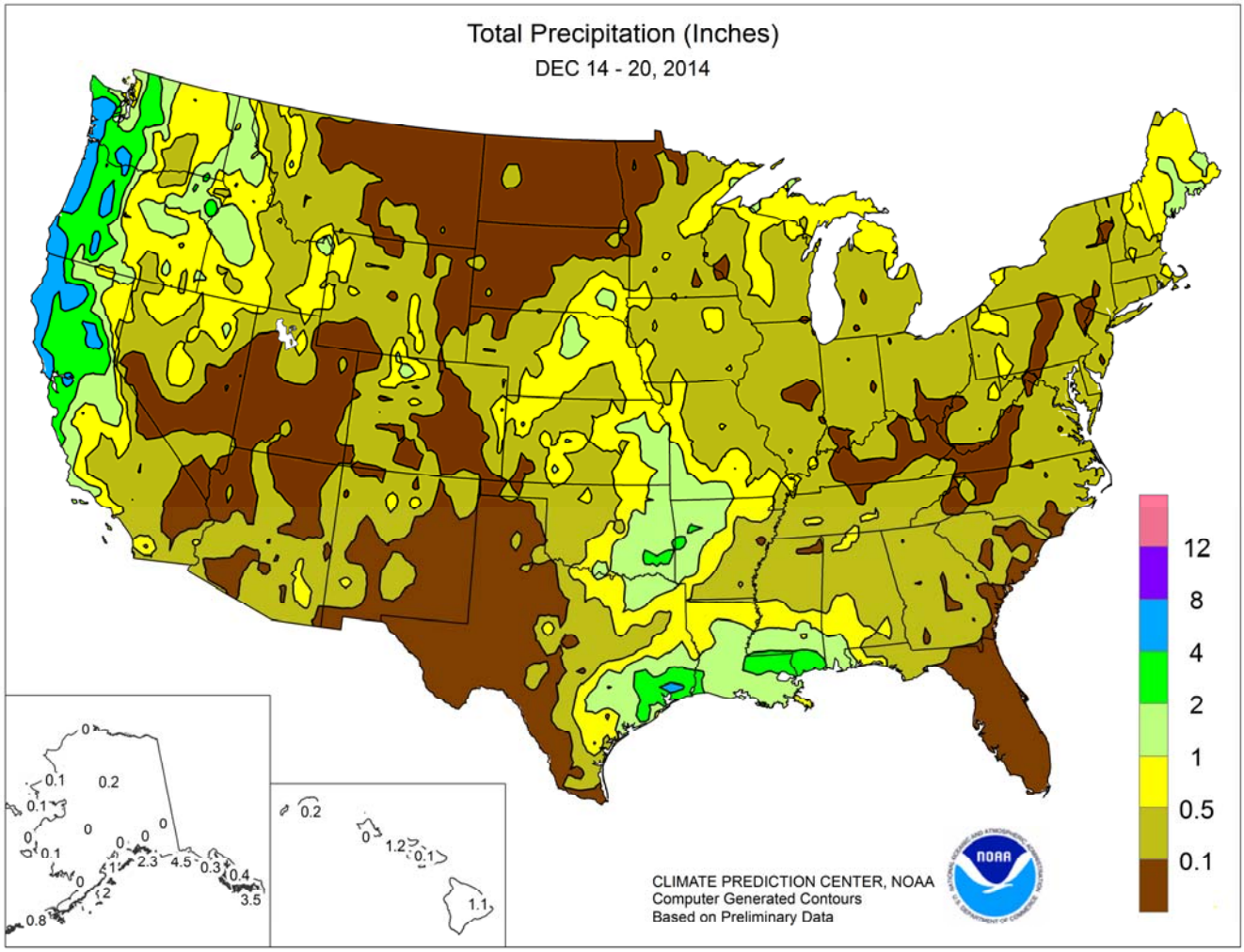
Volume 101, No. 51 http://www.usda.gov/oce/weather December 23, 2014

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

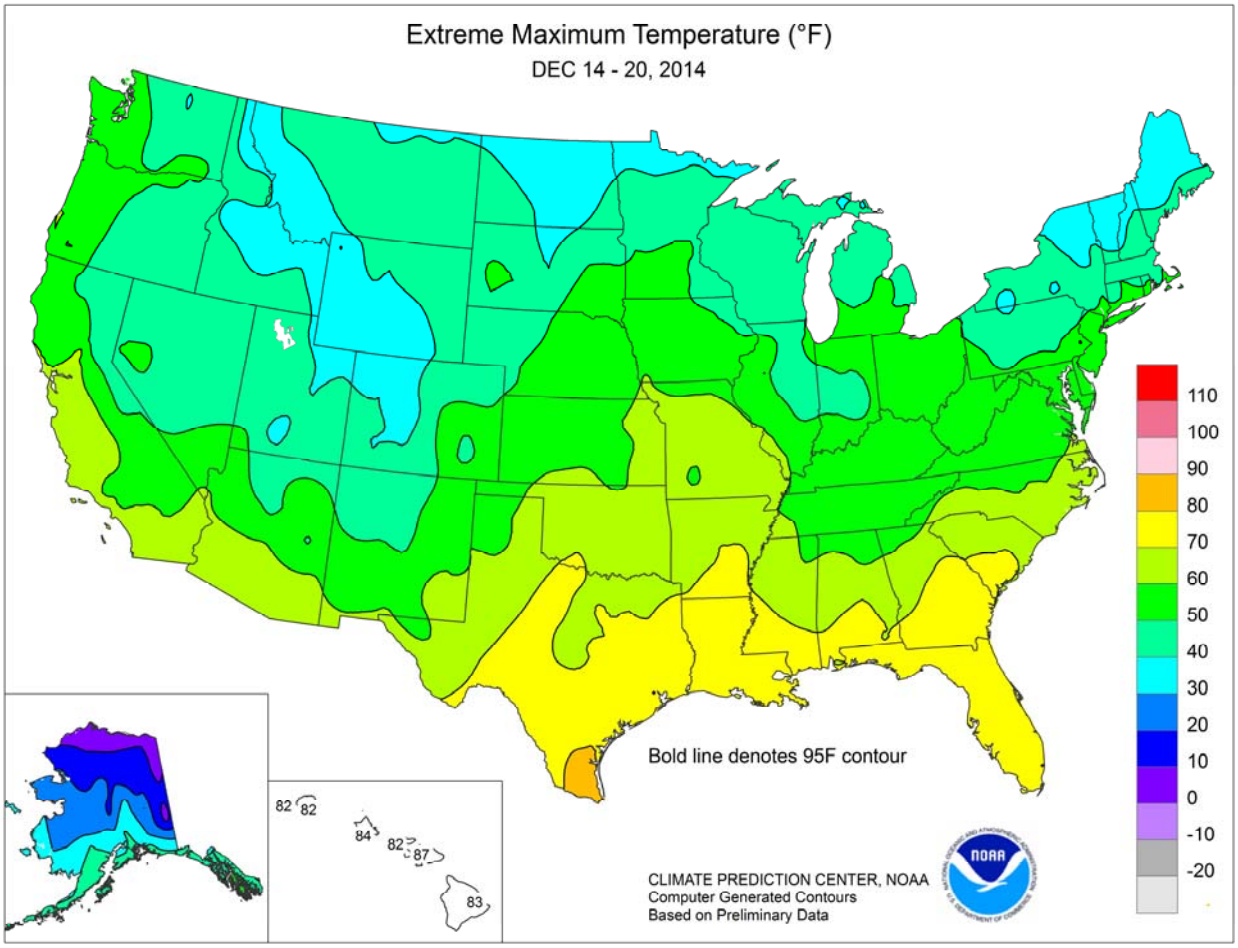
December 14 – 20, 2014

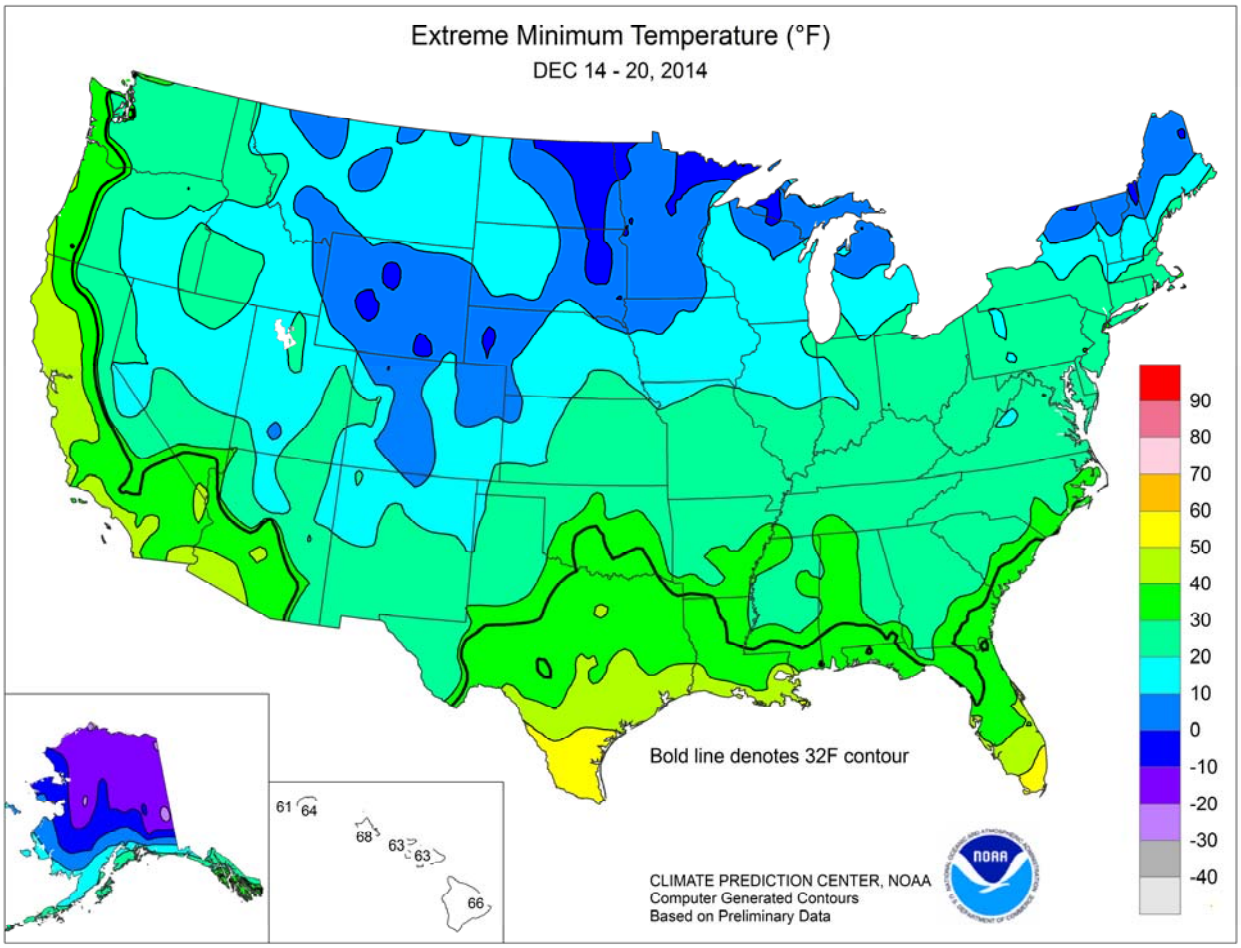
Highlights provided by USDA/WAOB

Unsettled, showery weather in **California** provided additional drought relief, primarily across the northern half of the state. After mid-week, however, heavy precipitation shifted into the **Northwest** and spread farther inland across the remainder of the **West**. In many alpine locations, particularly across the **Pacific Coast States** and the **Southwest**, a lack of snow accumulation remained a concern with respect to spring runoff prospects. Meanwhile, widespread precipitation occurred in most other areas of the country, although amounts were

(Continued on page 3)

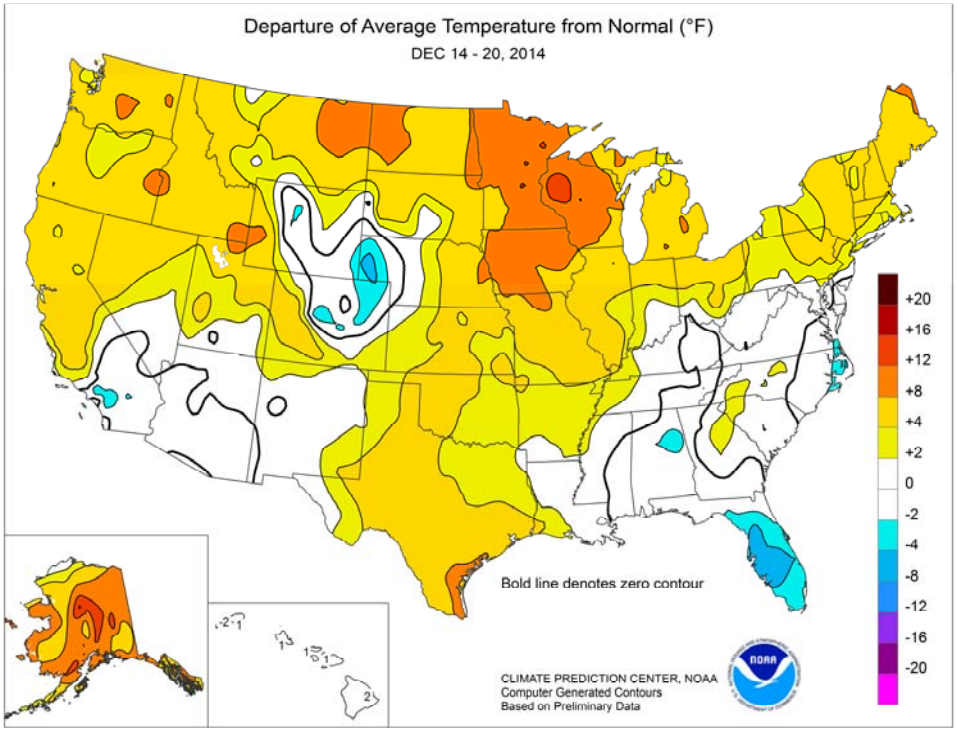
Contents


Extreme Maximum Temperature (°F)
DEC 14 - 20, 2014
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95F contour
82 82
84
82
87
83
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
DEC 14 - 20, 2014
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32F contour
61 64
68
63
63
66
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

(Continued from front cover)

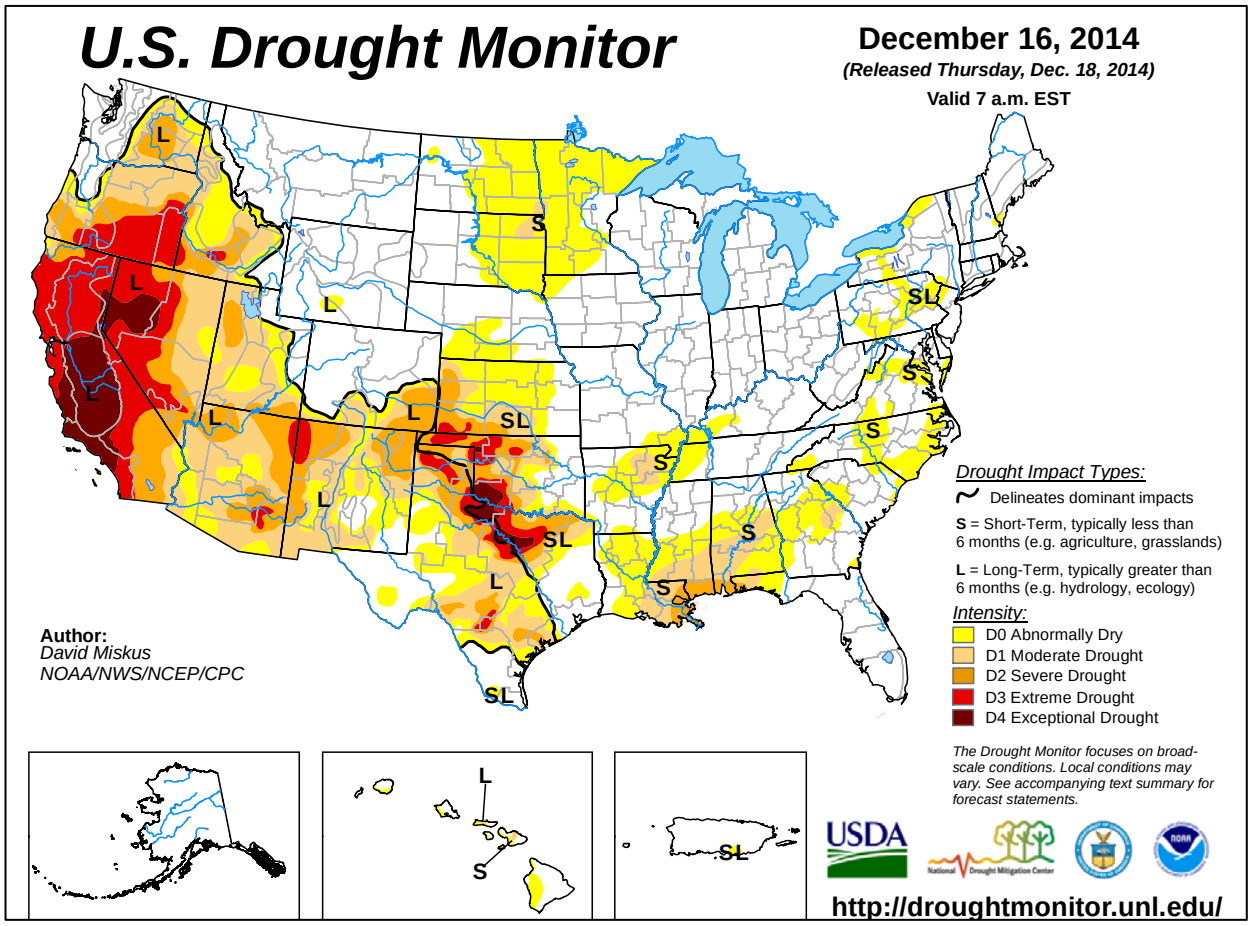
generally light. One exception was the **western and central Gulf Coast regions**, where heavy, late-week rain halted fieldwork but boosted topsoil moisture and aided pastures and winter grains. Another exception included portions of the **Plains**, where early- to mid-week precipitation (rain and snow) benefited winter wheat, following a relatively dry autumn. Mostly dry weather persisted, however, on the **southern High Plains**. Farther east, dry weather lingered through week's end in the **southern Atlantic region**, allowing late-season fieldwork to advance. In contrast, mild, damp weather and muddy fields hampered final corn harvest efforts in **Wisconsin** and elsewhere in the **Great Lakes States**. Warmth continued to dominate most of the U.S., with weekly temperatures averaging at least 10°F above normal in the **upper Mississippi Valley**. For the most part, unusually cool conditions were limited to **Florida's peninsula**, where readings averaged as much as 5°F below normal.

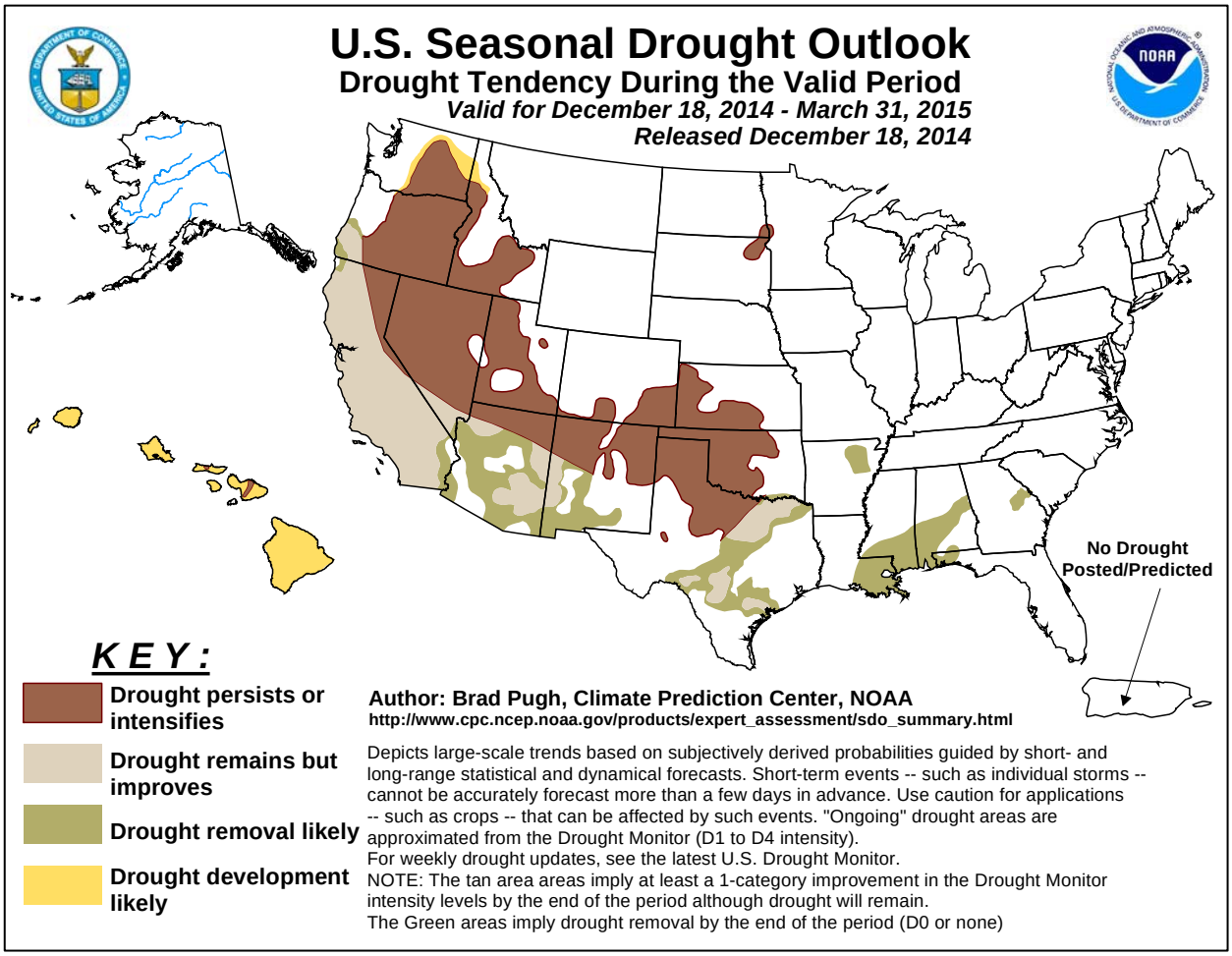


Warmth lingered early in the week across the **nation's mid-section**, where **Omaha, NE**, posted a daily-record high (59°F on December 14). **Omaha** also tied a monthly record with a December 14 low temperature of 52°F (previously, 52°F on December 22, 1877). Elsewhere on the 14th, monthly high minimum temperature records were also set or tied in locations such as **Lincoln, NE** (53°F), and **St. Cloud, MN** (42°F). Later, however, **Valentine, NE**, netted a daily-record snowfall (3.5 inches) on December 15, shortly after noting seven consecutive highs (from December 7-13) of 50°F or greater. Farther west, mid- to late-week highs surged to daily-record levels in locations such as **Bellingham, WA** (56°F on December 18), and **Portland, OR** (59°F on December 20).

In mid-December, a respectable snow storm crossed the **northern Intermountain West**, as well as portions of the **Plains** and **upper Midwest**. In **Wyoming**, December 14-15 snowfall totaled 9.3 inches in **Casper** and 5.6 inches in **Lander**. **Sioux Falls, SD**, received a daily-record precipitation total (0.79 inch on December 15), along with 2.0 inches of snow. **Minneapolis-St. Paul, MN**, received a 0.8-inch snowfall on December 16, a day after tallying a daily-record high of 51°F. Meanwhile, portions of the **central Plains** received rain, followed by snow. **Goodland, KS**, collected a daily-record precipitation total of 0.87 inch on December 14 and received 1.2 inches of snow on December 17-18. Elsewhere, December 17-18 snowfall included 2.7 inches in **Wichita, KS**, and 2.6 inches in **Kansas City, MO**. Later, heavy precipitation in **northern New England** led to a daily-record total of 0.83 inch on December 18, along with 8.3 inches of snow, in **Caribou, ME**. Periods of heavy precipitation also affected **northern California**, resulting in daily-record rainfall totals in locations such as **Stockton** (0.93 inch on December 15) and **Sacramento** (0.99 inch on December 17). Through December 20, month-to-date rainfall surpassed the 10-inch mark in **San Francisco** (10.60 inches, or 434 percent of normal) and **Redding** (10.21 inches, or 262 percent). Meanwhile, late-week rainfall in the **Gulf Coast region** led to daily-record totals for December 19 in **Houston, TX** (3.06 inches), and **Baton Rouge, LA** (2.41 inches). Late-week precipitation also hammered the **Northwest**, resulting in record-setting amounts for December 20 in **Crescent City, CA** (2.84 inches); **Hoquiam, WA** (1.88 inches); **Burns, OR** (0.77 inch); **Boise, ID** (0.71 inch); and **Winnemucca, NV** (0.66 inch). In contrast, 23-day (November 27 – December 19) dry spells ended with some light rain on December 20 in **Georgia** locations such as **Alma** (0.04 inch) and **St. Simons Island** (0.01 inch).

Mild, mostly dry weather continued across the **Alaskan mainland**, while heavy precipitation accompanied above-normal temperatures across the southeastern part of the state. On December 14-15, the week opened with consecutive daily-record highs in locations such as **Port Alexander** (48 and 49°F) and **Klawock** (52°F both days). Other daily-record highs included 52°F (on December 15) in **Petersburg** and 45°F (on December 20) in **Yakutat**. Meanwhile, the month-to-date precipitation climbed to 9.92 inches (140 percent of normal) on **Annette Island**, aided by a 2.16-inch total on December 20. In **Yakutat**, weekly rainfall totaled 4.48 inches. Farther south, **Hawaii** experienced warm, mostly dry weather. **Kahului** posted a daily record-tying high of 87°F on December 20. Through December 20, month-to-date rainfall ranged from one-quarter to one-half inch (10 to 20 percent of normal) in **Honolulu**, **Kahului**, and **Lihue**, and totaled 4.42 inches (56 percent) in **Hilo**. Much heavier rain arrived across **western Hawaii**, including **Kauai**, on December 21.


U.S. Drought Monitor
December 16, 2014
(Released Thursday, Dec. 18, 2014)
Valid 7 a.m. EST
Author:
David Miskus
NOAA/NWS/NCEP/CPC
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://droughtmonitor.unl.edu/


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for December 18, 2014 - March 31, 2015
Released December 18, 2014
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/sdo_summary.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)

The California Drought in Charts and Numbers

Highlights: During the last 3 weeks, precipitation in California has begun to chip away at staggering, 3-year rainfall deficits. The rain has boosted topsoil moisture, benefited winter grains, and allowed rangeland and pastures to begin a gradual recovery process. However, major long-term impacts—such as low reservoir levels and groundwater depletion—remain. In addition, California's recent spate of wet weather did not result in much high-elevation snow, leading to concerns about a spring runoff shortfall unless "colder" storms materialize during the next few months.

Figure 1

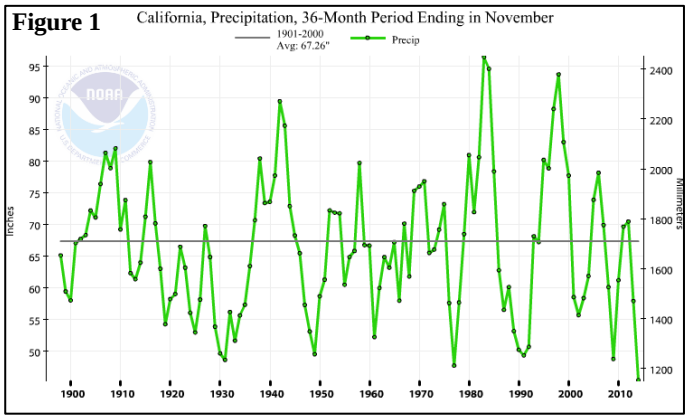


Figure 1. *California recently completed its driest 36 months on record for all 3-year periods ending in November, according to the National Climatic Data Center. From December 2011 – November 2014, California's precipitation averaged 45.39 inches, just 67% of normal. Effectively, the state has received 2 years of precipitation in the last 3 years. Previously, the previous driest such period occurred from December 1974 – November 1977, when an average of 47.68 inches fell.*

Figure 2 California, Average Temperature, 36-Month Period Ending in November

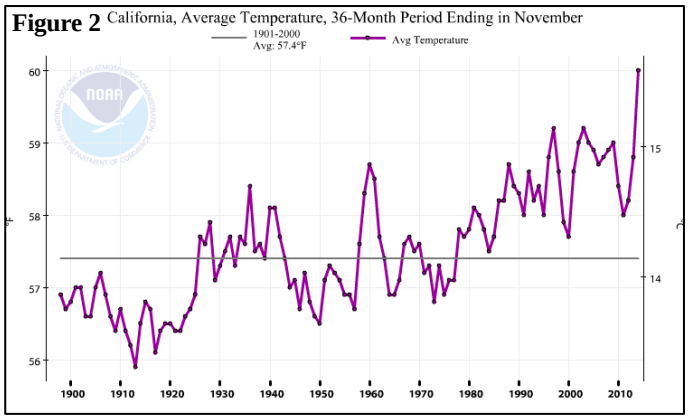


Figure 2. *Consistently high temperatures have complicated California's drought situation by increasing evaporation rates and boosting irrigation demands. Since 1895, California's temperatures have never been higher than they have been over the last 3 years. From December 2011 – November 2014, California's average temperature of 60.0°F was 2.6°F above the 20th century mean.*

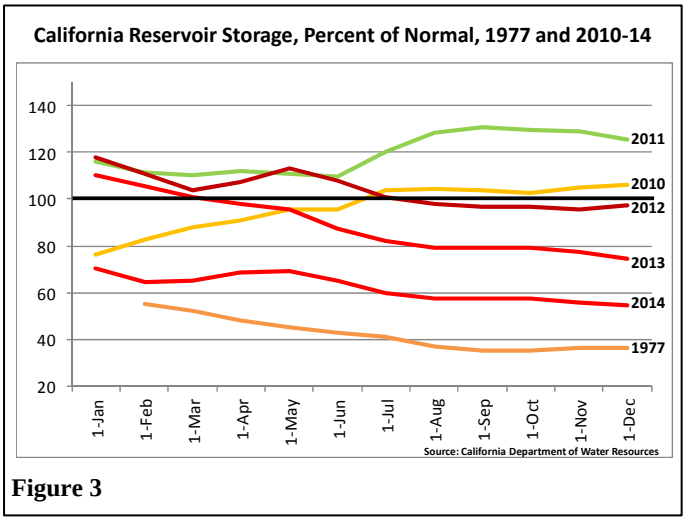


Figure 3

Figure 3. *California's 154 in-state reservoirs continue to languish at near-record low levels. At the end of November, storage was just 55% of the long-term average, according to the California Department of Water Resources. Only 1977 featured lower storage at this time of year. During the current drought, which began in late 2011, statewide reservoir storage fell below the historic average in March 2013. This lag in reservoir impacts helps to highlight the disconnect that exists in California (and elsewhere in the western U.S.) between meteorological drought and managed water systems.*

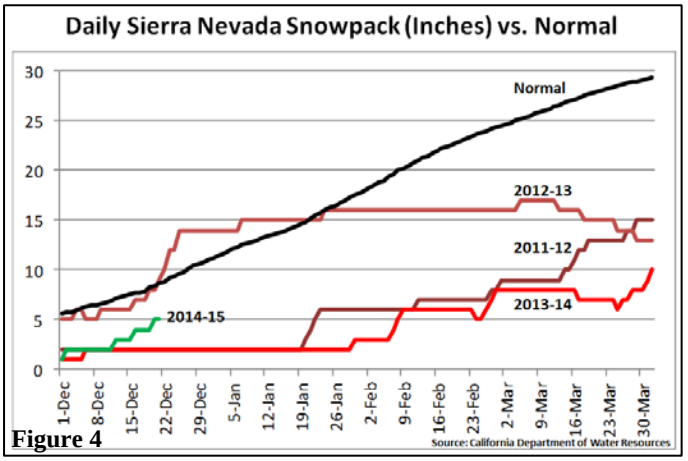


Figure 4

Figure 4. *In the Sierra Nevada, snowpack has improved during a stormy period in December 2014 but remains below average.*

Location	Total	Normal		Location	Total	Normal
SFO Airport	10.62	2.59		Redding	10.24	4.11
Sacramento	8.59	2.11		Eureka	8.84	5.58
LAX Airport	3.73	1.24		San Diego	4.42	0.95
Bakersfield	1.87	0.64		Fresno	2.29	1.08

Table 1. *Three-week rainfall and normal values (both in inches) in selected California cities, December 1-21, 2014, are shown.*

National Weather Data for Selected Cities

Weather Data for the Week Ending December 20, 2014

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE 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	54	33	63	32	44	-2	0.40	-0.54	0.17	2.19	78	44.80	86	93	54	0	4	3	0
	HUNTSVILLE	52	35	58	32	44	1	0.50	-0.73	0.50	2.06	57	49.78	90	84	62	0	2	1	1
	MOBILE	62	41	71	35	51	-1	1.68	0.70	1.15	1.87	61	69.31	107	95	59	0	0	3	1
	MONTGOMERY	61	35	73	29	48	-1	0.36	-0.74	0.16	0.39	12	44.09	83	90	46	0	3	3	0
AK	ANCHORAGE	31	22	36	14	26	8	0.01	-0.23	0.01	0.33	49	18.24	116	84	72	0	7	1	0
	BARROW	-7	-15	1	-21	-11	0	0.02	0.02	0.02	0.05	500	7.95	197	82	75	0	7	1	0
	FAIRBANKS	16	-2	23	-11	7	13	0.00	-0.17	0.00	0.00	0	16.23	162	81	75	0	7	0	0
	JUNEAU	41	33	46	29	37	8	0.29	-0.93	0.25	2.21	65	67.59	120	93	78	0	4	3	0
	KODIAK	43	35	45	25	39	8	1.95	0.25	0.47	7.15	153	82.80	114	93	81	0	2	7	0
	NOME	25	13	30	2	19	11	0.05	-0.17	0.05	0.25	37	13.90	86	79	65	0	7	1	0
AZ	FLAGSTAFF	40	20	45	10	30	0	0.29	-0.10	0.20	2.71	242	19.93	90	91	57	0	7	2	0
	PHOENIX	64	48	66	45	56	2	0.07	-0.12	0.07	0.80	154	8.25	105	81	57	0	0	1	0
	PRESCOTT	50	30	55	25	40	3	0.00	-0.28	0.00	1.81	229	12.12	65	83	41	0	5	0	0
	TUCSON	62	41	68	37	51	-1	0.34	0.12	0.33	1.47	263	9.49	81	87	63	0	0	2	0
AR	FORT SMITH	48	38	66	29	43	2	1.96	1.21	1.10	2.15	86	41.98	98	91	70	0	2	3	2
	LITTLE ROCK	53	39	71	32	46	3	0.41	-0.64	0.15	1.92	58	46.87	95	86	55	0	1	4	0
CA	BAKERSFIELD	60	44	65	39	52	5	0.31	0.16	0.20	1.87	468	3.87	63	88	67	0	0	3	0
	FRESNO	59	45	62	39	52	7	0.49	0.22	0.30	2.29	314	7.45	70	91	78	0	0	3	0
	LOS ANGELES	62	50	64	48	56	-1	0.91	0.54	0.73	3.66	373	7.92	64	86	67	0	0	2	1
	REDDING	51	46	54	38	49	4	3.84	2.85	1.04	10.19	372	33.75	107	98	91	0	0	6	4
	SACRAMENTO	57	49	62	45	53	7	2.54	2.03	0.99	8.60	597	18.74	111	94	68	0	0	4	3
	SAN DIEGO	65	53	68	50	59	2	0.84	0.58	0.52	4.42	650	7.68	76	79	58	0	0	2	1
	SAN FRANCISCO	60	52	63	49	56	7	2.99	2.39	1.50	10.61	632	20.65	109	97	87	0	0	7	2
	STOCKTON	57	47	62	42	52	7	2.24	1.87	0.92	6.02	563	14.16	108	94	85	0	0	6	2
CO	ALAMOSA	36	8	41	2	22	5	0.09	0.03	0.06	0.16	89	5.47	77	86	65	0	7	2	0
	CO SPRINGS	43	21	52	17	32	3	0.02	-0.06	0.01	0.04	20	16.91	98	90	38	0	7	2	0
	DENVER INTL	42	20	49	13	31	2	0.08	0.02	0.08	0.08	47	18.26	135	87	47	0	7	1	0
	GRAND JUNCTION	40	27	42	23	34	6	0.19	0.10	0.11	0.55	204	11.44	131	95	77	0	7	4	0
	PUEBLO	45	17	55	13	31	1	0.04	-0.03	0.04	0.04	19	11.62	95	87	72	0	7	1	0
CT	BRIDGEPORT	45	33	54	29	39	4	0.24	-0.50	0.19	4.42	205	44.94	105	80	59	0	4	2	0
	HARTFORD	42	29	51	24	35	4	0.46	-0.31	0.26	3.81	166	45.07	100	82	60	0	5	2	0
DC	WASHINGTON	50	36	58	30	43	3	0.40	-0.26	0.40	2.08	109	42.98	113	71	50	0	1	1	0
DE	WILMINGTON	46	31	54	27	39	3	0.10	-0.64	0.10	1.85	86	49.74	120	84	57	0	5	1	0
FL	DAYTONA BEACH	72	45	77	40	59	-2	0.00	-0.58	0.00	0.24	14	61.22	127	95	37	0	0	0	0
	JACKSONVILLE	69	39	76	31	54	-1	0.00	-0.56	0.00	0.01	1	51.73	101	99	38	0	1	0	0
	KEY WEST	76	64	79	63	70	-2	0.00	-0.46	0.00	0.01	1	34.38	90	86	59	0	0	0	0
	MIAMI	78	59	80	57	69	-1	0.00	-0.48	0.00	0.88	59	63.16	109	81	45	0	0	0	0
	ORLANDO	74	46	78	41	60	-3	0.00	-0.50	0.00	0.72	48	54.46	115	93	38	0	0	0	0
	PENSACOLA	63	44	71	39	53	-1	1.18	0.35	0.59	1.39	57	81.06	129	92	56	0	0	3	2
	TALLAHASSEE	68	38	79	29	53	-1	0.19	-0.68	0.14	0.23	10	59.92	97	84	49	0	2	2	0
	TAMPA	72	49	77	44	60	-3	0.00	-0.52	0.00	0.18	12	56.48	129	88	51	0	0	0	0
	WEST PALM BEACH	78	54	79	51	66	-2	0.00	-0.64	0.00	0.41	18	59.93	99	87	47	0	0	0	0
GA	ATHENS	60	36	69	28	48	3	0.39	-0.41	0.33	0.57	25	41.31	89	90	49	0	2	2	0
	ATLANTA	57	37	66	30	47	2	0.38	-0.42	0.18	0.73	30	42.84	88	86	55	0	1	3	0
	AUGUSTA	64	31	71	25	48	1	0.14	-0.53	0.08	0.18	10	34.67	80	94	51	0	6	2	0
	COLUMBUS	61	38	66	32	49	0	0.26	-0.70	0.14	0.61	22	48.11	102	92	44	0	2	3	0
	MACON	64	35	71	27	50	2	0.23	-0.62	0.15	0.25	11	42.84	99	100	42	0	2	3	0
	SAVANNAH	67	41	77	33	54	3	0.09	-0.50	0.09	0.11	7	46.64	97	82	46	0	0	1	0
HI	HILO	80	67	83	66	74	2	1.09	-1.18	0.56	4.42	57	113.54	92	89	77	0	0	6	1
	HONOLULU	82	71	84	68	76	1	0.02	-0.62	0.01	0.33	19	20.10	117	75	67	0	0	2	0
	KAHULUI	83	67	87	63	75	2	0.07	-0.60	0.05	0.29	16	18.55	106	82	72	0	0	2	0
	LIHUE	80	69	82	64	74	1	0.21	-0.84	0.11	0.43	14	31.12	82	85	72	0	0	4	0
ID	BOISE	44	32	47	26	38	8	0.66	0.36	0.51	1.61	181	13.72	117	83	68	0	3	2	1
	LEWISTON	44	33	47	29	39	5	0.75	0.53	0.40	1.58	239	11.83	96	95	77	0	2	3	0
	POCATELLO	39	25	42	16	32	7	0.07	-0.15	0.02	0.35	53	12.23	101	95	78	0	5	4	0
IL	CHICAGO/O'HARE	38	31	50	19	34	6	0.08	-0.46	0.06	0.28	17	38.96	110	87	78	0	5	2	0
	MOLINE	39	27	53	15	33	6	0.25	-0.24	0.18	0.30	20	38.87	104	88	76	0	5	2	0
	PEORIA	40	28	50	18	34	6	0.44	-0.10	0.29	0.55	32	39.08	111	86	70	0	5	2	0
	ROCKFORD	36	28	48	18	32	7	0.28	-0.18	0.21	0.43	29	33.00	92	86	80	0	5	2	0
	SPRINGFIELD	40	31	51	20	36	5	0.38	-0.19	0.37	1.06	61	44.55	128	91	74	0	5	2	0
IN	EVANSVILLE	44	34	54	27	39	3	0.50	-0.29	0.47	2.46	98	46.23	107	83	74	0	4	2	0
	FORT WAYNE	39	30	53	24	35	6	0.44	-0.18	0.30	0.90	48	42.02	118	91	76	0	4	3	0
	INDIANAPOLIS	37	29	48	19	33	1	0.20	-0.47	0.19	1.24	59	40.25	101	92	78	0	5	2	0
	SOUTH BEND	40	33	55	27	37	8	0.36	-0.34	0.28	0.55	26	40.51	105	87	78	0	4	2	0
IA	BURLINGTON	40	30	54	19	35	7	0.14	-0.33	0.14	0.21	14	40.02	107	93	77	0	5	1	0
	CEDAR RAPIDS	38	26	54	12	32	8	0.21	-0.11	0.17	0.22	21	38.12	116	96	77	0	5	2	0
	DES MOINES	39	28	58	15	34	9	0.25	-0.04	0.25	0.25	27	41.19	120	85	75	0	5	1	0
	DUBUQUE	36	26	48	14	31	8	0.27	-0.10	0.22	0.42	35	36.98	106	93	78	0	5	2	0
	SIOUX CITY	35	25	56	8	30	8	0.49	0.37	0.45	0.49	111	40.45	157	88	78	0	6	2	0
	WATERLOO	37	26	54	10	32	10	0.82	0.59	0.73	0.87	107	34.13	104	92	83	0	5	2	1
KS	CONCORDIA	39	29	58	22	34	4	0.58	0.41	0.38	0.59	105	27.05	96	96	84	0	6	4	0
	DODGE CITY	43	29	59	20	36	3	0.45	0.28	0.32	0.92	196	23.11	105	90	61	0	6	4	0
	GOODLAND	42	21	54	7	32	2	0.94	0.88	0.87	0.94	448	17.35	89	92	78	0	7	3	1
	TOPEKA	43	32	62	24	38	6	1.03	0.72	0.72	2.12	210	31.00	88	88	77	0	6	4	1

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

Weather Data for the Week Ending December 20, 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
	WICHITA	45	34	59	28	39	5	0.52	0.23	0.25	1.12	126	25.42	85	86	73	0	5	3	0
KY	JACKSON	43	32	54	27	37	-1	0.07	-0.89	0.05	1.64	57	53.01	110	85	60	0	4	3	0
	LEXINGTON	41	31	52	22	36	0	0.04	-0.87	0.04	2.65	102	53.54	120	87	74	0	4	1	0
	LOUISVILLE	44	34	56	27	39	1	0.24	-0.57	0.23	2.82	115	42.52	98	82	66	0	4	2	0
	PADUCAH	47	36	57	28	41	4	0.82	-0.18	0.67	1.82	59	45.76	95	88	68	0	2	2	1
LA	BATON ROUGE	64	44	77	34	54	2	2.56	1.40	2.41	2.57	78	58.58	96	92	59	0	0	4	1
	LAKE CHARLES	66	49	77	40	58	5	1.03	0.06	1.00	1.04	36	67.63	122	89	65	0	0	2	1
	NEW ORLEANS	65	49	79	46	57	2	1.28	0.17	1.21	1.28	38	52.06	83	82	61	0	0	3	1
	SHREVEPORT	57	43	74	35	50	2	1.63	0.61	1.34	2.89	98	40.34	81	94	63	0	0	4	1
ME	CARIBOU	29	21	36	4	25	9	0.80	0.10	0.50	3.93	196	44.34	122	91	81	0	7	3	1
	PORTLAND	41	29	46	22	35	7	0.77	-0.17	0.70	4.63	168	54.23	122	88	66	0	6	2	1
MD	BALTIMORE	46	31	54	24	39	2	0.34	-0.39	0.34	2.28	109	51.28	126	84	61	0	4	1	0
MA	BOSTON	42	33	49	27	38	3	0.44	-0.39	0.43	5.44	228	44.13	107	85	65	0	3	2	0
	WORCESTER	37	28	44	23	33	4	0.51	-0.32	0.35	4.03	168	52.72	111	91	70	0	6	2	0
MI	ALPENA	36	24	47	8	30	6	0.68	0.29	0.54	0.76	67	33.85	122	96	73	0	4	4	1
	GRAND RAPIDS	39	30	49	17	35	7	0.06	-0.54	0.04	0.18	9	38.84	107	92	76	0	4	3	0
	HOUGHTON LAKE	35	24	44	6	29	5	0.35	-0.03	0.14	0.44	39	29.99	108	94	86	0	4	3	0
	LANSING	39	29	51	17	34	7	0.23	-0.25	0.14	0.38	25	36.29	117	89	80	0	4	3	0
	MUSKEGON	40	30	50	18	35	6	0.09	-0.48	0.07	0.46	26	37.34	117	87	78	0	4	3	0
	TRAVERSE CITY	38	28	48	12	33	6	0.16	-0.42	0.10	0.39	24	37.83	117	92	79	0	4	4	0
MN	DULUTH	30	21	43	10	26	12	0.71	0.53	0.65	0.88	126	30.23	98	88	82	0	6	4	1
	INT'L FALLS	27	15	38	-2	21	12	0.30	0.16	0.17	0.50	104	29.89	126	90	78	0	6	5	0
	MINNEAPOLIS	34	23	51	9	28	9	0.26	0.06	0.19	0.28	41	34.84	120	87	82	0	6	4	0
	ROCHESTER	33	23	47	10	28	11	0.19	-0.01	0.19	0.20	27	32.42	104	91	86	0	5	1	0
	ST. CLOUD	33	21	50	8	27	12	0.51	0.37	0.45	0.57	127	36.53	136	87	74	0	6	5	0
MS	JACKSON	59	39	70	31	49	1	0.75	-0.43	0.42	0.80	23	53.07	98	93	57	0	1	3	0
	MERIDIAN	59	35	67	29	47	-2	0.52	-0.64	0.50	0.72	21	46.33	82	95	64	0	2	2	1
	TUPELO	52	37	59	32	45	2	0.35	-1.04	0.32	2.16	55	54.16	101	85	64	0	1	3	0
MO	COLUMBIA	44	33	67	23	39	7	0.46	-0.09	0.33	1.72	95	43.66	110	94	76	0	4	3	0
	KANSAS CITY	41	32	62	22	36	5	0.92	0.57	0.61	1.59	136	39.75	106	92	77	0	6	3	1
	SAINT LOUIS	46	36	63	30	41	7	0.34	-0.29	0.33	1.80	88	42.50	112	78	69	0	4	2	0
	SPRINGFIELD	44	35	58	24	39	3	0.85	0.15	0.34	1.35	56	38.17	86	92	80	0	2	4	0
MT	BILLINGS	35	24	40	20	30	4	0.29	0.15	0.26	0.29	81	13.64	94	83	68	0	7	2	0
	BUTTE	30	9	36	0	20	2	0.02	-0.09	0.01	0.20	65	14.47	115	91	68	0	7	2	0
	CUT BANK	31	14	42	2	23	1	0.00	-0.06	0.00	0.05	31	14.98	121	89	74	0	7	0	0
	GLASGOW	32	20	45	17	26	10	0.00	-0.07	0.00	0.03	18	14.93	135	85	79	0	7	0	0
	GREAT FALLS	36	23	48	11	29	5	0.07	-0.07	0.07	0.25	71	19.26	132	88	65	0	7	1	0
	HAVRE	***	***	***	***	***	***	***	***	***	***	***	11.40	102	***	***	***	***	***	***
	MISSOULA	34	26	38	23	30	7	0.08	-0.17	0.07	0.45	64	14.83	111	89	77	0	7	2	0
NE	GRAND ISLAND	36	26	58	20	31	5	0.45	0.33	0.31	0.45	94	27.24	106	91	84	0	6	3	0
	LINCOLN	39	30	59	20	34	7	0.89	0.72	0.48	0.89	148	34.41	122	88	79	0	6	3	0
	NORFOLK	35	26	58	19	31	7	0.63	0.51	0.37	0.63	134	29.14	110	88	83	0	6	3	0
	NORTH PLATTE	34	19	53	12	27	1	0.63	0.55	0.49	0.63	263	21.11	108	92	77	0	7	2	0
	OMAHA	39	29	59	17	34	8	0.76	0.58	0.59	0.77	113	38.23	128	90	81	0	6	3	1
	SCOTTSBLUFF	31	9	47	1	20	-6	0.80	0.69	0.57	0.80	229	18.59	115	90	82	0	7	2	1
	VALENTINE	32	17	42	9	25	1	0.45	0.39	0.31	0.45	205	21.34	110	89	81	0	7	2	0
NV	ELY	39	17	44	10	28	2	0.01	-0.08	0.01	0.33	138	8.86	91	90	69	0	7	1	0
	LAS VEGAS	55	42	57	39	49	2	0.02	-0.06	0.02	0.30	150	1.81	42	72	55	0	0	1	0
	RENO	48	32	51	26	40	7	0.15	-0.04	0.08	0.84	153	4.90	69	86	62	0	5	2	0
	WINNEMUCCA	42	27	46	19	35	5	0.88	0.71	0.66	1.00	213	8.39	105	87	72	0	5	2	1
NH	CONCORD	38	26	43	16	32	6	0.70	0.06	0.63	3.84	199	44.80	123	92	67	0	6	3	1
NJ	NEWARK	46	34	55	31	40	4	0.22	-0.54	0.22	3.34	146	47.76	106	76	57	0	3	1	0
NM	ALBUQUERQUE	45	30	46	24	37	1	0.16	0.07	0.14	1.10	458	8.77	95	84	50	0	7	2	0
NY	ALBANY	37	31	42	23	34	6	0.29	-0.29	0.21	3.99	225	38.31	103	81	68	0	3	2	0
	BINGHAMTON	33	27	39	21	30	3	0.21	-0.47	0.09	2.20	106	38.51	102	96	89	0	7	5	0
	BUFFALO	37	29	46	24	33	3	0.63	-0.22	0.32	1.53	60	41.79	106	90	78	0	6	2	0
	ROCHESTER	37	31	44	25	34	4	0.36	-0.25	0.29	1.65	91	32.30	98	88	78	0	4	4	0
	SYRACUSE	35	29	42	21	32	3	0.34	-0.35	0.21	2.16	99	39.64	101	97	83	0	6	4	0
NC	ASHEVILLE	54	33	64	23	44	5	0.02	-0.70	0.01	0.09	4	44.59	97	83	47	0	2	2	0
	CHARLOTTE	57	32	63	26	45	1	0.12	-0.55	0.09	0.42	22	43.31	103	77	39	0	5	2	0
	GREENSBORO	52	34	59	29	43	2	0.07	-0.59	0.07	0.53	28	34.68	83	78	46	0	2	1	0
	HATTERAS	52	36	64	33	44	-6	0.11	-0.85	0.09	1.25	46	60.64	109	96	63	0	0	2	0
	RALEIGH	53	33	60	29	43	0	0.40	-0.24	0.32	1.24	68	51.52	123	82	50	0	4	2	0
	WILMINGTON	59	35	68	31	47	-2	0.08	-0.73	0.08	0.42	18	55.20	99	96	41	0	2	1	0
ND	BISMARCK	29	16	39	11	23	7	0.00	-0.08	0.00	0.00	0	13.81	83	93	82	0	7	0	0
	DICKINSON	33	21	48	15	27	9	0.00	-0.06	0.00	0.00	0	21.79	134	86	69	0	7	0	0
	FARGO	29	16	47	2	23	10	0.04	-0.07	0.04	0.05	16	19.99	95	89	79	0	6	1	0
	GRAND FORKS	26	13	37	-1	20	8	0.05	-0.06	0.04	0.08	25	22.92	118	95	81	0	7	2	0
	JAMESTOWN	26	12	33	-3	19	5	0.00	-0.08	0.00	0.00	0	21.00	115	93	79	0	7	0	0
	WILLISTON	30	19	42	10	24	11	0.00	-0.11	0.00	0.01	3	10.67	77	85	83	0	7	0	0
OH	AKRON-CANTON	40	33	51	26	37	6	0.38	-0.29	0.32	1.51	76	44.89	120	88	73	0	4	4	0
	CINCINNATI	40	32	53	25	36	1	0.27	-0.46	0.20	2.40	112	41.09	99	75	67	0	4	2	0
	CLEVELAND	41	34	54	28	38	7	0.50	-0.20	0.34	1.46	67	43.68	116	89	71	0	4	4	0
	COLUMBUS	39	33	53	27	36	3	0.34	-0.31	0.25	1.91	96	37.30	99	82	71	0	4	2	0
	DAYTON	39	30	52	24	35	3	0.31	-0.38	0.17	2.00	98	35.17	91	85	72	0	4	2	0
	MANSFIELD	39	31	52	26	35	5	0.32	-0.40	0.30	1.32	59	35.98	85	95	76	0	4	2	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending December 20, 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	40	33	53	24	37	8	0.28	-0.31	0.17	0.43	24	31.04	96	87	76	0	4	2	0
	YOUNGSTOWN	39	32	50	26	36	5	0.50	-0.16	0.35	1.58	77	38.53	104	92	80	0	4	6	0
OK	OKLAHOMA CITY	48	39	63	33	44	4	0.40	-0.01	0.27	0.54	45	28.21	80	85	67	0	0	3	0
	TULSA	48	38	63	30	43	3	1.52	0.98	1.14	1.79	102	29.40	70	91	75	0	2	3	1
OR	ASTORIA	53	44	57	39	48	5	3.84	1.51	2.42	7.96	114	70.25	110	87	76	0	0	6	2
	BURNS	39	26	41	17	32	7	1.11	0.83	0.75	1.84	233	10.29	102	91	85	0	7	6	1
	EUGENE	50	40	57	35	45	6	2.53	0.68	1.63	5.34	95	39.12	81	94	87	0	0	7	2
	MEDFORD	52	39	54	32	45	7	0.51	-0.14	0.24	1.41	72	19.37	111	95	67	0	1	5	0
	PENDLETON	42	31	52	28	36	2	0.63	0.32	0.39	1.89	197	12.33	101	96	87	0	5	4	0
	PORTLAND	51	41	58	36	46	6	1.56	0.28	1.11	4.58	120	38.63	110	90	78	0	0	5	1
	SALEM	52	40	58	33	46	6	2.43	0.98	1.72	5.28	121	39.59	104	91	82	0	0	6	1
PA	ALLENTOWN	43	33	51	30	38	6	0.22	-0.51	0.22	2.17	99	43.23	98	77	61	0	3	1	0
	ERIE	40	33	50	27	37	4	0.68	-0.17	0.44	1.78	69	40.09	96	82	75	0	4	3	0
	MIDDLETOWN	43	31	50	25	37	3	0.19	-0.53	0.19	2.04	92	42.43	107	84	60	0	4	1	0
	PHILADELPHIA	46	34	53	32	40	3	0.12	-0.60	0.12	2.27	109	46.37	114	74	57	0	1	1	0
	PITTSBURGH	40	31	53	26	35	2	0.17	-0.45	0.12	2.01	105	36.21	98	91	73	0	4	2	0
	WILKES-BARRE	39	32	46	29	35	3	0.24	-0.32	0.16	2.16	123	30.23	82	81	66	0	3	3	0
	WILLIAMSPORT	41	34	47	30	38	7	0.09	-0.55	0.09	2.04	100	36.61	90	78	64	0	2	1	0
RI	PROVIDENCE	43	30	52	26	37	3	0.39	-0.52	0.31	5.00	188	45.68	102	85	61	0	5	2	0
SC	BEAUFORT	65	40	73	34	52	1	0.12	-0.54	0.11	0.21	12	48.43	100	93	47	0	0	2	0
	CHARLESTON	65	39	72	33	52	2	0.10	-0.59	0.10	0.36	19	49.95	100	95	48	0	0	1	0
	COLUMBIA	63	34	69	29	49	2	0.18	-0.54	0.10	0.22	11	38.53	82	87	47	0	2	2	0
	GREENVILLE	59	36	69	34	48	5	0.13	-0.70	0.07	0.59	25	46.85	96	77	42	0	0	2	0
SD	ABERDEEN	30	18	45	0	24	8	0.00	-0.06	0.00	0.00	0	17.54	88	87	80	0	7	0	0
	HURON	30	16	52	-3	23	4	0.30	0.24	0.29	0.30	136	15.98	77	94	83	0	7	2	0
	RAPID CITY	39	21	52	18	30	5	0.02	-0.06	0.02	0.02	11	21.13	129	88	64	0	7	1	0
	SIOUX FALLS	32	18	55	-1	25	7	0.81	0.72	0.79	0.81	225	28.74	117	92	83	0	6	2	1
TN	BRISTOL	47	28	55	20	37	0	0.13	-0.61	0.12	1.41	64	36.51	91	94	57	0	6	2	0
	CHATTANOOGA	50	32	57	26	41	-1	0.51	-0.53	0.33	1.25	40	42.12	80	84	60	0	3	3	0
	KNOXVILLE	45	32	52	24	39	-2	0.04	-0.95	0.04	1.52	53	38.93	84	89	63	0	4	1	0
	MEMPHIS	52	39	66	32	45	2	0.40	-0.90	0.31	1.96	49	57.00	108	83	60	0	1	2	0
	NASHVILLE	47	34	55	29	40	0	0.19	-0.82	0.14	1.63	54	49.00	105	89	64	0	3	3	0
TX	ABILENE	59	43	74	34	51	6	0.02	-0.27	0.01	0.02	3	14.51	62	75	61	0	0	2	0
	AMARILLO	48	32	57	23	40	3	0.11	-0.01	0.08	0.13	45	19.40	100	94	55	0	4	2	0
	AUSTIN	62	48	76	36	55	3	1.66	1.11	1.24	1.90	123	29.25	89	85	72	0	0	4	1
	BEAUMONT	67	52	80	44	60	6	2.22	1.07	2.16	2.25	69	50.96	88	90	63	0	0	3	1
	BROWNSVILLE	76	64	81	57	70	9	0.01	-0.22	0.01	0.89	122	28.05	103	93	73	0	0	1	0
	CORPUS CHRISTI	73	60	80	51	66	8	0.22	-0.17	0.17	0.43	41	28.75	91	88	72	0	0	4	0
	DEL RIO	66	52	77	43	59	7	0.00	-0.17	0.00	0.04	9	15.48	86	87	67	0	0	0	0
	EL PASO	58	34	62	26	46	1	0.01	-0.16	0.01	0.01	2	8.46	93	69	33	0	1	1	0
	FORT WORTH	54	46	67	39	50	3	0.64	0.06	0.37	0.67	42	20.85	62	90	68	0	0	5	0
	GALVESTON	67	57	75	51	62	4	2.77	2.02	2.24	3.12	139	31.13	73	94	74	0	0	3	1
	HOUSTON	67	53	80	44	60	6	3.86	3.06	3.07	3.99	168	42.11	91	88	70	0	0	2	2
	LUBBOCK	53	35	62	27	44	4	0.02	-0.12	0.01	0.02	5	22.19	121	88	63	0	3	2	0
	MIDLAND	62	39	67	32	50	5	0.00	-0.14	0.00	0.01	3	7.46	51	75	56	0	1	0	0
	SAN ANGELO	62	42	74	34	52	6	0.04	-0.18	0.04	0.04	7	16.39	80	80	52	0	0	1	0
	SAN ANTONIO	67	53	76	48	60	8	0.22	-0.22	0.16	0.97	77	27.91	87	85	52	0	0	3	0
	VICTORIA	70	54	80	49	62	7	1.47	0.92	1.35	1.61	103	29.58	75	88	71	0	0	3	1
	WACO	57	45	70	36	51	3	0.33	-0.30	0.26	0.36	20	29.92	92	88	68	0	0	4	0
	WICHITA FALLS	52	41	73	32	47	4	0.79	0.40	0.67	0.80	75	23.61	84	86	73	0	1	2	1
UT	SALT LAKE CITY	43	30	47	24	36	6	0.09	-0.16	0.05	0.20	27	13.27	83	88	63	0	6	2	0
VT	BURLINGTON	34	25	39	10	29	4	0.22	-0.25	0.15	2.21	146	35.69	101	86	74	0	6	3	0
VA	LYNCHBURG	48	28	57	23	38	0	0.25	-0.44	0.25	1.71	85	43.32	103	87	55	0	6	1	0
	NORFOLK	51	34	63	29	43	-1	0.26	-0.39	0.26	0.74	41	47.34	106	87	51	0	2	1	0
	RICHMOND	52	31	60	26	42	2	0.54	-0.13	0.54	1.03	55	33.63	79	78	56	0	5	1	1
	ROANOKE	49	33	58	29	41	2	0.01	-0.60	0.01	1.07	58	37.94	91	73	51	0	5	1	0
	WASH/DULLES	45	30	58	20	38	2	0.41	-0.26	0.41	2.07	105	44.87	110	85	61	0	4	1	0
WA	OLYMPIA	50	35	55	24	43	5	2.11	0.35	1.61	4.72	89	53.23	110	95	87	0	2	5	1
	QUILLAYUTE	50	40	55	32	45	5	2.39	-0.87	0.75	11.37	118	102.30	106	98	90	0	2	6	2
	SEATTLE-TACOMA	52	43	55	35	48	8	1.50	0.25	0.76	3.47	91	47.16	134	80	67	0	0	4	1
	SPOKANE	40	31	42	26	36	9	0.58	0.08	0.48	2.40	159	15.42	97	97	79	0	4	4	0
	YAKIMA	43	33	45	23	38	9	0.34	0.04	0.18	0.81	95	6.40	83	88	83	0	2	5	0
WV	BECKLEY	41	29	54	23	35	0	0.27	-0.41	0.27	1.88	96	38.99	96	88	67	0	5	1	0
	CHARLESTON	43	33	57	28	38	0	0.18	-0.55	0.13	2.30	103	45.64	106	81	64	0	3	2	0
	ELKINS	40	27	57	23	34	1	0.41	-0.35	0.39	3.29	147	41.67	93	94	72	0	6	2	0
	HUNTINGTON	42	33	55	27	37	0	0.08	-0.66	0.07	2.62	121	47.90	117	84	66	0	4	2	0
WI	EAU CLAIRE	35	26	48	14	31	13	0.08	-0.12	0.08	0.08	11	42.38	133	90	77	0	5	1	0
	GREEN BAY	35	26	45	16	30	9	0.36	0.07	0.24	0.63	63	31.07	108	93	78	0	5	2	0
	LA CROSSE	37	28	49	17	32	10	0.35	0.10	0.31	0.49	55	37.08	116	86	73	0	5	2	0
	MADISON	35	27	46	15	31	8	0.27	-0.09	0.17	0.50	42	34.78	107	89	82	0	5	2	0
	MILWAUKEE	38	30	49	19	34	8	0.15	-0.34	0.10	0.35	23	31.43	92	81	73	0	5	2	0
WY	CASPER	33	18	40	3	26	2	0.78	0.66	0.46	0.78	205	11.64	91	81	70	0	7	2	0
	CHEYENNE	40	21	47	14	30	3	0.00	-0.08	0.00	0.02	7	17.12	112	70	51	0	7	0	0
	LANDER	24	6	39	-6	15	-6	0.81	0.69	0.72	0.81	208	10.69	81	93	72	0	7	2	1
	SHERIDAN	35	18	45	10	27	5	0.31	0.17	0.17	0.31	79	14.65	102	83	71	0	7	2	0

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

National Agricultural Summary

December 15 – 21, 2014

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Most of the country saw above-average temperatures, with parts of the Pacific Northwest and the Upper Midwest recording weekly temperatures more than 9°F above normal. However, except for southern and western coastal areas, the entire continental U.S. noted minimum temperatures below freezing during the week. Precipitation levels were near normal in all locations, except for above-average rainfall in the Upper Coast of Texas and coastal areas of the Pacific Northwest.

In **Arizona**, cotton harvesting was 90 percent complete. This was the same as last year at this time but 1 percentage point below the 5-year average. Alfalfa conditions were mostly fair to excellent, depending on location. Harvesting occurred on three-fourths of the state's alfalfa acreage. Last week's storms brought much-needed moisture throughout the state, enough to maintain good soil moisture for a second straight week. Rangeland conditions vary widely from very poor to good, depending on location. Central Arizona growers shipped broccoli, Bok Choy, Chinese cabbage, red and green cabbage, cantaloupes, cilantro, collard greens, dandelion greens, kale, lemons, mustard, parsley, turnips, Swiss chard, and spinach. Western Arizona growers shipped anise, arugula, broccoli, Bok Choy, cauliflower, celery, Chinese cabbage, red and green cabbage, cilantro, endive, escarole, kale, various lettuce including Boston, iceberg, romaine, green and red leaf lettuce, parsley, and spinach.

Several Pacific low-pressure systems moved into **California**, with rain reported in most areas. The heaviest rains occurred during the middle and end of the week over the northern half of the state. Temperatures averaged 5 to 10°F warmer than normal across most of the state. The exception was southeastern California and in the deserts, where temperatures averaged close to seasonal levels. Heavy rain and winds have reduced accessibility to fields. Alfalfa fields were sprayed with dormant sprays. In Tulare County, field preparation and planting of winter wheat for grain and silage continued. Planted winter forage crops continued to grow; they received a significant boost from recent rains. Cotton harvest was complete and fields were being prepared for winter crops. Pruning, shredding, and herbicide applications continued on grape vineyards and fruit orchards. Table grape and olive harvests were completed. Persimmon harvest neared completion. Color in Navel oranges improved. Grapefruit, lemons, and oranges were packed. Finger limes were being picked for specialty domestic markets and for export. Pruning and shredding in nut orchards continued. Orchard ground was saturated by the recent rains. Pistachio and almond harvests ceased during the rains. Shelling and processing of stored almonds continued. Field preparation for winter and spring vegetable planting continued. The planting of spring spinach and broccoli continued in Tulare County. Strawberries were progressing well with cool, damp weather. Carrot harvest slowed as the fields were too wet. Onions were up to good standards and beds were put up for tomatoes. Even with the recent rains, drought conditions continued to affect rangeland pastures. The continuing rain helped with the germination and development of foothill grasses. Ranchers were supplementing feed with baled hay.

Temperatures ranged from 20 to 89°F across **Florida**. Almost all field crops were harvested. Winter wheat and rye for grazing was rated in excellent growing condition. In Glades and Hendry Counties, sugarcane harvest continued. In southwest Florida, harvesting continued for green beans, beets, cucumbers, eggplant, herbs, kale, peppers, squash, tomatoes, and watermelon. Cool weather reduced yield on cucumbers, peppers, tomatoes, and squash in southwest Florida. Spring-season vegetable crop planting began. Farms in Palm Beach County used ditches, canals, and equipment to irrigate. Crops harvested in Miami-Dade County were green beans, pole beans, yellow squash, zucchini, tomato, peppers, eggplant, boniato, malanga, and avocado. In the Panhandle, cattlemen reported cattle in better condition at this time of year than normal. In southwest Florida, cattlemen were providing supplemental feed to compensate for declining pasture. Statewide, the cattle condition was mostly good, while pasture condition was fair to good. The early orange, white and colored grapefruit harvest was running at a strong pace, as harvesting managers steadily moved fruit from the groves to the processing plants and packinghouses. Sunburst tangerines and Navel orange harvest continued at a steady rate. The harvest season began for Honey Tangerines. Overall fruit quality going to the fresh market was good, but much of it was still coming in very small. Grove activity included irrigation, mowing in preparation for harvest, aerial spraying, and fertilizing. Field workers across the citrus growing region reported resets being planted, and old, non-productive trees being pushed.

International Weather and Crop Summary

December 14-20, 2014

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

HIGHLIGHTS

EUROPE: Warm, wet weather maintained generally favorable conditions for dormant (north) to vegetative (south) winter crops.

WESTERN FSU: Unseasonably warm weather kept key southern winter wheat areas devoid of a protective snow cover.

MIDDLE EAST: Widespread rain boosted moisture supplies for winter grains over much of the region.

NORTHWESTERN AFRICA: Showers sustained favorable early winter grain prospects over most of the region.

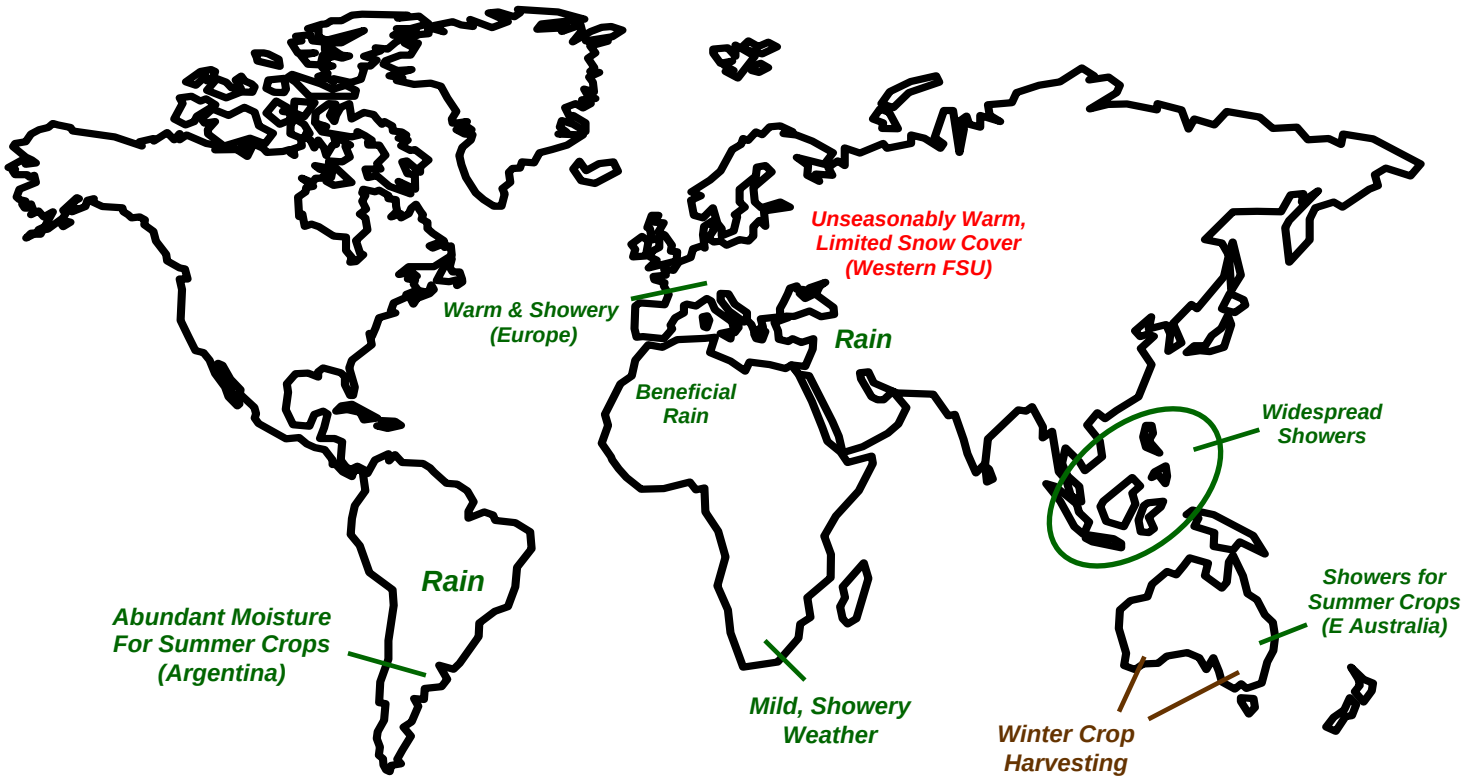
SOUTHEAST ASIA: Widespread showers continued throughout the region, maintaining beneficial moisture supplies for winter crops, while causing some localized flooding.

AUSTRALIA: Rain in the east further benefited vegetative summer crops, while mostly dry weather in the south and west promoted winter crop harvesting.

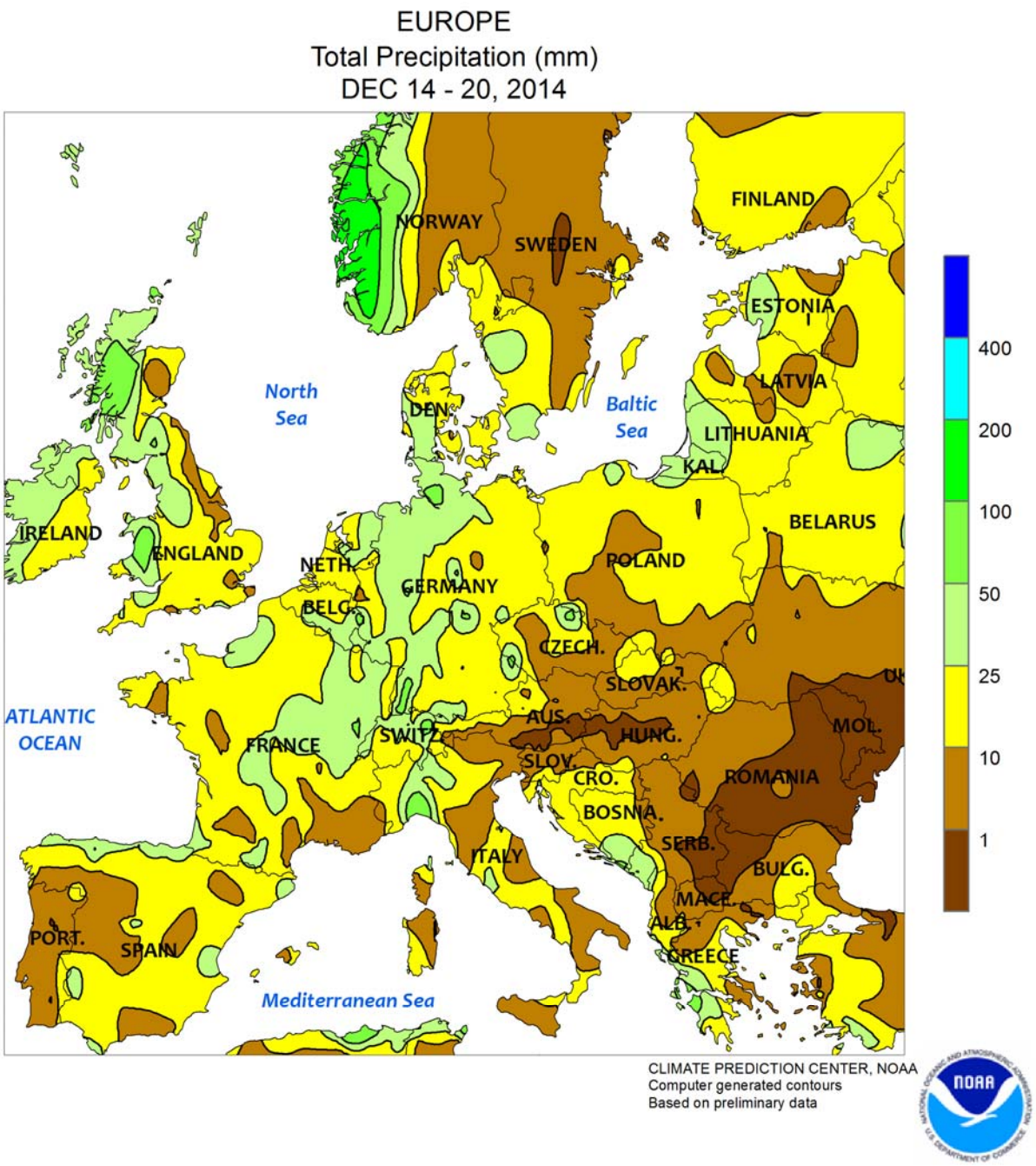
SOUTH AFRICA: Mild, showery weather maintained generally favorable conditions for emerging to vegetative corn.

ARGENTINA: Showery weather slowed fieldwork while maintaining moisture levels for summer crops.

BRAZIL: Widespread, locally heavy rain benefited soybeans and other rain-fed summer crops.



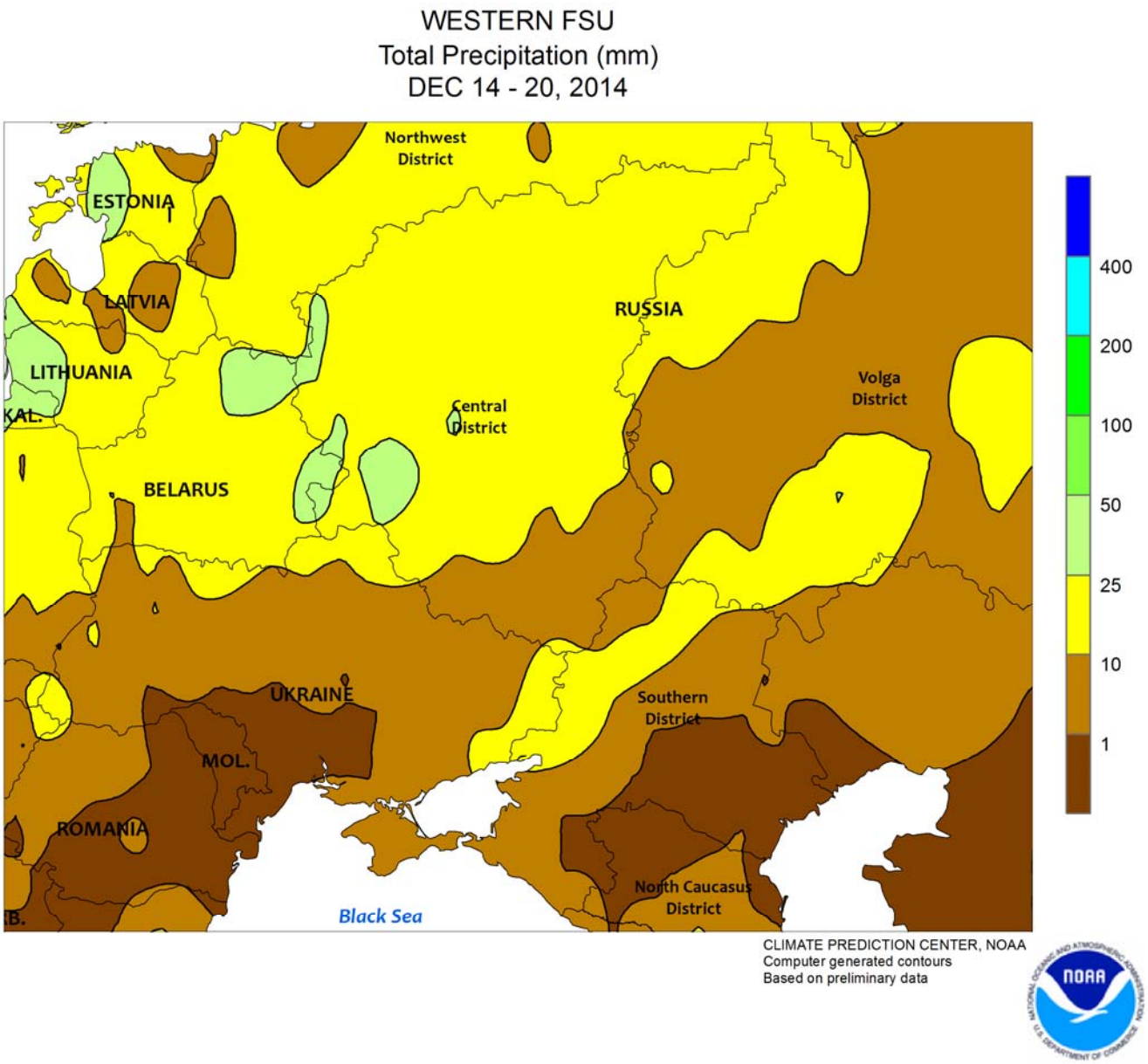
For additional information contact: mbrusberg@oce.usda.gov



EUROPE

Warm, showery weather sustained favorable conditions for winter crops across much of the continent. A series of fast-moving Atlantic disturbances generated widespread showers (10-50 mm) from France and the United Kingdom into Poland and the Baltic States, maintaining adequate to abundant soil moisture reserves for dormant winter crops. However, recent warmth reduced winter crop cold hardiness, and some winter grains and oilseeds in northern and central France likely added vegetative growth with the warmer weather. Farther south, 5 to locally more than 50 mm of rain provided additional soil moisture for wheat and barley in Spain and Italy and continued the favorable start to the Iberian Peninsula's 2014-15 wet season (October-April). In contrast, dry but warm weather facilitated fieldwork in southeastern Europe, though temperatures up to 7°C above normal in the northern Balkans reduced winter crop cold hardiness and kept the region uncharacteristically devoid of a protective snow cover.

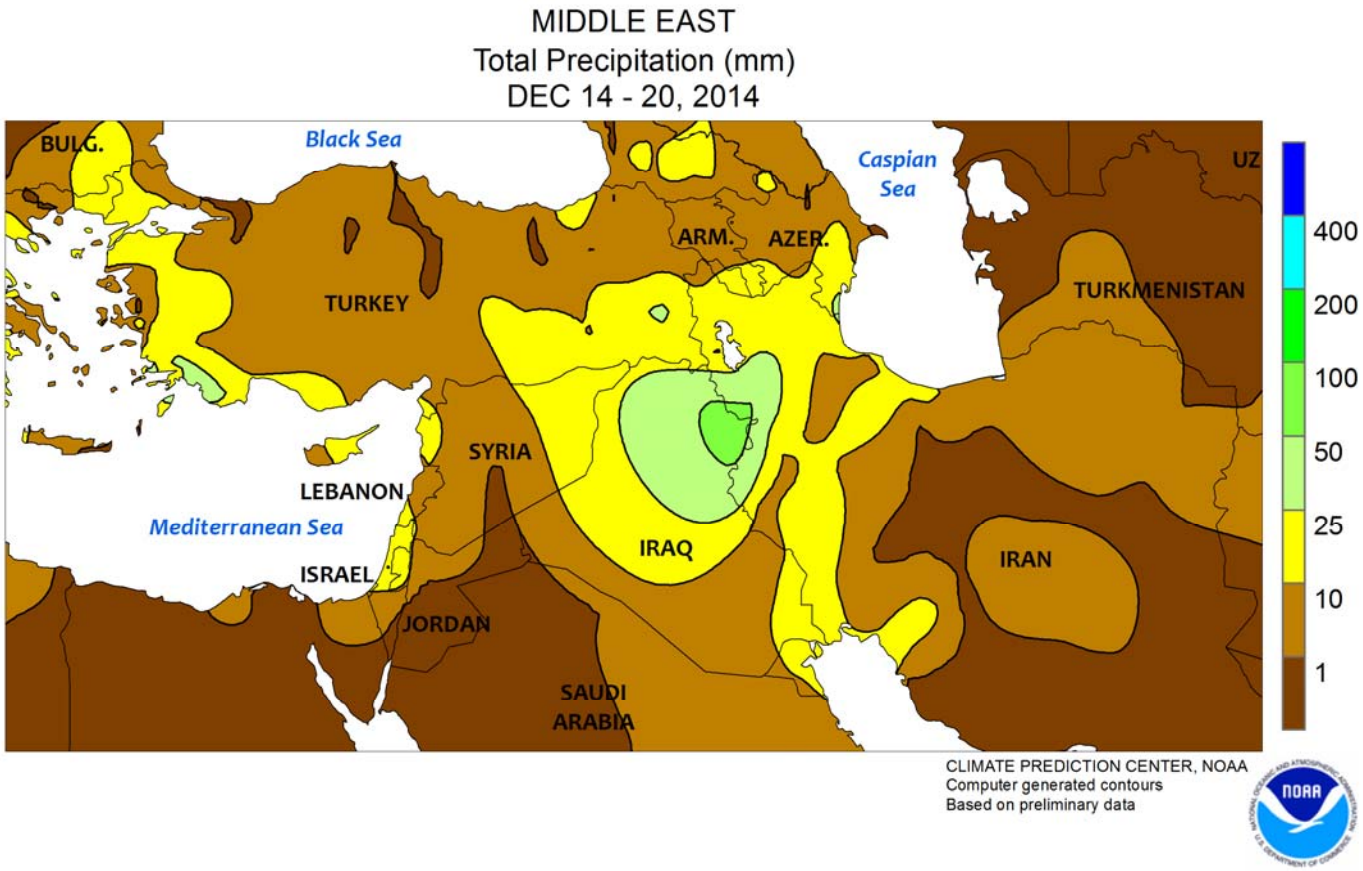
For additional information contact: mbrusberg@oce.usda.gov



WESTERN FSU

Warm weather maintained favorable conditions for dormant winter crops but continued to erode the region's protective snow cover. Across primary winter wheat areas of southern Russia and Ukraine, temperatures up to 5°C above normal kept the region devoid of a protective snow cover and reduced crop cold hardiness. However, warmth eliminated the risk for winterkill or freeze damage. Meanwhile, widespread showers (5-25 mm) and much-above-normal temperatures (5-9°C above normal) melted most of the remaining snow cover from Belarus and northern Ukraine into central Russia, though the rain and melting snow partially recharged depleted soil moisture reserves following an autumn drought in these locales.

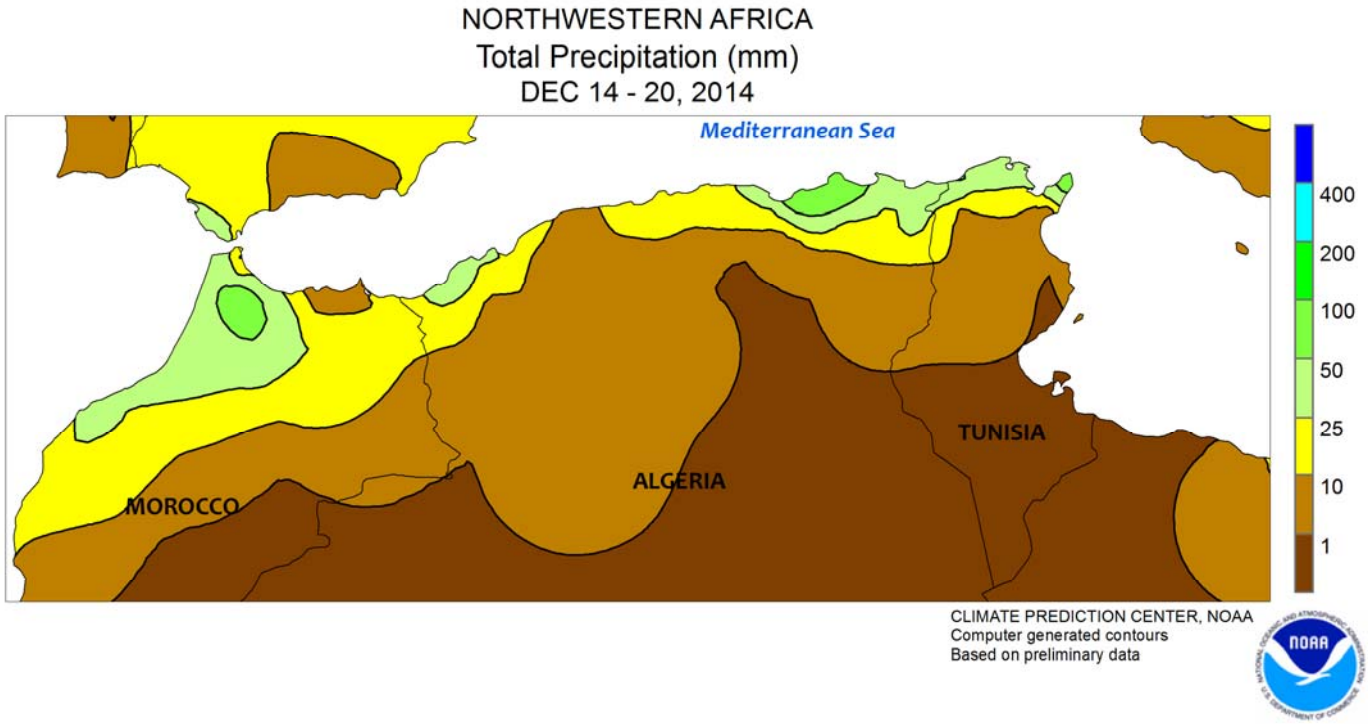
For additional information contact: mbrusberg@oce.usda.gov



MIDDLE EAST

A slow-moving disturbance triggered widespread showers, continuing the favorable start to the 2014-15 wet season. Rain in Turkey was heaviest (5-30 mm) in western and southern portions of the country, though lighter showers (less than 5 mm) on central Turkey's Anatolian Plateau were nevertheless beneficial for wheat and barley. Light to moderate showers (5-25 mm) also sustained soil moisture for winter crops along the eastern Mediterranean Coast. The storm briefly stalled over central portions of the region, resulting in moderate to heavy rainfall (10-75 mm) across eastern Syria (per satellite imagery), Iraq, and western Iran. The additional rainfall continued the excellent start to the 2014-15 winter grain growing campaign in these areas. Light rain (5-10 mm) also returned to northeastern Iran, where winter crop prospects are vastly improved following last year's drought. Temperatures averaged 1 to 5°C above normal over most of the region, keeping winter crops devoid of a protective snow cover but minimizing the risk for freeze damage and allowing wheat and barley to add vegetative growth.

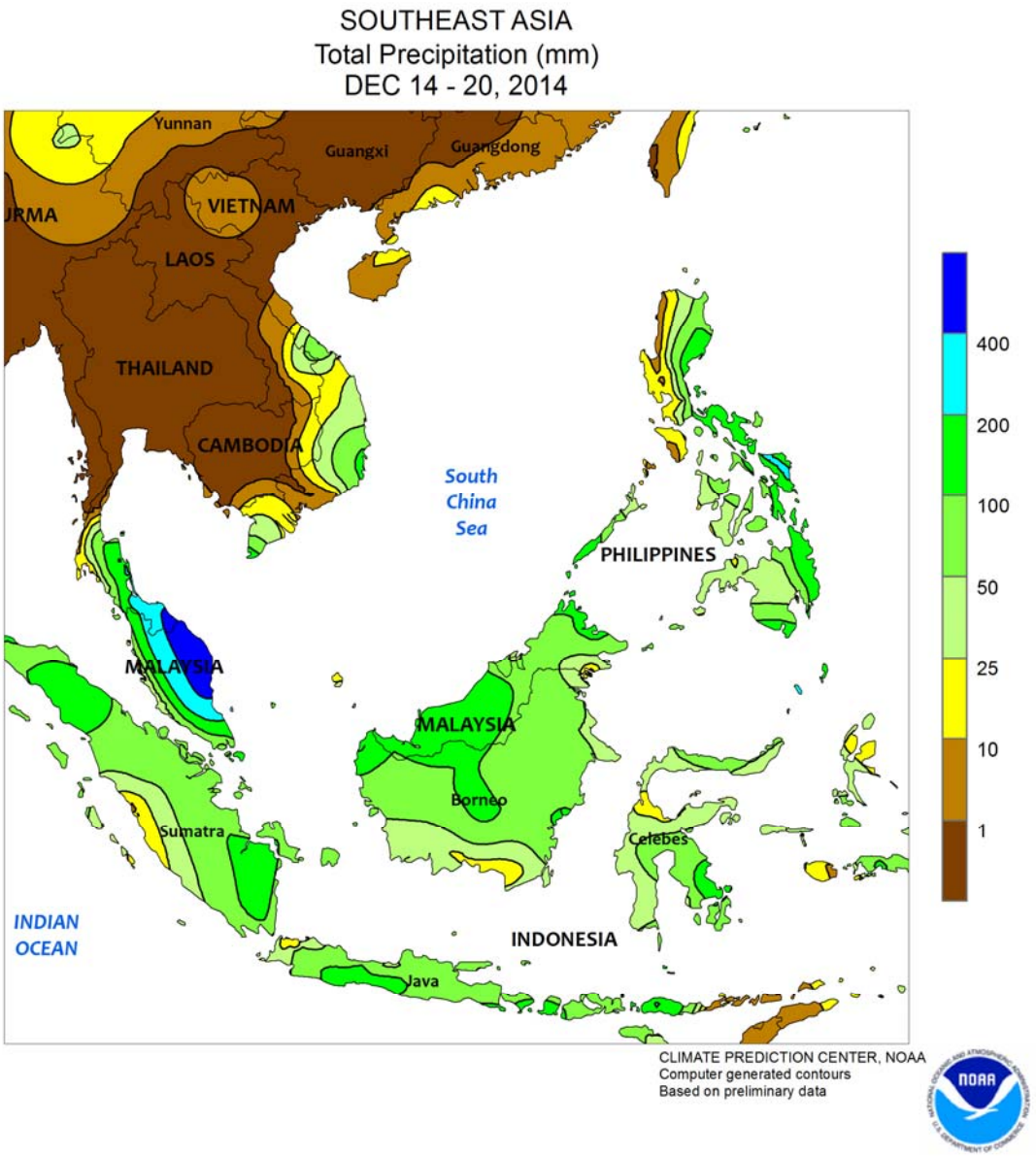
For additional information contact: mbrusberg@oce.usda.gov



NORTHWESTERN AFRICA

Widespread showers further benefited winter wheat and barley over primary growing areas. In Morocco, light to moderate rain (10-50 mm, locally more) sustained soil moisture for vegetative winter grains. Farther east, another round of moderate to heavy showers (25-75 mm, locally more) fell in previously dry portions of northeastern Algeria and northern Tunisia, boosting soil moisture for winter grain establishment following an unfavorably dry November. Temperatures averaged near normal, with no untimely freezes or early-season heat noted.

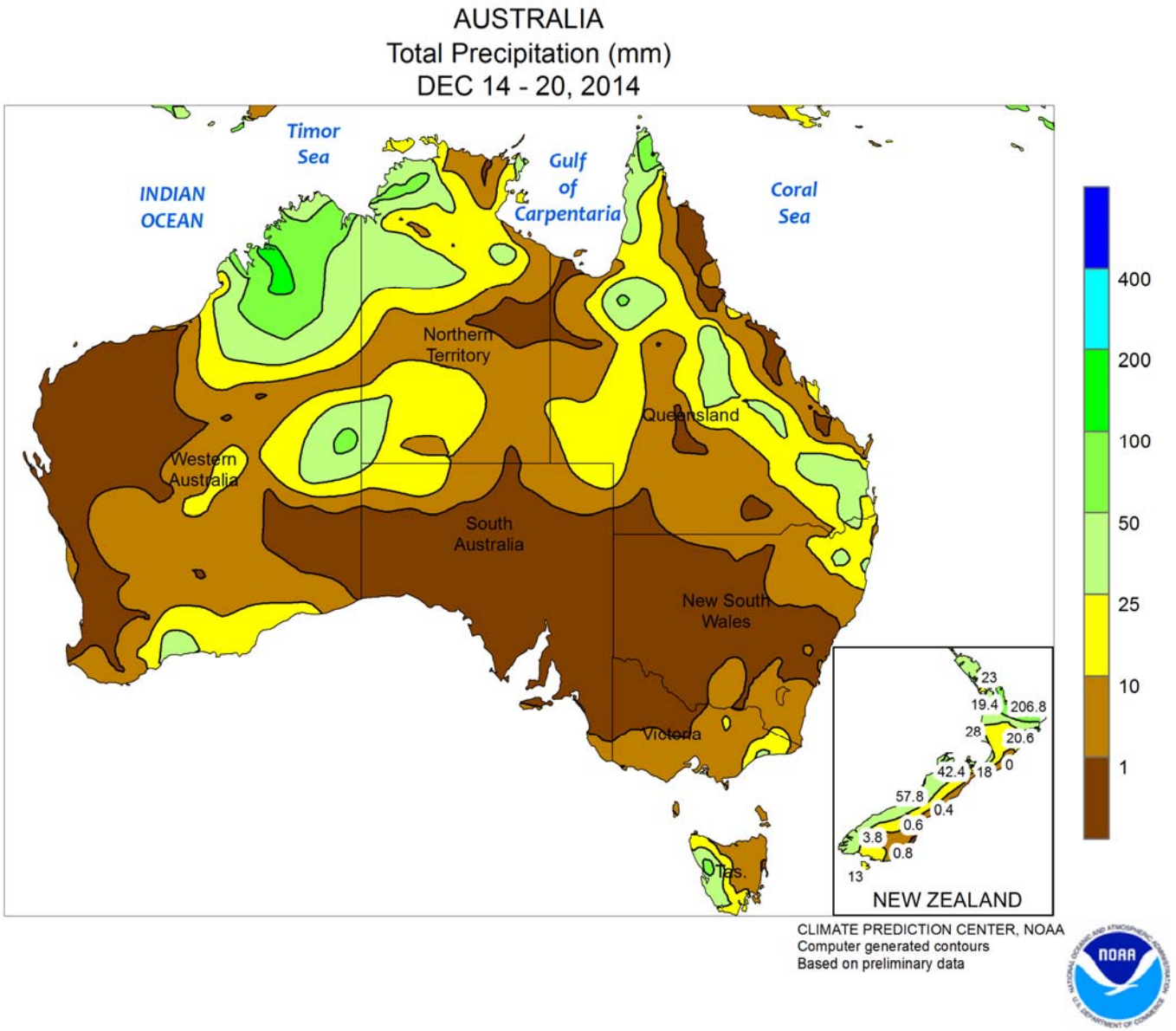
For additional information contact: mbrusberg@oce.usda.gov



SOUTHEAST ASIA

Strong easterly winds (not indicative of current El Niño conditions) continued to bring widespread heavy showers to the region. Showers returned to western Java, Indonesia after a brief week-long lull. Rainfall across western rice areas averaged 50 mm for the week and maintained above-normal seasonal (since November 1) totals for main-season rice. In central and eastern Java, weekly rainfall averaged 70 mm, maintaining near-normal seasonal totals for rice. Meanwhile in the Philippines, heavy showers (100-250 mm) continued in the eastern Visayan Islands, causing localized flooding but keeping moisture supplies high for rice and corn. Rainfall in other parts of the Philippines was more seasonable with 25 to 100 mm favoring rice and corn. In Vietnam, moisture conditions remained favorable for winter-spring rice, as the dry season became more established in the north, while rainfall (over 100 mm) was confined to minor agricultural areas in central Vietnam. Elsewhere in the region, flooding was likely in eastern sections of Peninsular Malaysia with over 600 mm of rain reported. In addition to flooding, significant delays in oil palm harvesting likely occurred.

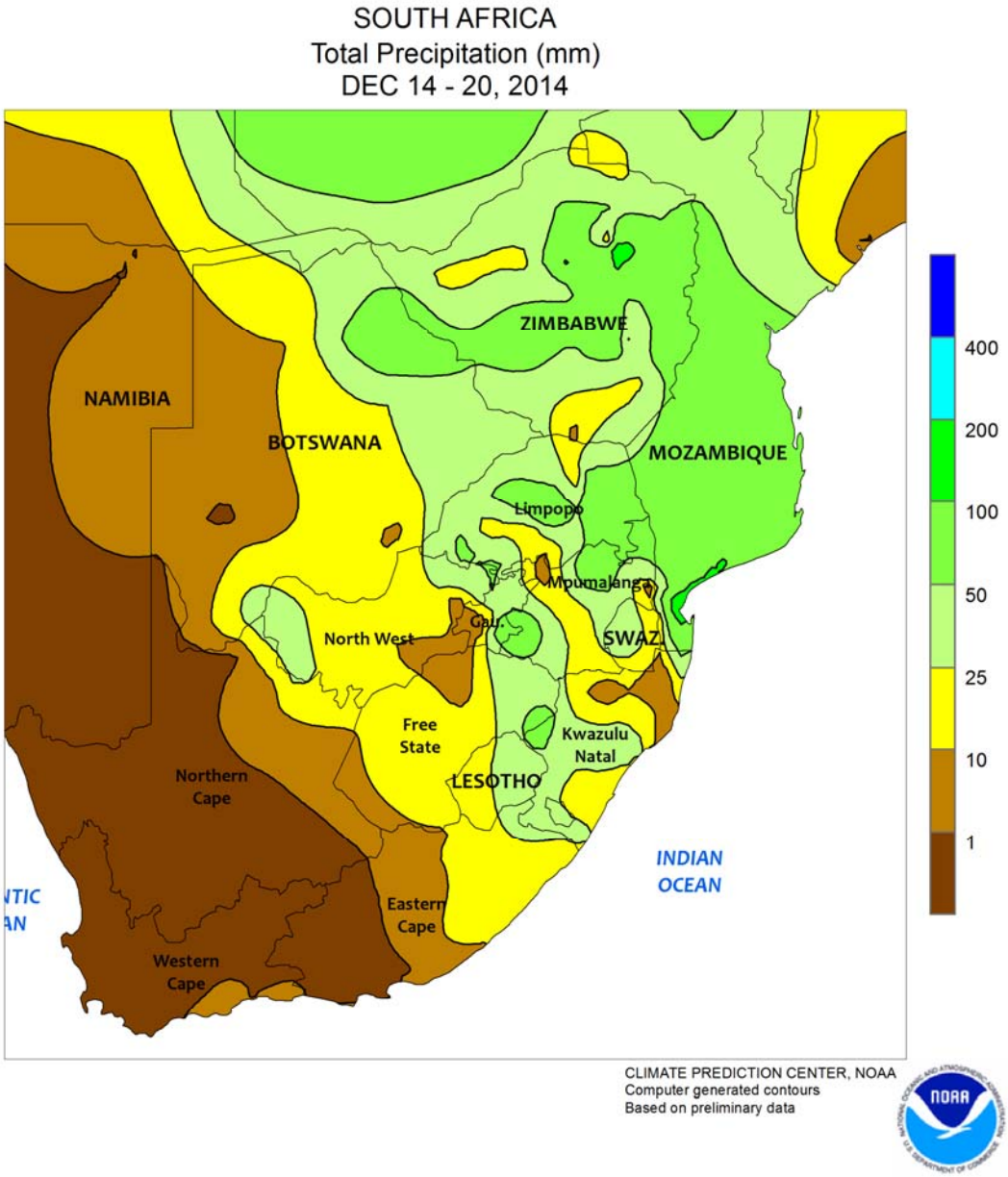
For additional information contact: mbrusberg@oce.usda.gov



AUSTRALIA

In southern Queensland, widespread showers (5-25 mm, locally more) further benefited vegetative summer crops, easing local irrigation requirements and aiding dryland crop development. Following a relatively dry spring, the rainfall in recent weeks has provided a much-needed boost in soil moisture and was reportedly promoting additional sorghum planting in its wake. Little additional cotton planting had been reported, however, primarily because the rain came after the optimal time to sow. In northern New South Wales, the bulk of the rain this week fell east of the major growing areas. Nevertheless, showers during the past few weeks have improved topsoil moisture in this area, favoring cotton and sorghum development. Elsewhere, mostly dry weather favored wheat, barley, and canola harvesting in southeastern and western Australia. Winter crop harvesting was reportedly making good progress throughout the wheat belt, and was finished or approaching completion in many areas. Temperatures in most major agricultural areas averaged within about 2°C of normal.

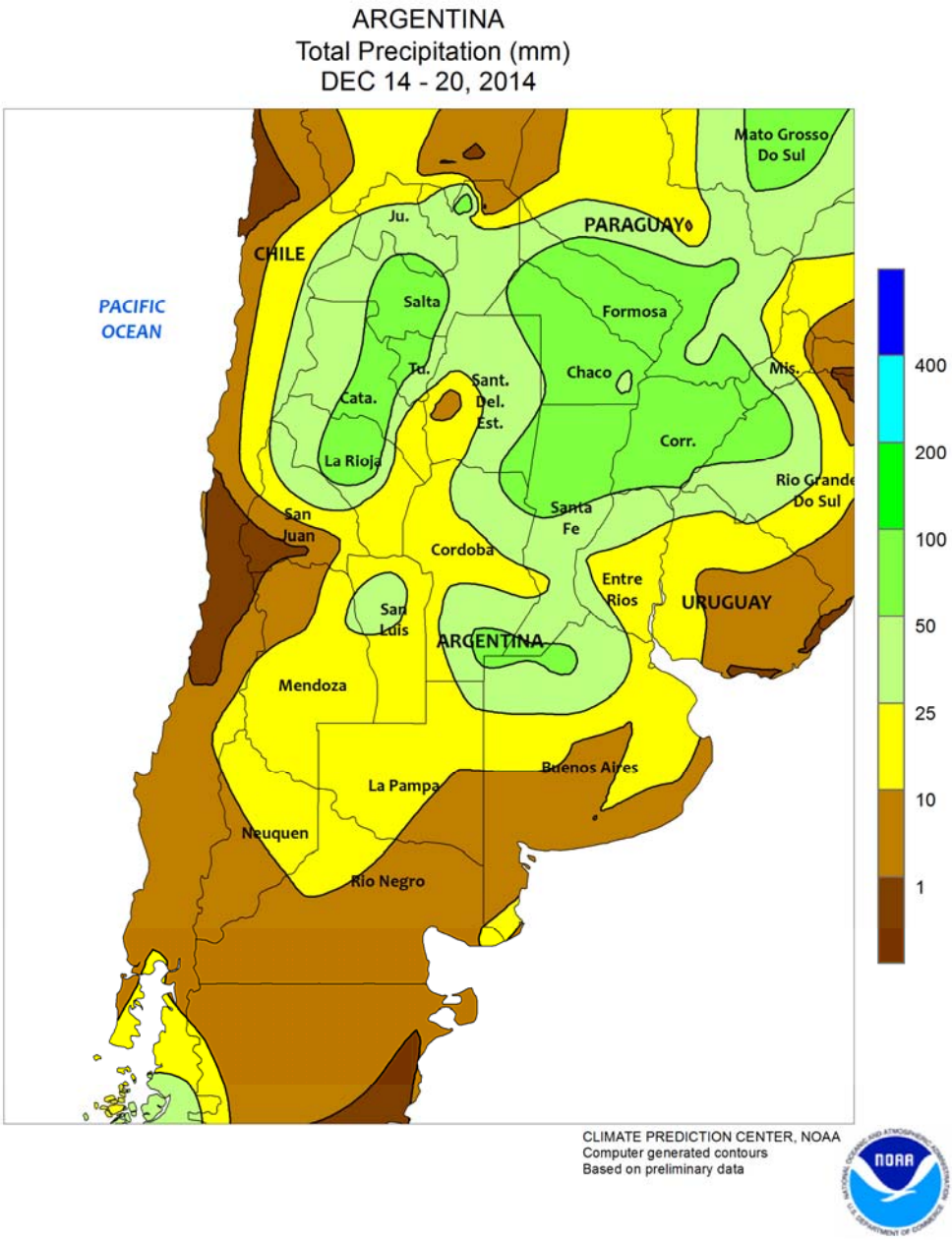
For additional information contact: mbrusberg@oce.usda.gov



SOUTH AFRICA

Warm, showery weather benefited emerging to vegetative summer crops across the corn belt. Most eastern production areas recorded rainfall totaling more than 25 mm, with isolated amounts in excess of 50 mm in Gauteng and Mpumalanga. The heavy showers also extended northward through Limpopo, possibly causing localized flooding in the lower Limpopo River Valley. Somewhat lighter rain (less than 25 mm) fell in commercial white corn areas of North West and Free State. Weekly temperatures averaged within 1°C of normal across the corn belt, with daytime highs ranging from the middle and upper 20s (degrees C) in eastern farming areas and the lower 30s farther west and north. Elsewhere, showers continued to be unseasonably light (less than 25 mm) in some sugarcane areas of southern KwaZulu-Natal; seasonable warmth (daytime highs in the lower and middle 30s) accompanied the relatively drier weather, further limiting moisture for proper development of rain-fed crops. Scattered, generally light showers (5-25 mm) covered eastern sections of Eastern Cape and extended northward into the Orange River Valley. Warm, mostly dry weather dominated the remainder of the Cape Provinces, fostering development of irrigated tree, vine, and row crops.

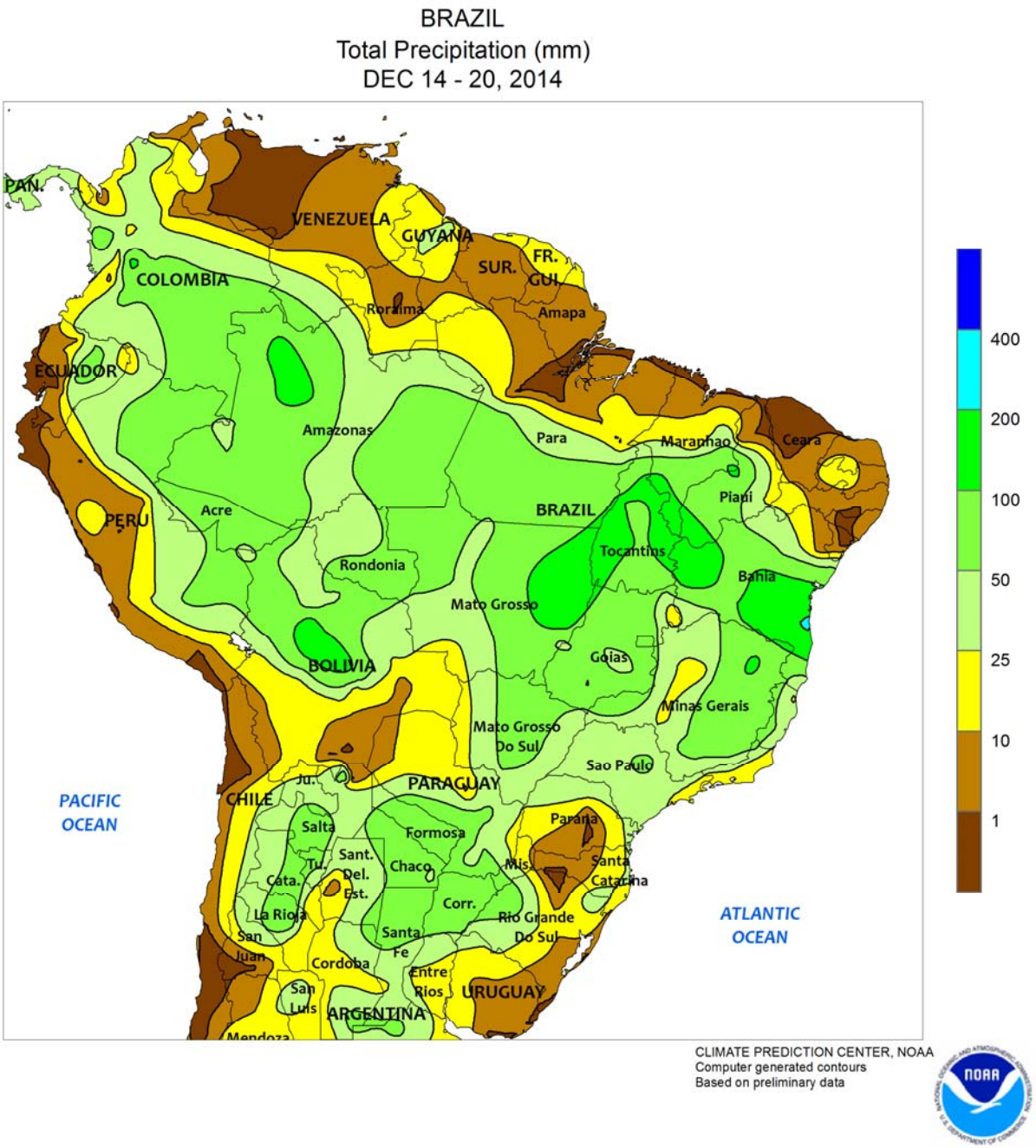
For additional information contact: mbrusberg@oce.usda.gov



ARGENTINA

Showery weather continued throughout Argentina, slowing fieldwork in spots but maintaining adequate to abundant levels of moisture for summer crops. Major farming areas of central Argentina (La Pampa, Buenos Aires, and neighboring locations in Cordoba, Santa Fe, and Entre Rios) recorded rainfall totaling below 25 mm for much of the week. The drier conditions were favorable for fieldwork in sections of southeastern Buenos Aires plagued by excessive topsoil moisture. However, heavier rain (locally in excess of 50 mm) arrived at week's end in the vicinity of northwestern Buenos Aires, providing beneficial rain to previously dry locations in southern Cordoba after recent weeks of drier-than-normal weather. Weekly temperatures averaged near normal in the aforementioned areas, although hot weather (daytime highs reaching the middle 30s) developed at week's end in the southwest (notably La Pampa and southern Cordoba) ahead of the late-week showers. Wetter conditions prevailed farther north, with amounts totaling more than 50 mm stretching from Salta to Corrientes. As in central Argentina, weekly temperatures averaged near normal, though warmer weather (daytime highs reaching the upper 30s) was developing at week's end. According to Argentina's Ministry of Agriculture, corn was 67 percent planted as of December 18, slightly behind last year's pace (69 percent); similarly, soybeans were 76 percent planted, lagging last year's pace by 2 percentage points. Additionally, wheat was 67 percent harvested versus 66 percent last year.

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



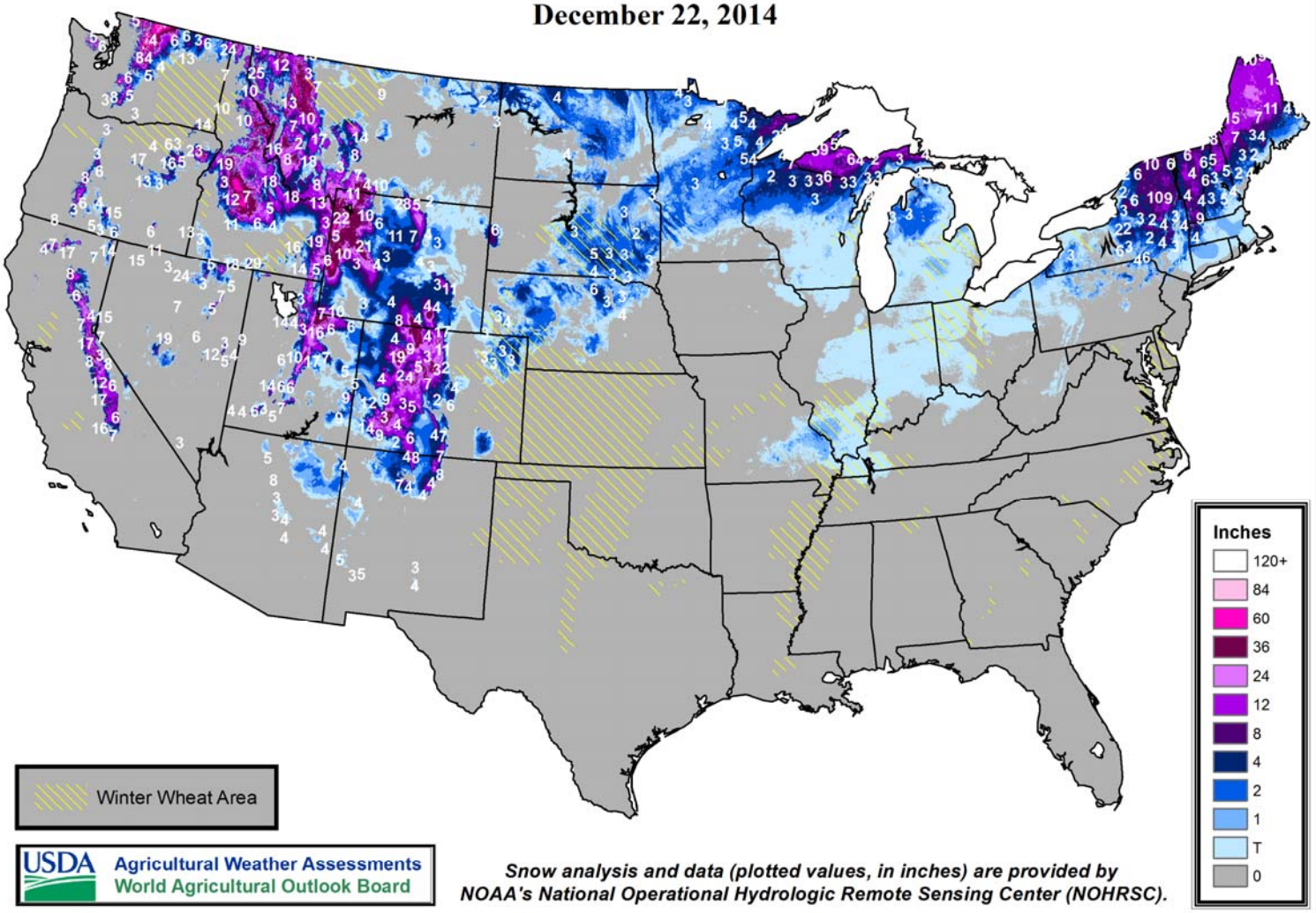
BRAZIL

Widespread, locally heavy rain benefited soybeans and other summer crops in key production areas of central and southern Brazil. The heaviest rain (greater than 50 mm) was concentrated from Mato Grosso eastward to the Atlantic Coast, extending northward into soybean and cotton areas of the northeastern interior (western Bahia, Tocantins, Maranhoa, and Piaui). Rainfall exceeding 100 mm likely caused some flooding along Bahia's coast. In contrast, rainfall tapered off across much of the south. An exception was in coffee areas of Espirito Santo and Rio de Janeiro, which recorded light to moderate rain (10-50 mm) after several weeks of dryness. Sugarcane and coffee areas of Sao Paulo and Minas Gerais received more than 25 mm, although these totals were generally below normal; near- to above-normal temperatures (daytime highs in the lower and middle 30s degrees C) promoted rapid crop development in these areas, while maintaining high crop moisture demands. Drier conditions prevailed farther south, with little to no rain falling from central Parana southward through eastern Rio Grande do Sul. Mid-week showers (locally greater than 50 mm) kept emerging to vegetative soybeans well watered in western farming areas of Rio Grande do Sul. Weekly average temperatures were near to slightly above normal in the south, with daytime highs reaching the middle 30s in the traditionally warmer western areas at week's end.

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

Snow Depth

December 22, 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