer weather accompanied the drying trend, spurring growth of sugarcane and irrigated summer row crops. In Western Cape, warm, mostly dry weather promoted development of irrigated tree and vine crops and favored seasonal fieldwork.





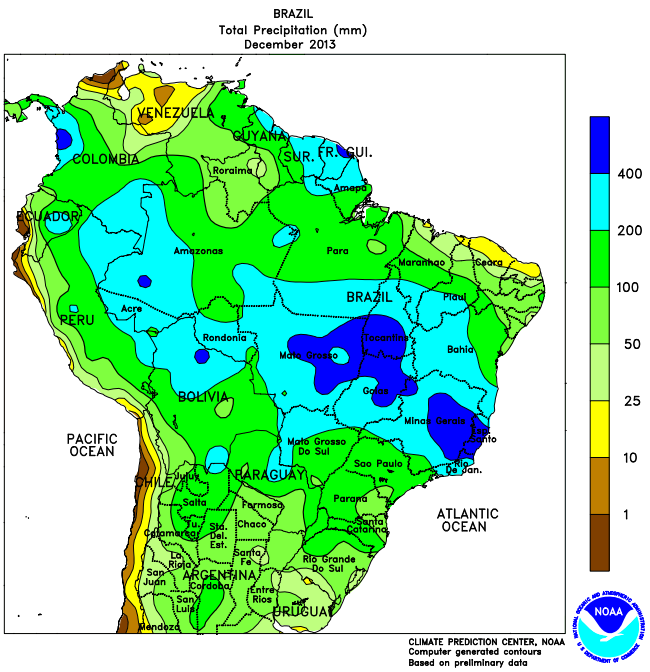


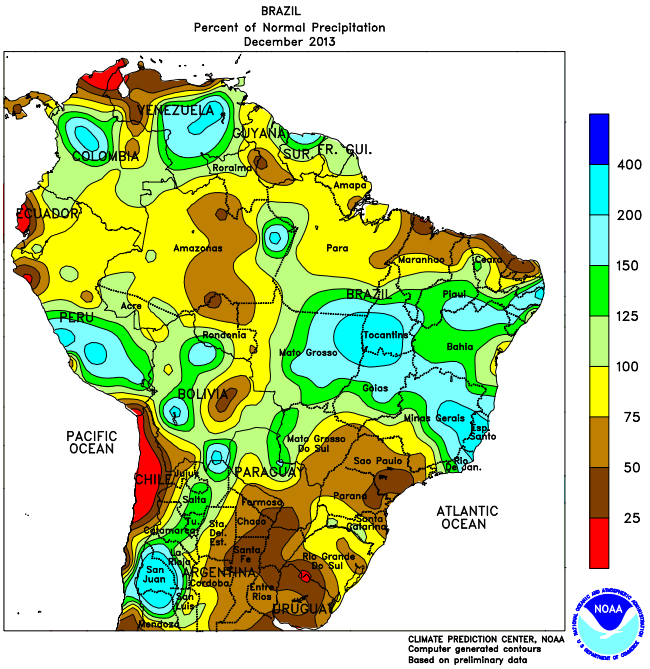


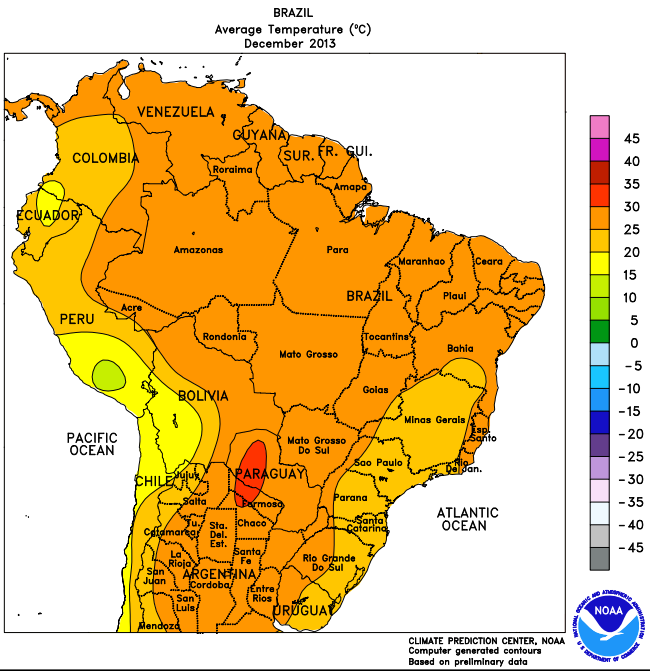
ARGENTINA

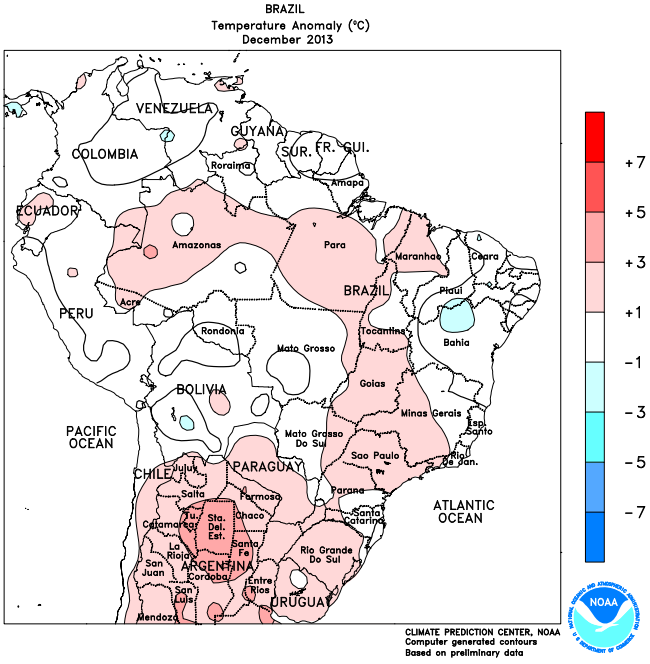
In December, unseasonable warmth, accompanied by sporadic rainfall, stressed emerging to reproductive crops in the country's main production areas. Monthly temperatures averaged 2 to 4°C above normal in nearly all major agricultural districts, with daytime highs often exceeding 35°C and occasionally reaching 40°C, even in the high-yielding farming areas of central Argentina (northern Buenos Aires and southern sections of Cordoba, Santa Fe, and Entre Rios). Heavy showers brought localized relief from the heat, but below-normal December rainfall — in combination with the heat — lowered soil moisture to unfavorably low levels, for developing summer crops and germination of recently-planted crops. Similar conditions were recorded in the northeast (notably Chaco and northern Santa Fe), reducing moisture for cotton and other summer row crops. As a result of the stressful conditions, central Argentina's early-planted corn in or approaching reproduction suffered some irreversible damage. In contrast to the problems in central and northeastern farming areas, the northwest (in and around Salta) saw some improvement, with more frequent rainfall helping to replenish soil moisture from earlier periods of dryness and providing timely moisture for newly-planted corn and soybeans.

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





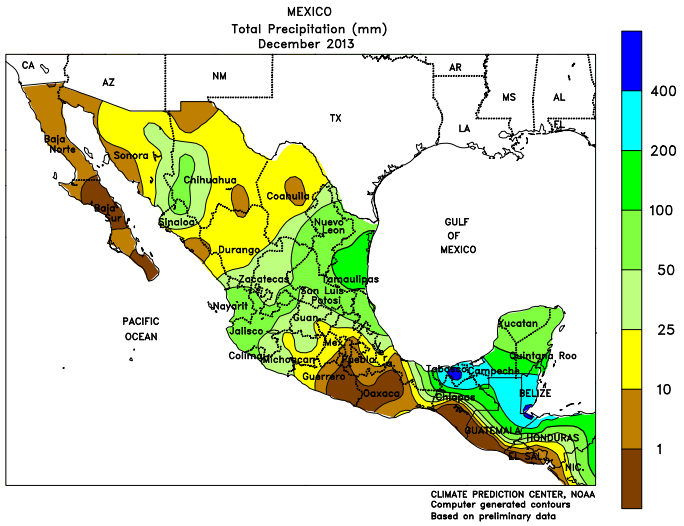


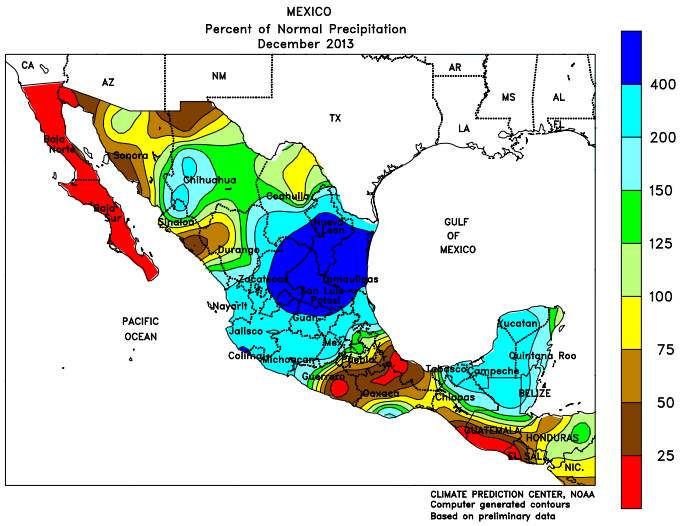


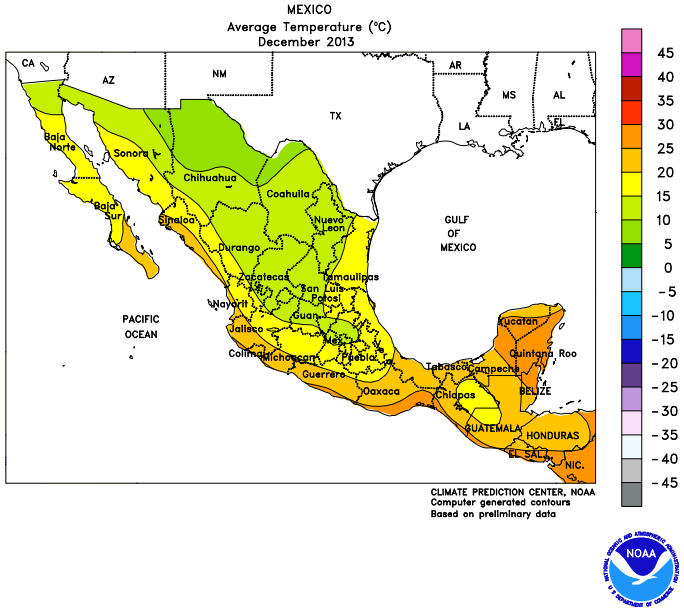
BRAZIL

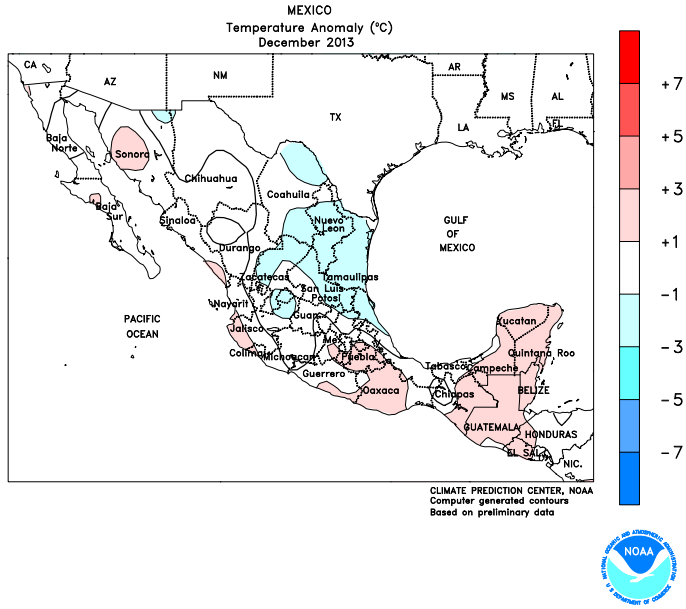
A drying trend developed over southern Brazil during the latter half of December, accompanied by a gradual rise in temperatures. As a result, monthly temperatures averaged as much as 2°C above normal (daytime highs frequently in the low 30s degrees C), spurring corn and soybean growth but reducing moisture reserves. Dryness also affected major sugarcane areas of Sao Paulo but as in much of the south, rainfall increased at the end of the month, slowing fieldwork but increasing moisture for sugar production. More frequent, locally heavy rain fell farther north, maintaining overall favorable conditions for summer crops, in particular soybeans and cotton in key production areas of the Center-West and northeastern interior regions (Mato Grosso to western Bahia). The rain also briefly reached into the usually drier coastal regions, giving an unexpected boost in moisture for sugarcane, cocoa, and coffee. Monthly temperatures were more seasonable in the northern production areas, although daytime highs periodically reached 35°C in traditionally warmer interior growing areas.

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



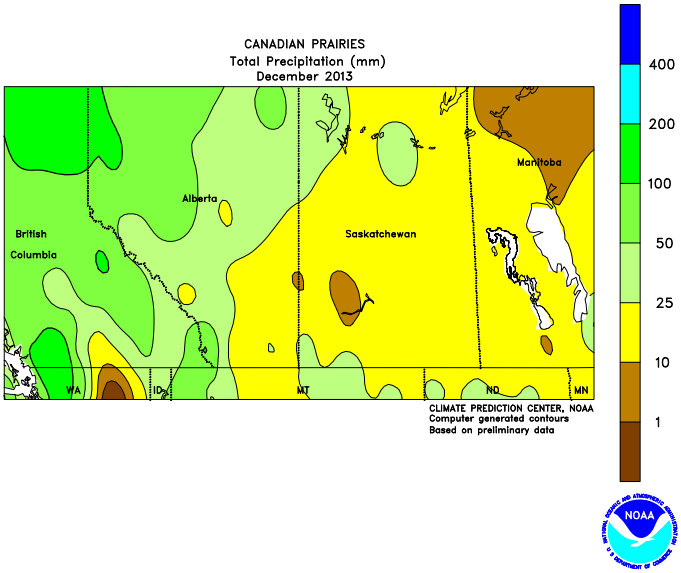


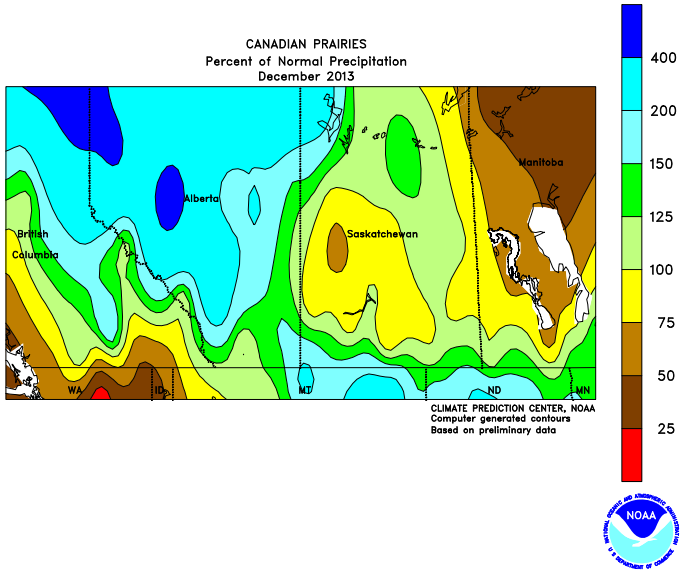


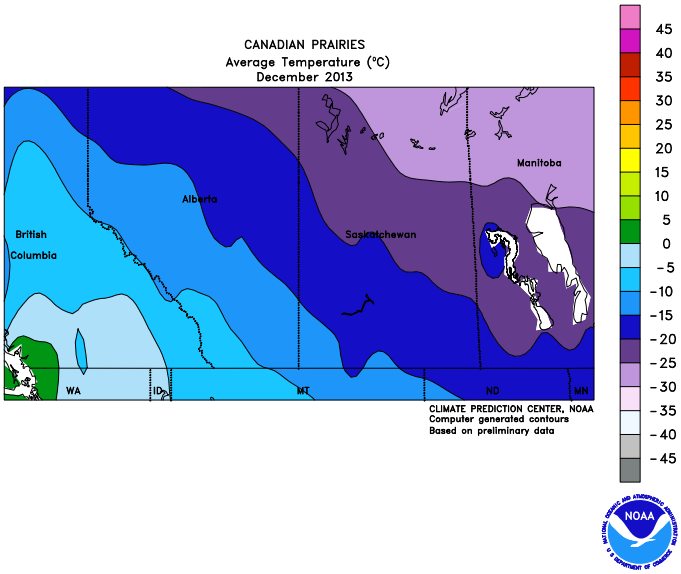


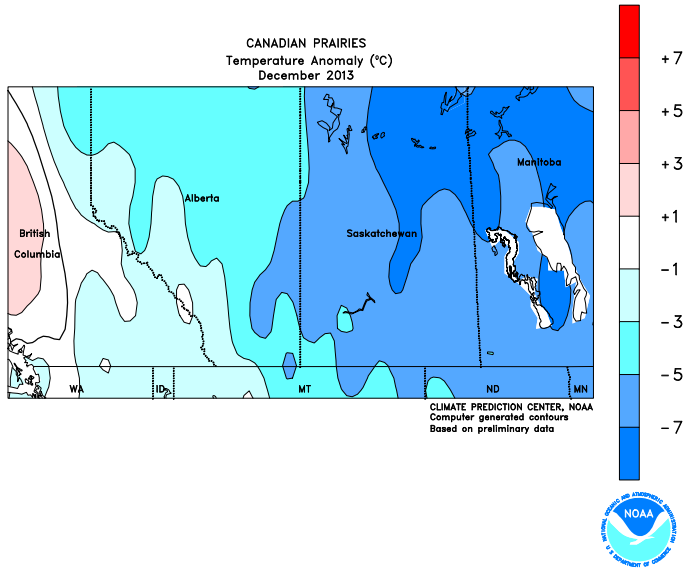
MEXICO

During December, above-normal rainfall increased moisture for reservoirs and development of rain-fed winter grains. Across the north, much of the rain came at the end of the month as a cold front drove southward to the southern plateau, although light showers were scattered throughout the northwest in early December. In the northeast, the unseasonable moisture was timely for germination of rain-fed winter sorghum, which is typically planted in January and February. Similarly, the rainfall benefited winter grains on the southern plateau. Temperatures were below normal during the latter half of December in the wake of the frontal passage, but freezing temperatures were confined to northern interior sections of the country, away from the main winter growing areas. Elsewhere, periods of heavy rain increased irrigation reserves for winter-grown fruit in farming areas near the Gulf Coast for much of the month but drier weather prevailed along the southern Pacific Coast. According to the government of Mexico, total national reservoir capacity was at 67.3 percent as of December 30, compared with 47.5 percent last year and 53.9 percent in 2011. In the northwest (Sonora and Sinaloa), capacity was 59.9 percent, compared with 39.8 percent last year and 37.2 percent in 2011.



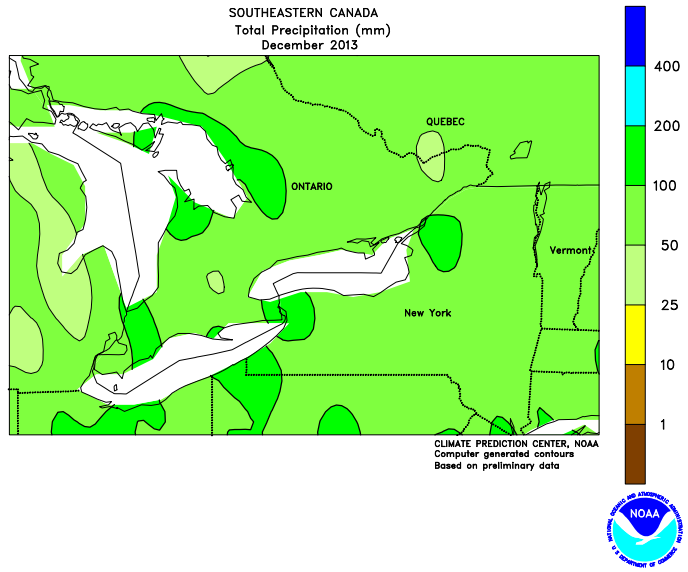


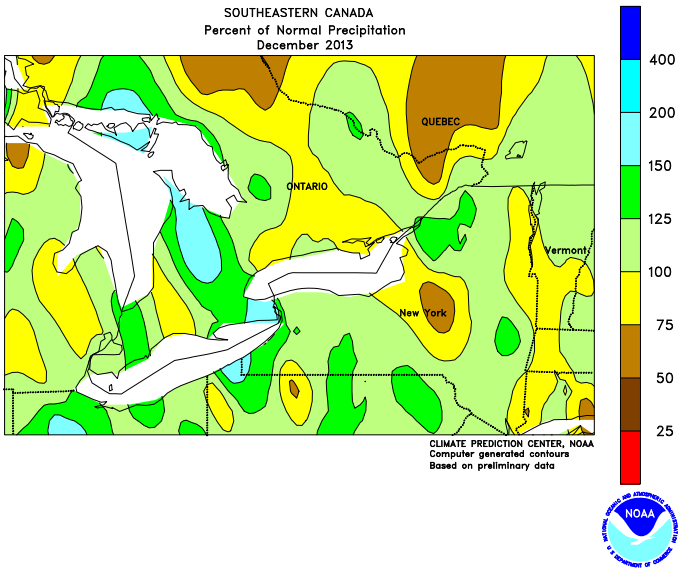


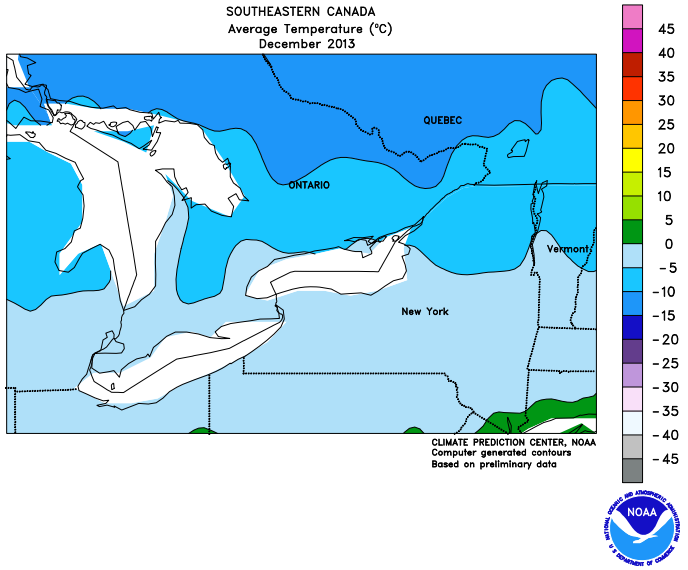


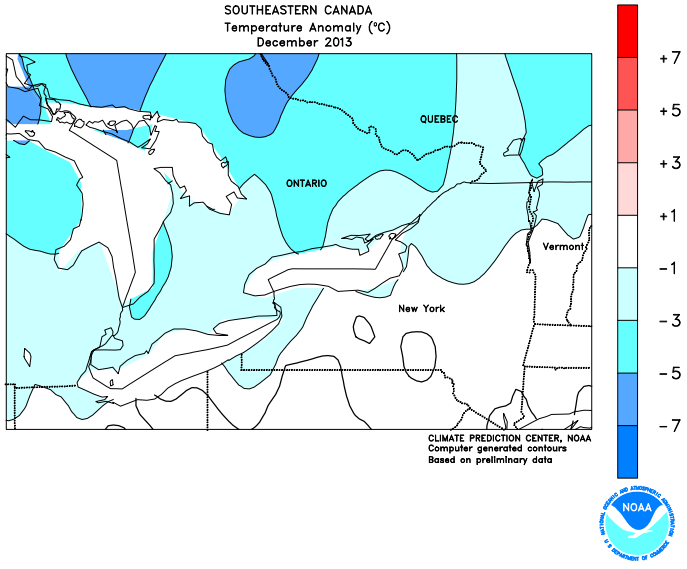
CANADIAN PRAIRIES

Bitter cold dominated the Prairies for much of December. Monthly temperatures averaged 5°C or more below normal throughout much of the region, with nighttime lows falling below -30°C at different times of the month. Based on estimates of snow cover, some southern locations may have had only a shallow layer of protective snow cover (less than 5 cm) during earlier cold outbreaks, raising concerns for potential winterkill of grains and pastures. Monthly precipitation was unseasonably light throughout most of Saskatchewan and Manitoba and southern sections of Alberta, although the additional snowfall (5-25 mm, liquid equivalent) was welcome. Wetter conditions (greater than 25 mm, liquid equivalent) resulted in locally deep snow cover (estimated greater than 30 cm) in Alberta's northern farming areas and in nearby locations in Saskatchewan.









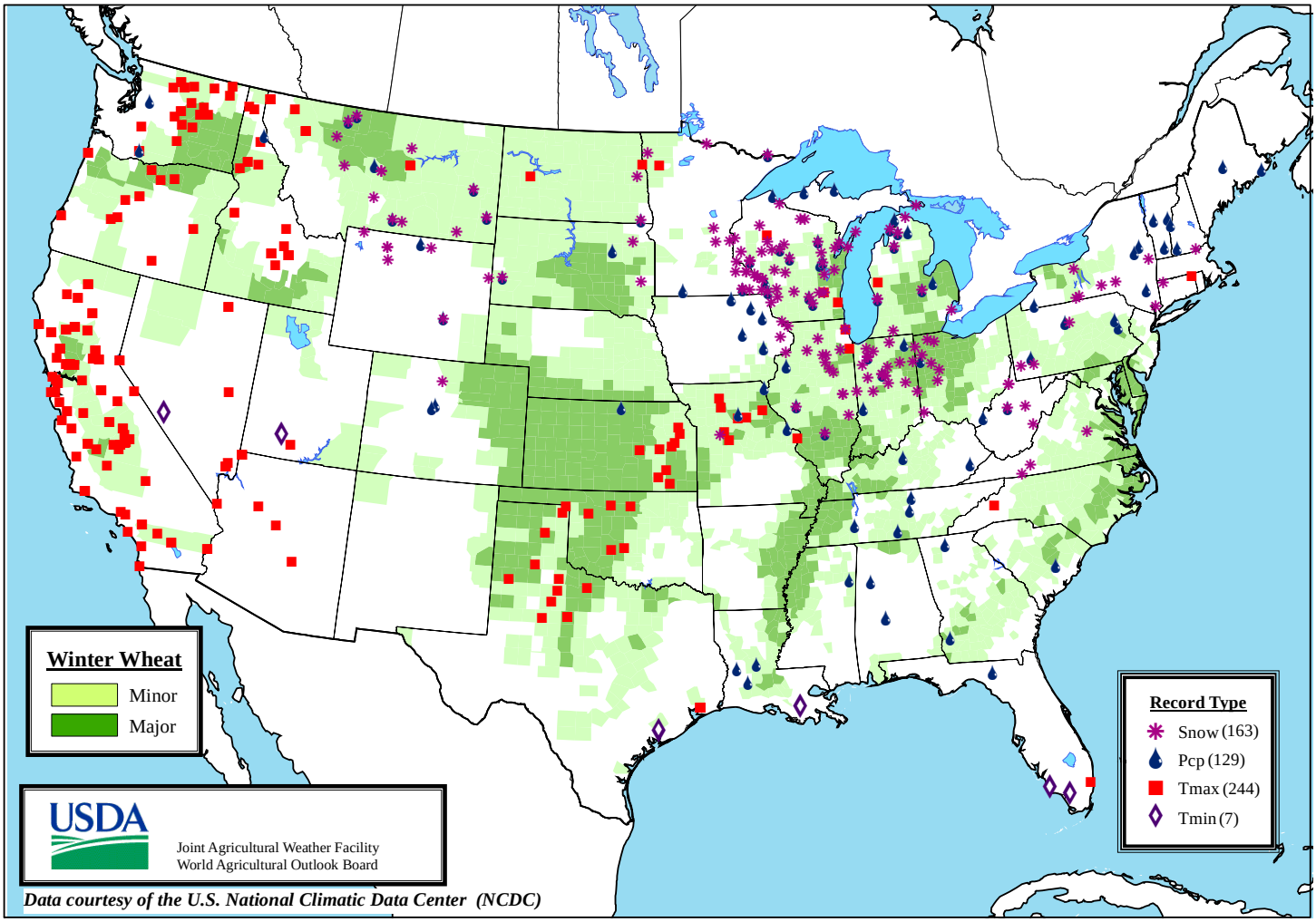
SOUTHEASTERN CANADA

Colder conditions gradually enveloped the region in December after a brief spell of mild weather. Above-normal temperatures (daytime highs exceeding 10°C on the warmest day) and light rain at the beginning of the month eroded the snow cover over a broad section of southwestern Ontario, leaving winter grains and pastures exposed to potential damage from extreme temperatures. In mid-December, an arctic outbreak dropped temperatures below -20°C throughout the region, but precipitation in advance of the coldest weather provided Ontario crops with a protective blanket of snow. About 10 days later, another arctic front brought similar conditions, although by that time Ontario had received additional snowfall, further allaying fears of potential damage from the cold. Quebec enjoyed deeper snow cover during both events and crops were more fully protected. Averaged over the entire month, temperatures were 2 to 3°C below normal and precipitation was variable, with most locations recording amounts between 50 and 100 mm (liquid equivalent).

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

Daily Weather Records (ASOS & COOP)

January 12-18, 2014



The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. The contents may be redistributed freely with proper credit.

Correspondence to the meteorologists should be directed to:
***Weekly Weather and Crop Bulletin*, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**
Internet URL: **http://www.usda.gov/oce/weather**
E-mail address: ***brippey@oce.usda.gov***

The *Weekly Weather and Crop Bulletin* and archives are maintained on the following USDA Internet URL:
http://www.usda.gov/oce/weather/pubs/Weekly/Wwcb/index.htm