



HIGHLIGHTS January 4-10, 2009 Highlights provided by USDA/WAOB

hazardous combination of melting snow and torrential rain resulted in major flooding in the Pacific Northwest, especially across western Washington. Sudden warmth also melted snow across the interior Northwest, reducing or eliminating winter wheat's protective cover. In contrast, mostly dry weather prevailed across the southern half of the West, including central and southern California. Meanwhile, briefly warmer weather also eroded some of the northern High

(*Continued on page 3*)

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(Continued from front cover)

Plains' snow cover, while warm, breezy, dry conditions maintained stress on the southern Plains' winter wheat. By January 11, USDA rated more than half (52 percent) of the Texas winter wheat crop in very poor to poor condition, up from 16 percent on November 23. Farther north, a deep snow cover persisted across the remainder of the nation's northern tier, from the upper Midwest into New England. In these areas, a sustained period of cold, snowy weather has stressed livestock and frequently disrupted rural travel. Elsewhere, heavy precipitation fell across much of the South and East, excluding Florida's peninsula. In peninsular Florida, warm, mostly dry conditions increased irrigation requirements for citrus and winter crops. However, at least 4 inches of rain fell from central Mississippi into southwestern Virginia, while two more rounds of frozen precipitation (snow, sleet, and freezing rain)

affected the **Northeast**. Temperature patterns were similar to those observed the previous week, with bitterly cold weather confined to parts of the **nation's northern tier**. In addition, cold air remained trapped across parts of the **Intermountain** West, especially in snow-covered valleys. Meanwhile, mild weather covered areas from the **High Plains into the** Southeast, with temperatures averaging more than 10°F above normal in portions of the latter region.

Early in the week, cold air settled across the Great Basin and the Intermountain West, resulting in daily-record lows in Randolph, UT (-20°F), and Eureka, NV (-18°F). In Wyoming, readings dipped to -38°F at Glade Creek, in Yellowstone National Park, and Bondurant. In contrast, early-week warmth across the South produced daily-record highs in locations such as Galveston, TX (76°F on January 4), and New Orleans, LA (78°F on January 5). Meanwhile, a final round of heavy snow overspread the Northwest in advance of a surge of Pacific warmth and moisture. On January 5 in Washington, Spokane's daily-record snowfall of 7.5 inches boosted its total since December 10 to 78.4 inches. Later, however, Spokane's snow depth decreased from a peak of 27 inches on January 5 to just 4 inches by week's end. By January 6, temperatures surged to daily-record levels in Northwestern locations such as Yakima, WA (59°F), and The Dalles, OR (57°F). The following day, precipitation records in Washington for January 7 included 4.82 inches in Olympia and 2.88 inches in Quillayute. In western Washington, records crests were reported along the Naselle River near Naselle (unknown crest due to inundation on January 7) and the Snoqualmie River near Carnation (8.31 feet above flood stage on January 8). Previous records had been established near Naselle on March 18, 1997 (3.76 feet above flood stage), and near Carnation on November 7, 2006 (7.17 feet above flood stage). Elsewhere in Washington, flood waters rose to their highest levels since February 8, 1996, along the Newaukum River near Chehalis (3.00 feet above flood stage on January 7) and the Skookumchuck River near Bucoda (4.22 feet above flood stage on January 8).



Meanwhile, heavy rain developed across the interior Southeast, where daily-record totals for January 6 included 3.79 inches in Chattanooga, TN, and 2.69 inches in Huntsville, AL. The following day, Northeastern precipitation records for January 7 reached 1.38 inches in Providence, RI, and 1.25 inches in Worcester, MA. Worcester's precipitation fell in the form of 2.7 inches of snow, along with a significant amount of freezing rain. On January 8, Syracuse, NY (9.0 inches), measured a daily-record snowfall. Another round of frozen precipitation swept into the Midwest and Northeast at week's end, when snowfall records for January 10 included 8.4 inches in Chicago, IL; 6.4 inches in Detroit, MI; and 5.5 inches in Binghamton, NY. Elsewhere, warm weather prevailed during the mid- to late-week period across the South, the High Plains, and the Northwest. In Florida, both Miami and Ft. Lauderdale posted daily-record highs of 86°F on January 7. The following day, records for January 8 included 68°F in Imperial, NE, and 67°F in The Dalles, OR. Late-week records in Texas reached 85°F (on January 9) in San Angelo and 83°F (on January 10) in Victoria. Farther west, downslope winds began to howl at week's end across southern California, where numerous gusts of 60 to 80 m.p.h. were clocked. At Newhall Pass in Los Angeles County, CA, a northerly wind gust to 72 m.p.h. was reported on January 10.

Bitterly cold weather entrenched across interior Alaska held weekly temperatures as much as 35°F below normal. On January 8, the community of Chicken along the Taylor Highway in eastcentral Alaska noted a low of -68°F. In Fairbanks, the temperature stayed below -20°F on 16 consecutive days from December 27 - January 11, approaching its all-time record of 18 such days in 1971. In contrast, heavy snow blanketed much of southeastern Alaska. Juneau measured daily-record snowfall totals on January 4, 8, and 10 (5.9, 12.4, and 6.1 inches, respectively). Through January 10, Juneau's month-to-date snowfall climbed to 49.8 inches. Elsewhere in southeastern Alaska, Lena Point's 45-inch snow cover on January 9 eclipsed its record of 42 inches, set on January 17, 1994. Farther south, tranquil weather returned to Hawaii. On the Big Island, Hilo netted 35.69 inches of rain during the 3-week period from December 14 - January 3, but received only 1.06 inches during the week of January 4-10.

Agricultural Weather Data Compiled by USDA's Stoneville Field Office

Weather Data for the Week Ending January 10, 2009

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	STATES	Г,	TEM			, <u> </u>	· =						_		4-IN	1CH	NUN	IBER	OF D	AYS
	AND			PERA	TUR	.⊏	Г			PREC		TION			SOIL	TEMP. F	тем	P. °F	PRF	ECIP
	STATIONS	GE UM	GE UM	ME	ME /	GE	URE RMAL	. N. ۲۲	URE RMAL	ST IN R, IN.	IN. EC01	RMAL EC01	IN., ANO 1	RMAL 4N01	GE UM	GE UM	BOVE	MOTE	RE RE	문
 		AVERA MAXIM	AVERA MINIM	EXTRE HIGI	EXTRE LON	AVERA	DEPART FROM NC	WEEK TOTAL,	DEPART FROM NC	GREATE 24-HOUI	TOTAL SINCE D	PCT. NOI SINCE D	TOTAL, SINCE J,	PCT. NOI SINCE J.	AVERA MAXIM	AVERA MINIM	90 AND A	32 AND B.	.01 IN OR MC	.50 ING OR MC
MISS	ISSIPPI																			, <u> </u>
ND	TUNICA 1W	-	-		- '	- '	- 1	- '	- '		- '	- '	-	- '	-	-	-	- '	-	!
	LYON	55	35	67	32	45	- 1	1.67	- '	0.87	7.95	- '	1.67	- '	50	45	0	1	3	2
	VANCE	54	35	66	34	45	-	1.32	- '	0.77	8.63	- '	1.81	- '	53	38	0	0	4	1
	PERTHSHIRE	55	36	67	32	45	-	1.10	- '	0.62	8.67	- '	1.10	- '	51	43	0	1	3	1
	SCOTT	58	37	69	33	47	-	1.24	- '	0.81	8.61	- '	1.25	- '	52	45	0	0	4	1
	SANDY RIDGE	57	37	69	34	47	-	1.72	- '	1.27	9.76	- '	1.74	- '	55	- '	0	0	4	1
NE	VERONA	56	38	71	28	47	-	1.79	- '	1.28	10.81	- '	1.86	- '	54	46	0	1	5	1
SD	STONEVILLE x	59	40	71	34	49	8	2.43	1.17	1.58	10.63	147	2.45	136	57	48	0	0	3	2
	INDIANOLA 1S*	58	38	71	36	48	1 - 1	2.25	- '	1.08	11.45	- '	2.31	- '	60	41	0	0	5	2
	INVERNESS 5E	58	38	71	35	48		1.88	- '	1.06	9.65		1.96	-	54	48	0	0	4	2
	SIDON	59	40	72	37	50	1 - 1	1.87	- '	1.11	10.61	- '	1.99	- '	-	- '	0	0	5	2
	NORTH ISSAQUENA	60	39	73	36	50	1 - 1	2.61	- '	1.55	10.15		2.62	-	55	48	0	0	3	2
	SILVER CITY	60	39	74	36	49	1 - 1	3.12	- '	2.07	14.37	- '	3.32	- '	54	48	0	0	4	2
	ONWARD	61	40	74	37	50	1 - 1	2.51	- '	2.09	13.71		2.51	-	57	49	0	0	3	1
	MAYDAY	61	41	74	39	51	1 - 1	2.50	- '	1.39	11.69		2.54	-	54	51	0	0	3	2
MISS	OURI				1 '	'	1 7	i '	1	'	1 '	'	1 '	'				1 '	1	, 1
NW	CORNING	35	16	52	9	25	1	0.00	-0.18	0.00	0.51	34	0.00	0	-		0	7	0	0
	ALBANY	34	16	56	10	25	1	0.00	-0.18	0.00	0.97	59	0.00	0	32	32	0	7	0	0
	ST. JOSEPH	35	18	57	11	26	0	0.00	-0.16	0.00	1.26	73	0.00	0	-	- '	0	7	0	0
NC	LINNEUS	36	18	59	10	27	2	0.00	-0.18	0.00	1.91	103	0.00	0	32	32	0	7	0	0
	BRUNSWICK	36	20	59	13	28	2	0.00	-0.29	0.00	1.80	85	0.00	0	33	33	0	7	0	0
NE	NOVELIY	36	18	57		26		0.00	-0.21	0.00	2.33	99	0.00	0	32	31	0	17	0	0
14/0	MONRUE CITY	38	21	63	13	28	1	0.00	-0.27	0.00	2.82	107	0.00	0	33	33	0	7	0	0
VVC		39	22	67	1/	30	3	0.09	-0.20	0.09	2.33	86	0.09	15	34	33	0	1 _ '		U
U	AUAVASSE	39	21	64	15	29	2	0.00	-0.34	0.00	2.71	91	0.00	0	34	34	0	1 4		0
		40	24	67	18	31	2	0.00	-0.34	0.00	2.21	78	0.00	U .	35	33	U	1		U
	WILLIAMSBURG	41	22	65	17	30	3	0.04	-0.54	0.04	2.79	73	0.04	5	32	30	0	17	111	0
	COL-JEFFERS FAG	40	22	67	1/	30	2	0.01	-0.32	0.01	2.14	76	0.01	2	36	34	0	1 4		0
	VEDEALLIES	40	22	66	17	30	2	0.01	-0.32	0.01	2.57	91	0.01	2	-	-	U	1 4		0
FC		41	23	69	1/	31	1	0.00	-0.39	0.00	2.45	82	0.00	0	38	34	0	<u>/</u>	0	0
EU		39	21	63	16	29	3	0.00	-0.42	0.00	2.65	86	0.00	0	33	32	0	<u>/</u>	0	0
500		41	25	64	19	33	2	0.00	-0.41	0.00	2.06	64	0.00	07	41	36	U	1 4		
30		47	24	64	20	33		0.21	-0.36	0.18	3.15	79	0.21	2/	41	38	0	<u>/</u>		0
SE		46	24	62	18	32	1	0.03	-0.66	0.02	4.07	84 69	0.03	3	40	36	0		2	0
SE		40	28	00	24	30	3	0.16	-0.45	0.12	3.52	00	0.10	17	42	35	0		3	
		48	29	62	26	38	4	0.61	-0.05	0.36	5.33	100	0.61	52	42	35	U	6	4	
		47	31	59	26	39	4	0.11	-0.52	0.11	3.69	/1	0.11	10	43	37	0	5		0
		47	30	60	26	38	3	0.26	-0.47	0.15	5.58	106	0.26	22	43	35	0	6	3	0
		48	31	60	27	40	5	0.70	-0.16	0.35	6.04	117	0.70	5/	46	38	0	4	3	0
l		49	31	62	27	40	5	0.72	-0.18	0.41	6.29	111	0.72	60	45	38	0	5	3	0
1	SIEELE	49	32	61	28	40	4	0.81	0.03	0.61	6.73	113	0.81		45	37	0	3	3	

Data Provided by the Mississippi State Delta Research and Extension Center (DREC)

Compiled by USDA/OCE/WAOB's Stoneville Field Office. * Beasley Lake. X Based on 1971-2000 normals. - Sufficient data not available.

Data are preliminary and subject to revision.

Mississippi: ND = Northwest; NC = Northeastern Mississippi; EC = East Central Mississippi; SD = Southern Delta. Missouri: NW = Northwest; NC = North Central; NE = Northeast; WC = West Central; C = Central; EC = East Central; SW = Southwest; SE = Southeast; SC = South Central. (Col-Columbia, Col-Jeffers F&G=Columbia Jefferson Farm and Gardens)

Weather and Crop Summary for the Mississippi Delta: A warming trend returned late in the week, after early-week showers cleared the Delta. Rainfall totals of at least 1 to 3 inches led to above-normal precipitation totals for the quarter (since December 1) and the year to date (since January 1).



please visit: http://agebb.missouri.edu/weather/stations/index.htm

please visit: http://www.deltaweather.msstate.edu/maps/weather_station_map.htm

January 13, 2009

Weekly Weather and Crop Bulletin

National Weather Data for Selected Cities

Weather Data for the Week Ending January 10, 2009 Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

					ornao									1000)	REL	ATIVE	NUM	IBER	OF D	AYS
	STATES	1	FEMF	PERA	TUR	E°	F			PREC					HUM PER	IDITY CENT	ТЕМ	P. °F	PRE	CIP
S			AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC01	PCT. NORMAL SINCE DEC01	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
AL	BIRMINGHAM	63 50	45 40	72 62	32	54 40	11	5.17	3.98	2.68	11.90	204	5.50	401	89 97	54 60	0	1	5	3
	MOBILE	72	40 54	76	44	49 63	13	1.81	0.62	1.17	7.46	124	3.08	226	84	61	0	0	3	2
٥ĸ	MONTGOMERY	69 1	48	78	35	59	13	2.01	0.96	1.24	6.62	107	2.23	184	86 74	51 62	0	0	5	2
	BARROW	-12	-22	-5	-30	-17	-24	0.02	0.01	0.01	0.16	123	0.02	100	87	74	0	7	1	0
	FAIRBANKS	-38	-46	-33	-47	-42	-33	0.00	-0.14	0.00	0.52	57	0.02	12	***	***	0	7	0	0
	KODIAK	18 25	8 9	27 34	-9 4	13 17	-13 -13	2.05 0.77	0.90 -1.12	0.65 0.45	6.43 8.50	95 87	2.51 0.77	189 35	87 75	80 67	0	7 7	6 3	1 0
. –	NOME	-2	-22	10	-28	-12	-18	0.00	-0.19	0.00	1.00	81	0.00	0	70	60	0	7	0	0
AZ	FLAGSTAFF	42 62	17 43	55 67	7	30 53	1	0.25	-0.19	0.23	5.01	214 87	0.27	53 17	84 68	38	0	7	2	0
	PRESCOTT	51	25	64	20	38	2	0.04	-0.30	0.04	2.29	139	0.04	3	85	32	0	7	1	0
	TUCSON	61	38	69 62	33	49	-2	0.41	0.17	0.32	1.49	113	0.41	141	81	49	0	0	4	0
АК	LITTLE ROCK	53 56	32 34	62 66	26 31	42 45	4 5	1.10	-0.46	0.06	4.82	79 85	1.12	13	91	45 53	0	4 5	2	1
CA	BAKERSFIELD	49	39	53	31	44	-2	0.01	-0.22	0.01	0.75	72	0.12	43	92	77	0	1	1	0
	FRESNO LOS ANGELES	48 62	37 46	58 71	31 42	43 54	-1 -3	0.08	-0.35 -0.56	0.03	1.26 2.51	69 103	0.17	35	91 79	83 50	0	2	3	0
	REDDING	55	37	71	26	46	1	0.00	-1.32	0.03	3.55	57	0.22	14	77	60	0	1	2	0
	SACRAMENTO	52	33	60	25	42	-3	0.03	-0.71	0.03	1.60	48	0.07	8	96	64	0	3	1	0
	SAN FRANCISCO	54	40	62	33	48	-1	0.00	-0.45	0.00	2.42	62	0.05	5	87	79	0	0	1	0
~~	STOCKTON	51	33	58	26	42	-3	0.05	-0.47	0.04	1.49	61	0.30	49	95	86	0	4	2	0
00	ALAMOSA CO SPRINGS	33 44	1 20	39 63	-13 2	17 32	3	0.08	0.02	0.07	0.56	140 40	0.08	114 55	88 71	73 29	0	7	2	0
	DENVER INTL	46	21	63	7	33	5	0.00	-0.07	0.00	0.24	59	0.00	0	67	30	0	6	0	0
	GRAND JUNCTION	27	6	34	-4	17	-8	0.07	-0.07	0.04	0.96	139	0.10	59	85	68	0	7	2	0
СТ	BRIDGEPORT	36	25	69 39	6 18	35 30	-1	0.02	-0.06	0.02	0.31 7.28	62 164	0.02	18 148	60 77	35 53	0	5 7	1	0
	HARTFORD	33	20	40	14	27	1	1.34	0.49	1.14	7.99	174	1.34	137	78	57	0	7	4	1
DC DF	WASHINGTON WILMINGTON	43 41	31 29	51 48	27 22	37	2	1.97	1.23	1.19	4.94 6.33	126 147	1.97	229 210	83 83	49 41	0	5	3	2
FL	DAYTONA BEACH	76	50	81	43	63	4	0.09	-0.59	0.09	1.02	29	0.09	11	97	41	0	0	1	0
	JACKSONVILLE	74	45	79	35	59	6	0.15	-0.60	0.15	0.74	21	0.15	17	91	39	0	0	1	0
	MIAMI	77 80	67 63	81 86	60 56	72 71	2	0.38	-0.14 -0.36	0.38	1.27 0.34	46 13	0.38	62 15	86 91	70 57	0	0	1	0
	ORLANDO	77	50	82	43	64	3	0.12	-0.40	0.12	0.78	27	0.12	20	96	45	0	0	1	0
	PENSACOLA	71	57 47	75 77	46 26	64 60	12	0.56	-0.56	0.17	4.32	82	1.04	81	91 01	64 53	0	0	4	0
	TAMPA	77	57	79	49	67	6	0.38	-0.35	0.29	1.35	47	0.38	20	87	50	0	0	1	0
~	WEST PALM BEACH	78	58	85	51	68	2	0.03	-0.70	0.03	1.79	45	0.03	4	85	51	0	0	1	0
GA	ATHENS	63 63	43 46	71 71	29 31	53 54	11 12	2.16 1.95	1.18 0.94	0.70	6.00 6.74	124 135	2.33 2.35	206 203	83 78	65 64	0	2 1	5 5	2
	AUGUSTA	70	43	77	28	57	12	0.43	-0.51	0.25	4.79	114	0.74	69	83	51	0	2	3	0
		68 70	47	75 76	33	57	10	1.30	0.26	0.59	6.30	113	1.90	158	89 84	47	0	0	4	1
	SAVANNAH	71	47	78	34	59	10	0.16	-0.69	0.16	0.75	20	0.19	19	86	46	0	0	1	0
н	HILO	77	64	78	61	70	-1	1.81	-0.23	0.79	38.87	303	8.48	362	89	81	0	0	6	1
	KAHULUI	80 82	67 61	81 84	64 59	74 72	1 0	0.00	-0.63 -0.84	0.00	8.29 5.20	231 128	0.71	96 2	80 87	71 74	0	0	0	0
	LIHUE	77	67	78	63	72	0	0.18	-0.91	0.09	19.91	330	0.44	35	92	80	0	0	6	0
ID	BOISE LEWISTON	40 45	28 33	49 56	16 19	34 39	5	0.37	0.07	0.26	2.21	127 200	0.46	128 379	75 79	63 65	0	5 3	2	0
	POCATELLO	34	19	49	-2	27	3	0.02	-0.23	0.02	1.66	119	0.17	57	86	69	0	6	1	0
IL	CHICAGO/O'HARE	29	14	37	11	22	0	0.78	0.38	0.35	6.58	227	0.79	168	83	67	0	7	5	0
	PEORIA	30 33	13 17	36 46	5 10	21 25	0	0.12	-0.26 -0.29	0.05	4.73 4.11	179 146	0.16	36 19	79 84	65 58	0	7	4	0
	ROCKFORD	29	13	37	9	21	2	0.61	0.30	0.26	4.62	190	0.61	165	82	71	0	7	5	0
IN	SPRINGFIELD	37	21	53 61	15	29	3	0.12	-0.29	0.09	4.05	134	0.13	27	87	57 72	0	7	3	0
	FORT WAYNE	43 30	18	42	10	24	0	0.37	-0.08	0.38	4.74	142	0.88	89 71	90 87	72	0	7	5	0
		36	22	51	16	29	2	0.41	-0.15	0.19	6.01	163	0.43	66	88	66	0	7	3	0
IA	SOUTH BEND BURLINGTON	27 33	15 16	36 46	8 10	21 25	-3 2	0.74 0.01	0.20	0.34	4.53 4.00	122 162	0.74 0.02	117 5	85 85	72 56	0	7 7	5 1	0
	CEDAR RAPIDS	25	8	31	-4	16	-2	0.10	-0.12	0.08	2.16	124	0.19	73	90	65	0	7	2	0
	DES MOINES	30	12	38	8	21	0	0.20	-0.02	0.12	2.20	138	0.21	81	70	57	0	7	2	0
	SIOUX CITY	25 28	8 8	34 39	-3 0	16	-1 0	0.59	0.31 -0.04	0.20	3.74 1.56	185	0.72	∠18 59	88 78	66	0	7	4 2	0
	WATERLOO	24	5	32	0	14	-2	0.23	0.06	0.13	2.31	176	0.30	150	82	69	0	7	3	0
ĸs	CONCORDIA DODGE CITY	41 51	17 19	53 66	12 10	29 35	2	0.00	-0.17 -0.16	0.00	0.55	52 15	0.01 0.00	5 0	75 65	55 24	0	7 7	0	0
	GOODLAND	48	17	65	9	32	4	0.01	-0.10	0.01	0.20	37	0.01	7	67	38	0	7	1	0
	TOPEKA	40	21	60	15	30	3	0.00	-0.22	0.00	1.49	89	0.00	0	69	48	0	7	0	0

Based on 1971-2000 normals

*** Not Available

Weekly Weather and Crop Bulletin Weather Data for the Week Ending January 10, 2009

January 13, 2009

		1	EMF	PERA	TUR	E°	F			PREC					REL/ HUM	ATIVE IDITY		IBER P°F	OF D	
	STATES	_	1												PER	CENT				-011
S	AND TATIONS	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 DEC01	PCT. NORMAL SINCE DEC01	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	43	21	61 62	17	32	2	0.00	-0.23	0.00	1.24	76	0.00	0	72	45	0	7	0	0
κĭ	LEXINGTON	48 44	30 28	62 58	18	39 36	э 4	1.31	0.51	0.72	9.71 7.78	157	2.87 1.75	305 188	98 85	68 71	0	3 5	э 4	3
	LOUISVILLE PADUCAH	44 48	28 28	61 64	20 22	36 38	3 5	0.79 0.59	0.05 -0.14	0.48 0.30	6.26 6.41	138 123	1.08 0.60	126 71	87 86	65 50	0	5 6	4 6	0
LA	BATON ROUGE	74	53	80	42	63	13	3.01	1.71	1.42	9.52	141	3.16	212	91	58	0	0	4	3
	LAKE CHARLES NEW ORLEANS	69 75	49 56	78 80	40 47	59 66	8 13	0.39 0.94	-0.83 -0.20	0.23 0.82	3.38 8.11	56 127	0.39 5.90	28 450	98 88	62 66	0	0	3 4	0 1
	SHREVEPORT	63	40	73	32	52	6	1.80	0.81	1.12	4.94	87	1.80	157	89	59	0	1	2	2
ME	PORTLAND	18 33	1 15	25 39	-13 5	10 24	0	0.79 0.51	0.08 -0.43	0.50 0.47	6.42 5.13	160 96	0.81 0.51	98 47	87 79	67 49	0	7 7	3 3	1 0
MD	BALTIMORE	42	29	50	22	35	2	1.98	1.18	1.14	5.17	121	1.98	215	75	51	0	6	3	2
IVIA	WORCESTER	35 29	24 17	40 35	17	29 23	-1 -1	1.39	0.54 0.54	1.17	8.49 6.95	180	1.39	140	80 86	50 60	0	7	4 5	1
MI		27	9	32	-4	18	-1	0.29	-0.12	0.20	4.17	181	0.32	67	86	62	0	7	3	0
	HOUGHTON LAKE	29 25	5	35 31	-4	24 15	-4	0.61	-0.16	0.22	6.88 4.83	213	0.61	55	88	66 74	0	7	ь З	0
	LANSING MUSKEGON	27	18	34 25	9	23	1	0.50	0.16	0.15	4.30	167	0.50	122	86 86	73 69	0	7	6	0
	TRAVERSE CITY	29	15	33	6	24 21	-1	0.28	-0.23	0.14	6.69	196	0.28	39	87	62	0	7	3	0
MN	DULUTH	15 9	-8 -20	22 17	-16 -34	4 -6	-5 -8	0.03	-0.17 -0.03	0.03	2.17 2.11	185 240	0.23	100 383	82 82	66 67	0	7 7	1	0
	MINNEAPOLIS	19	3	25	-4	11	-2	0.03	-0.19	0.03	1.34	106	0.18	69	79	61	0	7	1	0
	ROCHESTER ST. CLOUD	20 15	4 -6	27 21	-2 -22	12 4	0 -5	0.16	-0.03 -0.10	0.16 0.05	1.77 1.88	143 216	0.25	114 167	79 85	69 59	0	7 7	1 1	0
MS	JACKSON	64	44	74	37	54	9	2.84	1.58	1.83	11.84	175	2.93	203	94	63	0	0	4	2
	MERIDIAN TUPELO	67 56	45 38	74 70	32 29	56 47	10 7	2.73 2.28	1.45 1.03	1.82 1.26	11.13 13.88	164 184	2.96 2.40	203 167	95 88	67 69	0	1 1	4 5	2
MO	COLUMBIA	40	22	64	17	31	3	0.10	-0.26	0.09	2.67	92	0.10	23	83	51	0	7	2	0
	KANSAS CITY SAINT LOUIS	38 44	19 25	59 61	13 19	29 35	2 5	0.00 0.03	-0.26 -0.44	0.00 0.02	1.87 4.58	96 134	0.00 0.03	0 5	73 77	43 58	0 0	7 7	0 2	0
мт	SPRINGFIELD	44	24	65	17	34	2	0.16	-0.28	0.16	2.77	75	0.18	35	81	58	0	6	1	0
MI	BUTTE	41 33	24 16	53 43	2 -21	33 25	9 8	0.17 0.00	0.00 -0.11	0.13 0.00	1.50 1.21	170 181	0.27 0.09	129 64	74 78	49 52	0	6 6	2 0	0
	CUT BANK	35	18	43	6	26	7	0.00	-0.08	0.00	0.09	20	0.00	0	85	59	0	7	0	0
	GREAT FALLS	36	-3 20	35 47	-29 2	7 28	-4 6	0.06	-0.02 0.04	0.06	1.53	319 225	0.23	209 230	86 75	80 54	0	6	1	0
	HAVRE	27	5	37	-16	16 20	1	0.30	0.19	0.20	0.90	138	0.41	293 152	85 86	76 75	0	7	5	0
NE	GRAND ISLAND	39	14	46	6	29 26	4	0.15	-0.10	0.01	0.70	88	0.46	7	72	53	0	7	4	0
		32	13 10	46	7	23	0	0.02	-0.15	0.00	0.82	77 170	0.02	10	74 76	58 65	0	7	1	0
	NORTH PLATTE	46	11	64	1	28	5	0.03	-0.00	0.03	0.28	55	0.03	36	87	39	0	7	1	0
	OMAHA SCOTTSBLUFF	30 46	11 11	41 64	4 -4	21 29	-1 5	0.03	-0.14 -0.07	0.03	0.84	75 34	0.05	25 29	80 77	63 45	0	7 7	1 1	0
	VALENTINE	40	7	59	-14	24	3	0.00	-0.06	0.00	0.24	65	0.02	29	82	64	0	7	0	0
NV	ELY LAS VEGAS	37 53	7 36	52 59	-14 29	22 44	-3 -2	0.19 0.00	0.04 -0.11	0.18 0.00	0.66 1.15	97 213	0.35	194 0	84 45	70 30	0	7 2	2 0	0
	RENO	51	25	61	16	38	5	0.00	-0.20	0.00	0.54	48	0.04	17	76	59	0	7	0	0
NH	CONCORD	44 30	24 16	57 36	12 8	34 23	5 2	0.05 2.83	-0.14 2.17	0.05 2.05	1.21 7.47	116 201	0.09 2.83	39 372	77 84	59 55	0 0	5 7	1 5	0 2
NJ	NEWARK	39	28	45	24	34	2	1.36	0.48	1.12	7.24	158	1.36	133	67	38	0	6	3	1
NY	ALBOQUERQUE	47 29	26 14	57 37	21	37 21	-2	0.00	-0.11	0.00	0.65	103	0.00	0 150	69 84	36 60	0	7	0 4	1
	BINGHAMTON	29	16	36	9	23	0	1.09	0.54	0.56	4.74	129	1.11	171	85	68 64	0	7	4	1
	ROCHESTER	31	14	38	5	24 22	-3	1.02	0.50	0.20	4.63	139	1.02	167	90 81	63	0	7	4	1
NC	SYRACUSE	28 57	12	34 67	-2 22	20	-4 11	0.89	0.31	0.49	4.85	128	0.96	143	92 86	67 62	0	7	5	0
110	CHARLOTTE	60	40	67	25	50	8	2.20	1.41	1.30	5.53	133	2.21	232	84	60	0	3	5	2
	GREENSBORO HATTERAS	55 59	36	62 70	25 31	46 51	8	1.81	1.05	0.98	5.20 5.07	132 84	1.90	216 15	83 89	58 58	0	1	4	2
	RALEIGH	58	39	68	27	49	9	1.69	0.84	0.90	4.80	119	1.74	178	80	65	0	1	3	2
ND	WILMINGTON BISMARCK	65 15	45 -8	73 29	29 -25	55 3	9 -7	0.12 0.34	-0.86 0.26	0.09 0.21	3.16 1.76	64 320	0.12 0.35	11 318	89 85	51 75	0	2 7	2 3	0
	DICKINSON	23	2	33	-12	13	-1	0.10	0.04	0.10	0.89	217	0.10	143	88	71	0	7	1	0
	FARGO GRAND FORKS	6 2	-11 -16	13 10	-20 -28	-2 -7	-9 -13	0.00 0.01	-0.17 -0.13	0.00 0.01	2.08 1.17	270 163	0.28 0.19	140 112	84 85	70 72	0 0	7 7	0 1	0 0
	JAMESTOWN	6	-12	18	-23	-3	-12	0.11	0.00	0.09	1.25	216	0.18	129	88	72	0	7	2	0
ОН	AKRON-CANTON	14 32	-6 22	28 43	-27 19	4 27	-4 1	0.60 1.31	0.49 0.74	0.45 0.46	3.19 4.76	449 130	0.69 1.32	493 197	85 82	77 66	0	7 7	2 6	0
		40	26	59	18	33	3	0.96	0.29	0.46	5.48	135	0.99	127	90	77	0	7	5	0
	COLUMBUS	32 35	21	43 50	18 20	27 31	2	1.19	0.64	0.49	5.03 5.89	133	1.20	185	94 83	бб 64	0	6	ю 6	0
	DAYTON MANSFIELD	33 31	23 20	51 47	14 15	28 26	1 1	0.55	-0.04 0.30	0.31 0.36	5.78 5.77	153 146	0.60	87 130	89 92	70 69	0	7 7	4 5	0
			20	-1	10	20		0.01	0.00	0.00	0.77	i-tu	0.01	100	52	00	5	'	, v	Š

Based on 1971-2000 normals

January 13, 2009

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														ATIVE	NUN	NUMBER OF I				
	STATES	٦	FEMF	PERA	TUR	E°	F			PREC					HUM PER	IDITY Cent	TEM	IP. °F	PRE	ECIP
S	AND STATIONS		AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DECO1	PCT. NORMAL SINCE DEC01	TOTAL, IN., SINCE JANO1	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	30	18	37	11	24	-1	0.54	0.10	0.33	4.79	152	0.54	104	90	78	0	7	5	0
ок	YOUNGSTOWN OKLAHOMA CITY	32 49	20 26	41 75	17 19	26 38	0 2	1.56 0.00	1.03 -0.34	0.64 0.00	5.21 0.71	146 31	1.58 0.00	255 0	82 70	63 33	0	7 5	6 0	1 0
	TULSA	47	29	69	24	38	2	0.00	-0.37	0.00	1.77	62	0.00	0	67	49	0	6	0	0
OR	ASTORIA	50 38	42 21	54 45	32	46 29	4	6.84 0.33	4.69	3.69	19.29	150 123	9.34 0.37	378	92 87	84 75	0	1	6	4
	EUGENE	49	36	57	24	43	4	0.73	-0.96	0.23	6.51	64	1.66	86	94	89	0	3	5	0
	MEDFORD	47	32	56	22	39	1	0.35	-0.20	0.20	3.81	108	0.88	138	98	77	0	4	3	0
	PENDLETON	49 49	34 37	60 56	19 25	42 43	9 4	0.18	-0.12 -0.31	0.10	3.56 6.79	193 97	0.98 4.09	272 312	77 94	63 83	0	3	4 6	0
	SALEM	49	37	55	28	43	3	1.22	-0.06	0.51	9.22	116	3.20	216	95	85	0	3	5	1
PA	ALLENTOWN	36	24	44	18	30	2	0.99	0.21	0.65	7.83	183	0.99	110	76	53	0	7	3	1
	MIDDLETOWN	34 36	22	44 44	21	28 31	2	0.97	0.56	0.27	8.54 7.82	192	0.97	164	84 87	69 49	0	7	ю З	1
	PHILADELPHIA	41	29	48	22	35	2	1.72	0.93	1.37	7.29	173	1.72	189	75	42	0	6	3	1
	WILKES-BARRE	36 33	24 21	48 42	20 15	30 27	2	1.54	0.95	0.69	6.32 6.15	178 195	1.54	223 177	92 79	61 51	0	7	5 3	2
	WILLIAMSPORT	35	22	44	15	28	2	1.44	0.86	0.63	5.42	150	1.44	212	80	52	0	7	3	1
RI	PROVIDENCE	36	23	41	15	29	0	1.55	0.58	1.34	8.81	168	1.55	140	66	47	0	7	4	1
30	CHARLESTON	70 69	47 46	78 77	37	59 57	10 9	0.07	-0.82	0.05	0.14	3 12	0.07	7 16	89 86	44 46	0	0	3	0
	COLUMBIA	65	43	72	28	54	10	0.42	-0.58	0.25	3.88	86	0.48	42	84	56	0	2	4	0
SD	GREENVILLE	61 16	43	72	29	52	11	2.68	1.70	1.21	6.79 1.50	136	2.77	247	86 82	51 74	0	1	5	2
00	HURON	22	-12	24	-12	9	-5	0.01	-0.07	0.23	0.93	186	0.42	45	80	66	0	7	1	0
	RAPID CITY	40	10	48	-6	25	3	0.10	0.02	0.10	0.63	124	0.10	91	82	46	0	7	1	0
TN	SIOUX FALLS BRISTOL	23 51	4 36	33 59	-6 21	14 44	0 10	0.10	0.00	0.09	0.80	125 207	0.10	83 501	74 96	62 66	0	7	2	0
	CHATTANOOGA	57	40	63	28	49	10	4.60	3.44	3.68	14.66	239	4.91	369	88	67	0	1	4	2
	KNOXVILLE	55	37	65 60	23	46	9	5.09	4.05	3.07	14.29	252	5.28	444	94	66	0	3	5	3
	NASHVILLE	54 52	30	63	33 24	45 42	э 5	2.10	1.14	0.94	8.83	158	2.11	188	85 89	58 60	0	3	4 5	2
ТΧ	ABILENE	60	31	82	25	46	3	0.08	-0.16	0.08	0.15	10	0.08	28	57	30	0	5	1	0
	AMARILLO	53 69	23 40	67 82	15 24	38 54	3	0.00	-0.16	0.00	0.05	6 27	0.00	0 73	61 78	20 53	0	6	0	0
	BEAUMONT	68	47	77	37	58	6	0.69	-0.62	0.37	3.23	48	0.69	46	99	61	0	0	4	0
	BROWNSVILLE	78	54	84	45	66	7	0.11	-0.13	0.07	0.66	47	0.11	39	98	74	0	0	3	0
	DEL RIO	74 67	48 40	83 79	35 32	61 53	5	0.03	-0.33	0.02	0.47	22 50	0.04	10 23	89 75	60 42	0	0	2	0
	EL PASO	60	34	70	30	47	3	0.01	-0.10	0.01	0.28	30	0.01	7	57	26	0	3	1	0
	FORT WORTH	65 67	38	81 76	33	52 59	8	0.22	-0.28	0.13	0.49	16	0.22	38	69	32	0	0	2	0
	HOUSTON	68	44	78	35	56	4	0.09	-0.79	0.39	2.08	42	0.10	42	99 91	70	0	0	2	0
	LUBBOCK	56	27	77	22	42	4	0.02	-0.07	0.02	0.03	4	0.02	17	55	27	0	6	1	0
	SAN ANGELO	58 64	29 31	80 85	26 25	44 47	1	0.04	-0.07 -0.16	0.02	0.20	25 5	0.07	50 5	51 57	33 28	0	5 6	2	0
	SAN ANTONIO	69	44	81	28	56	6	0.21	-0.17	0.20	0.46	19	0.21	48	83	32	0	1	2	0
		72	42	83	31	57	4	0.07	-0.48	0.07	0.50	16	0.07	11	94 72	63	0	1	1	0
	WICHITA FALLS	54	29	80	22	41	1	0.44	-0.28	0.00	1.05	52	0.44	0	63	33	0	6	0	0
UT	SALT LAKE CITY	34	20	47	3	27	-2	0.43	0.14	0.17	2.11	134	0.83	244	87	62	0	7	4	0
VA	LYNCHBURG	27 50	31	34 62	-2 21	19 40	0 5	2.22	-0.18	0.24	3.25 5.74	117	0.32 2.22	58 249	80 85	57	0	5	3 5	2
	NORFOLK	55	36	71	29	46	6	0.66	-0.19	0.43	4.66	117	0.83	86	86	55	0	3	3	0
	RICHMOND	52 52	33	60 62	27	42	5	0.71	-0.10	0.34	4.82	119	0.77	82 272	79 70	56 52	0	4	4	0
	WASH/DULLES	42	29	50	20	35	3	2.12	1.45	1.04	4.63	120	2.12	250	79	53	0	6	3	2
WA		46	37	54	25	42	5	7.28	5.63	4.96	12.95	132	8.23	435	90	85	0	2	6	3
	QUILLAYUTE SEATTLE-TACOMA	46 47	40 38	50 53	33 30	43 43	3	9.17 4.24	6.14 3.11	2.92 2.35	21.40 9.22	119 133	10.22 5.12	294 394	94 86	87 78	0	0	7 6	5 2
	SPOKANE	36	27	44	13	32	6	0.50	0.09	0.39	5.06	185	1.01	210	94	79	0	5	4	0
W/V	YAKIMA	44	23	59 60	3	33	5	0.09	-0.19	0.05	1.79	105	0.96	291	83	72	0	5	2	0
vvv	CHARLESTON	47 49	31 31	60 64	17 24	39 40	8 6	2.52 3.07	1.81 2.38	0.86 1.14	6.96 8.16	178	2.53 3.08	309 385	91 91	71	0	3 4	ь 6	2
	ELKINS	46	27	56	20	36	7	3.10	2.35	1.16	8.10	188	3.12	359	96	71	0	7	6	3
wi	HUNTINGTON	45 20	30	62 26	21 -15	38 8	5	2.21	1.49	0.98	6.68 1.63	159 128	2.27	273	94 80	74 59	0	4	6	2
	GREEN BAY	24	2	32	-5	13	-3	0.64	0.39	0.51	4.51	264	0.79	263	88	64	0	7	3	1
	LA CROSSE	23	4	31	-1	14	-2	0.20	-0.02	0.18	2.61	175	0.29	112	87	59	0	7	2	0
	MILWAUKEE	25 30	6 14	33 35	10	16 22	-2 1	0.22	-0.03	0.19	3.51 4.88	179	0.22	73 156	85 77	70 64	0	7	3 5	0
WY	CASPER	35	16	51	-10	26	4	0.00	-0.11	0.00	0.69	91	0.31	221	64	53	0	6	0	0
		40 38	18 13	55 55	1 -7	29 25	3	0.00	-0.08 -0.11	0.00	0.31	54 80	0.00	0 43	57 73	33 37	0	7 7	0	0
	SHERIDAN	40	15	59	-11	28	7	0.21	0.04	0.20	1.09	124	0.43	215	78	62	ŏ	6	2	ŏ

Based on 1971-2000 normals

*** Not Available

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National Agricultural Summary

January 5-11, 2009

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Moderate to heavy precipitation fell in Washington, focused mostly on the western side of the State. Meanwhile in the Southeast, a band of mostly light to moderately heavy precipitation stretched from eastern Texas northeastward into New England. The remainder of the country received an inch or less throughout the week. Temperatures were above normal across the South and the Northwest. The Four Corners region, eastern portions of the northern Great Plains, the Great Lakes region, and portions of New England experienced colder-than-normal weather. Elsewhere, temperatures were near normal.

In California, fieldwork continued in rice fields in preparation for spring planting. Work also continued in winter wheat and grain fields, with early plantings progressing well in response to recent moisture. Specialty potato harvest was ongoing and planting preparations continued for spring potato beds. California vineyard pruning was evident, as old vines were removed, and producers were tying vines and spraying herbicides. Berry nursery stock digging and trimming continued, along with stone fruit orchard pruning and spraying. Citrus harvest continued, though some inclement conditions slowed progress.

Arizona cotton harvest was nearly complete, slightly behind last year and the 5-year average pace. Alfalfa harvest remained active and grain planting continued across the State. In Texas, small grains were showing signs of stress due to the lack of moisture across much of the State, except in the Blacklands. Cotton harvest continued, with mixed yields in the Northern High Plains and good yields were reported in the Edwards Plateau. Texas corn producers prepared for spring planting in the Blacklands and South Central Texas. Meanwhile in the Coastal Bend, sorghum producers needed more rain before seeding. In the Trans-Pecos region of the Lone Star State, pecans were being harvested. In South Texas, vegetable harvest was ongoing and preparations were being made for potato planting.

Recent moisture in Georgia has benefited small grains. Georgia's winter wheat continued to develop, and soil moisture was reported 71 percent adequate and 21 percent surplus. Small grain fields were soggy from past rains, slowing fieldwork.

Wheat in Florida's panhandle was doing well due to recent favorable weather; however more rain is needed to improve development. Florida potato planting continued and nursery crops were barely moving through the market due to a decline in consumer landscaping demands. Sugarcane harvest continued and vegetable irrigation efforts were ongoing as dry conditions threatened crop production. Harvest of vegetables and berries were ongoing. Citrus growers continued to irrigate as dry conditions persisted. Early and midseason harvest was in full swing at almost six million boxes weekly.



December Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: Stormy weather across the nation's northern tier buried winter grains beneath a protective blanket of snow but disrupted rural travel and increased stress on winter-weary livestock. December snowfall records were established in dozens of locations from Washington to New York, and a few all-time monthly snowfall records were also broken. The remainder of the West also received some precipitation, although not as consistently. For example, the Sierra Nevada received a monthly average of 6 inches of precipitation, boosting the water equivalency of the mountain snow pack from 1 inch (13 percent of average for the date) on November 30 to 7 inches (74 percent) by the end of December. At lower elevations, rain provided some relief for California's drought-stressed pastures and rangeland. Farther east, a dry regime across the southern Plains resulted in deterioration in the condition of the winter wheat crop. In addition, high winds raised dust on several occasions across the southern High Plains. By January 3, nearly half (46 percent) of the Texas winter wheat crop was rated in very poor to poor condition, up from 16 percent on November 23. Similarly, one-fifth of Oklahoma's wheat was rated very poor to poor on January 3, up from 6 percent on November 23. In contrast, just 9 percent of the winter wheat in Kansas was rated very poor to poor in early January, along with 4 to 5 percent of the crop in Montana, South Dakota, and Nebraska. Elsewhere, December rainfall significantly eased long-term drought across the interior Southeast, while occasional rain, freezing rain, sleet, and snow fell in the Northeast. In contrast, most of the lower Southeast, including Florida, remained dry during December. As a result, irrigation requirements increased in Florida's citrus and winter crop areas.

December temperatures generally averaged 2 to $6^{\circ}F$ above normal across the lower Southeast, but were mostly well below normal across the northern Plains, the Midwest, and the West. Monthly readings averaged as much as $6^{\circ}F$ below normal in the Northwest, and ranged from 4 to $12^{\circ}F$ below normal across the northern Plains and the upper Midwest.

Summary: The month opened on a warm note across the West, with daily-record highs for December 1 reported in locations such as Paso Robles, CA (78°F); Redmond, OR (67°F); Reno, NV (66°F); Flagstaff, AZ (66°F); and Helena, MT (60°F). Later, record-setting warmth reached as far east as the central High Plains, while snow developed across the north-central U.S. On December 2, McCook (70°F) notched a daily-record high, while Billings, MT (4.6 inches), collected a daily-record snowfall. Meanwhile, another round of chilly air settled across the Southeast, where records lows in Florida for December 3 dipped to 29°F in Archbold and 36°F in Lakeland. Chilly weather also returned to the High Plains, where Denver, CO (-5°F on December 4, along with 3.6 inches of snow), posted a daily-record low, just 2 days after reaching 69°F. A few days later, the coldest air of the year swept across parts of the Midwest and East. On December 4, La Crosse, WI, noted its first sub-zero temperature of the year (-2°F), 12 days earlier than normal. It was La Crosse's earliest sub-zero reading since November 7, 1992. Temperatures remained below 20°F on December 5 as far south as Fort Wayne, IN, where the high was 19°F. Meanwhile, snow squalls developed in areas downwind of the Great Lakes, where Muskegon, MI (11.2 inches), received a daily-record snowfall for December 6.

Eventually, cold weather also reached the East. Elkins, WV (-4°F), posted a daily-record low for December 7, followed the

next day by a record in Watertown, NY (-16° F). Farther west, snow returned to the nation's northern tier. Daily-record totals for December 8 included 4.4 inches in La Crosse, WI, and 3.6 inches in Huron, SD. In fact, La Crosse measured 11.9 inches of snow during the first 9 days of December, boosting its snow depth from 4 to 12 inches. The last time La Crosse had at least a foot of snow on the ground so early in the season was 1991, when the depth reached 14 inches on November 24. In contrast, warmth overspread the south-central U.S. in advance of a developing storm. In Texas, Childress (76°F) notched a daily-record high on December 8, followed by records for December 9 in locations such as McAllen (91°F) and San Antonio (85°F).

Heavy precipitation developed across the Mid-South and parts of the Midwest on December 9, when record totals for the date included 4.09 inches in Tupelo, MS; 3.86 inches in Jackson, TN; and 1.47 inches (and 2.6 inches of snow) in Chicago, IL. A day later, record rainfall totals for December 10 topped 2 inches in locations such as Meridian, MS (2.57 inches), and Macon, GA (2.55 inches). On December 11, a final round of heavy rain deposited at least 4 inches at several sites, including Wallops Island, VA (4.56 inches), and Jackson, MS (4.07 inches). By the night of December 10-11, a few inches of snow dusted parts of eastern Texas. Houston, TX (1.4 inches on December 10), tallied its first measurable snowfall since February 1, 1994, and its first 1-inch snowfall since December 22, 1989. Beaumont-Port Arthur, TX (1.8 inches on December 11), noted its earliest measurable snowfall on record, previously set with a 0.7-inch total on December 22, 1989. However, the band of heaviest Southern snow stretched from eastern Louisiana into south-central Mississippi. Unofficial snowfall totals for December 11 reached 8 inches at both Bogue Chitto, Lincoln County, MS, and Amite, Tangipahoa Parish, LA. Elsewhere in Louisiana, 3.0 inches blanketed in Baton Rouge and 1.0 inch coated New Orleans. By the following day, as much as an inch of freezing rain glazed the interior Northeast, causing major electrical and travel disruptions. In the storm's wake, daily-record lows were broken on December 11 in Victoria (27°F) and Corpus Christi, TX (30°F). In Deep South Texas, Harlingen's minimum temperature of 31°F (on December 11) represented its lowest reading since February 12, 2006, when it was also 31°F.

Meanwhile, wintry conditions deepened across the northern Plains and parts of the West. In North Dakota, December 13-14 snowfall totals reached 13.8 inches in Williston and 12.4 inches in Bismarck. In Montana, 10.0 inches of snow blanketed Glasgow on December 13, setting a record for any December day (previously, 8.0 inches on December 9, 1906). Glasgow also clocked a northeasterly wind gust to 49 m.p.h. On the night of December 13-14, wind gusts in Nebraska were measured as high as 65 m.p.h. in Gordon and 61 m.p.h. in Broken Bow. By December 14, daily-record lows were shattered in Montana locations such as Havre (-33°F), Lewistown (-29°F), and Great Falls (-25°F). Farther west, December 12-13 snowfall totals were as high as 2 to 3 feet in the Cascades, with 33.0 inches reported at June Lake, WA, and 29.5 inches noted at Oregon's Crater Lake.

During the week of December 14-20, temperatures averaged at least 20 to 30°F below normal in Montana, northern Wyoming, and the western Dakotas. Scattered readings below -30°F were noted across the northern Plains from December 15-17. However, a substantial snow cover insulated winter wheat across the northern Plains and the interior Northwest. Farther south, however, a patchy, shallow snow cover increased concerns about the potential for winter kill in wheat areas of the central High Plains, where temperatures briefly fell into the range of -20 to 0°F.

Meanwhile, stormy weather engulfed the West, especially from southern California to the Four Corners region. Following a dismal start to the 2008-09 winter wet season, snow was especially beneficial in the Southwestern mountains.

December 15 was a transitional day across the central and southern Plains due to the passage of an Arctic cold front. Childress, TX (76°F), and Tulsa, OK (75°F), posted daily-record highs during the afternoon of December 15, then experienced 56-degree temperature plunges by midnight (to 20 and 19°F, respectively). Farther north, Watertown, SD, collected a daily-record snowfall (6.0 inches) on December 14, which was also its first of 9 consecutive days with a low temperature below 0°F. Chilly weather also affected California's Central Valley, where lows of 26°F in Hanford and 27°F in Merced were both records for December 14. The next day, lows of -30°F in Havre, MT; -20°F in Buffalo, WY; and -19°F in Denver, CO, were among dozen of daily records for December 15. Even colder air gripped parts of Montana on December 16, when lows plunged to -39°F in Simpson and -35°F in both Harlem and Chinook.

In stark contrast, record warmth prevailed across the East in advance of a stormy spell. Daily-record highs for December 15 included 79°F in Augusta, GA; 73°F in Richmond, VA; and 67°F in New York's Central Park and Newark, NJ. The following day, however, Newark (1.6 inches) collected a daily-record snowfall for December 16. Farther west, daily snowfall records for December 16 were also established in locations such as Chicago, IL (4.8 inches); Concordia, KS (4.6 inches); and Madison, WI (4.4 inches). In Oregon, 11.1 inches of snow blanketed Pendleton from December 13-15, including a daily-record total (4.6 inches) on the 15th. In the Southwest, separate rounds of heavy precipitation arrived on December 15 and 17. In southern California, Los Angeles (LAX Airport) netted a daily-record rainfall of 1.89 inches on December 15, followed by a daily-record amount of 1.57 inches in Palm Springs on December 17. Elsewhere in southern California, winds during the second storm (on December 17) were clocked to 84 m.p.h. on Wiley Ridge, while the snow depth at Big Bear Lake climbed to 54 inches. Big Bear Lake's greatest snow depth on record was 58 inches on February 3, 1979. On December 17, snow also blanketed Las Vegas, NV, where the 3.6-inch total set records for the snowiest December (2.0 inches in 1967) and snowiest December day (2.0 inches on December 15, 1967). By December 18, cold air in the Western storm's wake resulted in daily-record lows in California locations such as Palmdale (18°F) and Redding (23°F).

Farther north, record-setting snow also buried the interior Northwest. On December 17-18, 24-hour snowfall records were broken in locations such as Coeur d'Alene, ID (25.0 inches), and Spokane, WA (19.4 inches). Previous records were 16.0 inches (on February 26, 1955) in Coeur d'Alene and 13.0 inches (on January 6-7, 1950) in Spokane. By December 20, daily-record lows in Washington included -23°F in La Crosse, -21°F in Winthrop, and -18°F in Spokane. Farther east, concurrent highlights included warm weather in the Southeast and yet another round of wintry weather from the Midwest into the Northeast. On December 19, daily-record highs soared to 82°F in Baton Rouge, LA, and 79°F in Hattiesburg, MS. Farther north, however, daily snowfall records for the 19th included 15.5 inches in Marguette, MI: 11.6 inches in Worcester, MA; and 11.4 inches in Milwaukee, WI. Huntsville, AL, netted a daily-record rainfall (2.18 inches) on December 20, boosting its month-to-date precipitation to 10.78 inches. The last time Huntsville received more than 10 inches of rain in a calendar month was May 2003, when 10.43 inches fell.

Late in the month, the North continued to reel from an endless parade of storms, interspersed with bitterly cold outbreaks.

Daily-record lows for December 21 included -25°F in Caribou, ME, and -22°F in Colville, WA. Later in the day, snowfall records for the 21st were established in Northeastern locations such as Portland, ME (14.5 inches); Buffalo, NY (11.3 inches); and Burlington, VT (9.1 inches). Unofficial, storm-total snowfall topped 2 feet in parts of northern New England, including a few locations in Coos County, NH, and Franklin County, ME. Meanwhile, the 2-week (December 13-26) snowfall in Pendleton, OR, climbed to 32.5 inches. Pendleton received measurable snow on every day during the 2-week span except December 17 and 23, and collected a daily-record sum of 7.4 inches on December 21. Closer to the coast, at least a half-inch of freezing rain glazed parts of the Pacific Northwest, including the National Weather Service office in Portland, OR. For the Portland area in general, which received at least 6 to 12 inches of snow in addition to the ice, it was the most severe storm since January 1980 and the worst December storm since 1968. Officially, 12.4 inches of snow fell from December 20-22 at the Portland airport, which represented the city's biggest snow storm since 14.8 inches fell in late-December 1968 and early-January 1969. Meanwhile in Chicago, IL, the minimum temperature of -6°F on December 21 represented the lowest reading since February 5, 2007, when it Similarly, Ord, NE (-17°F on December 22), was -10° F. experienced its coldest day since January 16, 2005, when it was -18°F.

Northwestern locations reporting a rare "White Christmas" included Seattle, WA (snow depth of 4 inches on December 25), and Portland, OR (about 6 inches on the ground). Between 1940 and 2007, the Portland airport had never reported more than a trace of snow on the ground on Christmas morning. On December 25, Salt Lake City, UT (7.2 inches); Pocatello, ID (5.9 inches); and Las Vegas, NV (a trace), reported daily-record snowfall totals. Las Vegas had also received a trace of snow on Christmas Day in 1941 and 1988. In California, Bishop noted its first snowfall on December 25 since 1968. In contrast, daily-record highs for December 25 were tied or broken in locations such as Jacksonville, FL (81°F); Savannah, GA (80°F); and New Orleans, LA (79°F). Farther north, however, the night of December 24-25 featured extremely windy conditions in the Northeast, where wind gusts included 69 m.p.h. at Maine's Matinicus Rock and 62 m.p.h. at both Watertown and Rochester, NY.

On December 25-26, more stormy weather engulfed the Intermountain West, where snowfall totals of at least 2 to 3 feet were common. For example, unofficial amounts reached 39 inches at Coal Bank Pass, CO, and 34 inches in Alta, UT. Elsewhere in Utah, wind gusts were clocked to 77 m.p.h. in Tooele and 68 m.p.h. in Sandy. In contrast, daily-record highs for December 26 surged to 83°F in both Baton Rouge, LA, and Dallas-Ft. Worth, TX. In the Midwest, rapidly melting snow resulted from highs that climbed to daily-record levels on the 26^{th} in locations such as Des Moines, IA (59°F), and Milwaukee, WI (51°F). The snow (7 inches) that covered Des Moines on Christmas Day was gone just 2 days later, while Milwaukee's 13-inch snow depth on December 25 fell to 2 inches within 3 days. The Raccoon River at Des Moines, IA, which rose 3.51 feet above flood stage on December 28, was one of dozens of Midwestern rivers to experience minor to moderate flooding. Late-week rainfall, which reached daily-record levels for December 27 in locations such as Chicago, IL (1.74 inches), and Grand Rapids, MI (1.51 inches), contributed to river rises. In addition, both Chicago (61°F) and Grand Rapids (60°F) posted daily-record highs for December 27. Among dozens of other record highs for the 27th were readings of 90°F in Corpus Christi, TX; New Orleans, LA (80°F); and Cincinnati, OH (70°F).

At year's end, another round of heavy precipitation arrived in the Northwest, where Spokane, WA (8.3 inches), received a daily-

record snowfall for December 29. The following day, snowfall records for December 30 reached 8.8 inches in Fargo, ND, and 7.3 inches in Wausau, WI. On New Year's Eve, wind and snow swept into the Northeast, where daily-record snowfall totals included 11.7 inches in Rochester, NY, and 6.5 inches in Boston, MA. Farther south, a wind gust to 62 m.p.h. was clocked on December 31 in Salisbury, MD. By month's end, Spokane's December snowfall climbed to 61.5 inches, shattering records for both December (previously, 42.7 inches in 1996) and any month (previously, 56.9 inches in January 1950). All-time monthly snowfall records were also broken in locations such as Madison, WI (40.4 inches; previously, 37.0 inches in February 1994), and Bismarck, ND (33.3 inches; previously, 31.1 inches in March 1975). December snowfall records were eclipsed at a multitude of Northern locations, including Rochester, NY (46.2 inches; previously, 46.1 inches in 1981); Green Bay, WI (45.6 inches; previously, 36.4 inches in 1887); Great Falls, MT (30.5 inches; previously, 25.0 inches in 1945); and Pendleton, OR (32.5 inches; previously, 26.6 inches in 1983). Farther south, Lubbock, TX—which experienced dust storms on December 3, 8, 14, 23, 26, and 27-posted a daily-record high of 80°F on December 30. Following a wet first half of October, when rainfall totaled 3.77 inches, Lubbock received less than one-tenth of an inch of precipitation in an 11-week span from October 16 - December 31. Elsewhere in Texas, San Antonio (13.76 inches, or 42 percent of normal) completed its third-driest year on record, behind 10.11 inches in 1917 and 13.70 inches in 1954. In stark contrast, locations completing their wettest year on record included Hartford, CT (65.43 inches, or 142 percent of normal; previously 64.55 inches in 1972); St. Louis, MO (57.96 inches, or 150 percent; previously 54.97 inches in 1982); Wichita, KS (53.82 inches, or 177 percent; previously, 50.48 inches in 1951); and Chicago, IL (50.86 inches, or 140 percent; previously, 49.35 inches in 1983).

Hawaii experienced two notable period of rainfall during December. From December 10-13, a low-pressure system produced heavy rain across the western Hawaiian Island, easing or eradicating drought but causing local flooding. December 10-13 totals on Kauai reached 16.18 inches in Kokee, 12.65 inches in Wailua, and 11.35 inches in Lihue. Lihue also netted daily-record totals on December 11 and 13 (4.56 and 4.90 inches, respectively).

During the same period on Oahu, Schofield Barracks endured 17.73 inches, while Wheeler Airfield collected 15.42 inches. On Maui, Kahului (3.06 inches) received 40 percent of its year-to-date rainfall on December 11. Late in the month, torrential rain arrived in windward locations on the eastern Hawaiian Islands (Maui and the Big Island). The Big Island also experienced wintry weather, with several inches of latemonth snow observed on the highest peaks. The heavy rain arrived on December 26, when Hilo (on the Big Island) endured its wettest December day on record (10.12 inches; previously, 8.65 inches on December 9. 1954). December rainfall totals of 30.38 inches (289 percent of normal) in Hilo and 19.46

inches (407 percent) in Lihue, Kauai, were impressive, but fell short of records established in December 1954 (50.82 inches) and 1968 (22.91 inches), respectively.

Despite a late-December cold outbreak, monthly temperatures averaged near normal across interior Alaska and as much as 5 to 10°F above normal in northern and western sections of the state. In contrast, monthly readings averaged at least 5°F below normal in parts of southeastern Alaska, where a large percentage of the precipitation fell in the form of snow. Valdez received 28.8 inches of snow from December 9-11 en route to a monthly total of 42.6 inches. Later, Yakutat measured 30.6 inches of snow from December 23-27, accounting for more than half of its monthly sum of 51.7 inches. Meanwhile in Fairbanks, the temperature stayed below -20°F on 16 consecutive days from December 27 - January 11, approaching its all-time record of 18 such days in 1971. Elsewhere, Anchorage remained below 0°F on 6 consecutive days from December 30 - January 4, marking its longest stretch of subzero weather since January 30 - February 5, 1999.

Fieldwork

Weather summary provided by USDA/NASS

Drier-than-normal weather prevailed across the southern Great Plains, Florida, and northern California, while above-normal precipitation occurred in much of the northern half of the country and the Southeast. Snow cover was adequate in the Dakotas, Montana, and Nebraska for winter wheat protection. Wheat conditions in Texas and Oklahoma declined due to lack of moisture.

Below-normal temperatures prevailed across most of the Corn Belt, maintaining snow cover in northern areas of the region. Several states in the region experienced late-season delays in row crop harvest due to the wet conditions.

Above-average precipitation and near- to above-normal temperatures in the Southeast encouraged winter wheat growth and improved soil moisture. Cotton and soybean harvests continued to lag normal due to the wet weather, while Louisiana's sugarcane harvest was complete by January 1. California and Florida producers continued to harvest seasonal fruits and vegetables.

Extreme Minimum Temperature (°F)





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TEMPERATURE AND PRECIPITATION SUMMARY

						Decem	ber 2	2008							
		TEN	∕IP, °F	PR	ECIP.		TEN	1P, °F	PR	ECIP.		TEN	IP, °F	PR	ECIP.
	STATES	ш	RE		RE	STATES	ш	RE		RE	STATES	ш	RE		RE
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	STATIONS	VEF	PAF	101	EPAF	STATIONS	VEF	PAF	101	EPAF	STATIONS	VEF	EPAF	101	PAF
		A	DE		DE		A	DE		DE		A	DE		DE
AL	BIRMINGHAM	49 46	3	6.40 12.02	1.93 6.43		36 39	0	6.03 4 71	2.00		33 31	0	4.88	1.95
	MOBILE	56	4	4.38	-0.28	LOUISVILLE	37	-1	5.18	1.49	MANSFIELD	29	-1	4.86	1.60
	MONTGOMERY	53	4	4.39	-0.58	PADUCAH	37	0	5.81	1.43	TOLEDO	28	-1	4.25	1.61
AK	ANCHORAGE	14	-3	0.99	-0.06	LA BATON ROUGE	56	4	6.36	1.10	YOUNGSTOWN	31	1	3.63	0.67
	BARROW COLD BAY	32	11	0.15	-0.92	LAKE CHARLES	55	4	2.99	-1.61	OK OKLAHOMA CITY	40 39	-1	1.77	-1.18
	FAIRBANKS	-8	-2	0.50	-0.24	SHREVEPORT	48	0	3.14	-1.41	OR ASTORIA	40	-3	9.95	-0.45
	JUNEAU	22	-7	3.92	-1.49	ME BANGOR	24	0	4.67	1.34	BURNS	23	-2	1.63	0.33
	KING SALMON	21	4	1.69	0.30	CARIBOU	16	0	5.61	2.42	EUGENE	38	-2	4.85	-3.44
	NOME	13	5	1.00	-0.01	MD BALTIMORE	38	1	3.19	-0.16	PENDLETON	29	-5	2.93	1.10
AZ	FLAGSTAFF	31	1	4.74	2.91	MA BOSTON	35	0	7.10	3.37	PORTLAND	38	-2	2.70	-3.01
	PHOENIX	56	2	0.97	0.05	WORCESTER	29	0	5.46	1.66	SALEM	37	-3	6.02	-0.44
	TUCSON	54	2	1.08	0.05	MI ALPENA	20	-4	3.85	2.02	PA ALLENTOWN	33	1	6.84	3.45
AR	FORT SMITH	41	0	3.70	-0.30	FLINT	20	-2	4.07	2.02	ERIE MIDDI FTOWN	35	1	6.85	3.63
CA	BAKERSFIELD	46	-1	0.63	-0.13	GRAND RAPIDS	26	-2	6.27	3.57	PHILADELPHIA	39	2	5.57	2.26
	EUREKA	43	-5	6.66	0.31	HOUGHTON LAKE	20	-4	4.60	2.85	PITTSBURGH	33	0	4.78	1.92
	FRESNO	45	0	1.09	-0.25	LANSING	26	-1	3.80	1.63	WILKES-BARRE	31	0	5.09	2.54
	REDDING	43	-3	3.33	-1.34	MUSKEGON TRAVERSE CITY	27	-2	6.39	4.35	PR SANJUAN	78	0	4.58	0.01
	SACRAMENTO	44	-2	1.53	-0.92	MN DULUTH	7	-7	1.94	1.00	RI PROVIDENCE	35	1	7.26	3.12
	SAN DIEGO	57	-1	3.38	2.07	INT'L FALLS	0	-8	1.42	0.72	SC CHARLESTON	56	5	0.35	-2.89
	SAN FRANCISCO	49	0	2.37	-0.52	MINNEAPOLIS	14	-5	1.16	0.16	COLUMBIA	51	4	3.40	0.02
co	ALAMOSA	20	3	0.48	-0.63	ST. CLOUD	9	-5 -5	1.52	0.89	GREENVILLE	52 47	3	4.02	-2.26
	CO SPRINGS	30	1	0.15	-0.27	MS JACKSON	50	2	8.91	3.57	MYRTLE BEACH	54	5	2.57	-0.88
	DENVER	28	-1	0.24	-0.07	MERIDIAN	51	2	8.17	2.86	SD ABERDEEN	9	-7	1.08	0.70
	GRAND JUNCTION	26	-2	0.86	0.34	TUPELO	45	2	11.48	5.36	HURON	13	-6 7	0.88	0.49
ст	BRIDGEPORT	35	0	5.84	-0.10	JOPLIN	30	-2	2.09	-0.87	SIQUX FALLS	10	-7	0.53	0.13
	HARTFORD	32	1	6.65	3.05	KANSAS CITY	29	-2	1.87	0.23	TN BRISTOL	40	3	4.41	1.02
DC	WASHINGTON	40	0	2.97	-0.08	SPRINGFIELD	33	-3	2.59	-0.58	CHATTANOOGA	45	3	9.75	4.94
DE	WILMINGTON	38	2	4.40	1.00	ST JOSEPH	26	-5	1.70	0.26	JACKSON	42	0	8.21	2.85
FL	DAYTONA BEACH	72	4	0.93	-1.78	ST LOUIS MT BILLINGS	33 19	-1	4.55	0.56	KNOXVILLE	42	1	9.01	4.52 2.95
	FT MYERS	67	1	2.07	0.49	BUTTE	15	-3	1.12	0.59	NASHVILLE	41	1	6.74	2.20
	JACKSONVILLE	59	4	0.59	-2.05	GLASGOW	7	-9	1.30	0.93	TX ABILENE	46	1	0.07	-1.20
	KEY WEST	71	-1	0.89	-1.25	GREAT FALLS	16	-8	1.50	0.83	AMARILLO	39	2	0.05	-0.56
	MELBOURNE	65 72	2	0.77	-1.54	HELENA KALISPELI	20	-1 -5	2.30	0.31	AUSTIN BEAUMONT	51 56	-1 2	2.54	-2.04
	ORLANDO	64	1	0.66	-1.65	MILES CITY	13	-8	0.16	-0.29	BROWNSVILLE	63	2	0.55	-0.56
	PENSACOLA	57	3	3.28	-0.69	MISSOULA	21	-2	1.42	0.27	COLLEGE STATION	53	1	0.80	-2.43
	ST PETERSBURG	67	3	1.37	-1.23	NE GRAND ISLAND	22	-4	0.69	0.03	CORPUS CHRISTI	60	2	0.43	-1.32
	TALLAHASSEE	56	2	1.50	-2.60	HASTINGS	23	-4	0.67	-0.06	DALLAS/FT WORTH	49 53	2	0.27	-2.30
	WEST PALM BEACH	69	1	1.76	-1.38	MCCOOK	27	-2	0.10	-0.43	EL PASO	48	3	0.27	-0.50
GA	ATHENS	48	3	3.67	-0.04	NORFOLK	19	-5	1.29	0.64	GALVESTON	57	-1	1.82	-1.71
	ATLANTA	48	3	4.39	0.57	NORTH PLATTE	22	-4	0.24	-0.16	HOUSTON	56	2	1.68	-2.01
	AUGUSTA	54 52	7	4.05	0.91	OMAHA/EPPLEY	22	-4	0.79	-0.13		43	3	0.01	-0.66
	MACON	53	5	5.33	1.40	VALENTINE	19	-5	0.20	-0.09	SAN ANGELO	40	3	0.05	-0.89
	SAVANNAH	56	5	0.56	-2.25	NV ELKO	24	-2	0.91	-0.02	SAN ANTONIO	55	3	0.25	-1.71
HI	HILO	72	0	30.39	19.89	ELY	25	-1	0.31	-0.19	VICTORIA	56	1	0.43	-2.04
	HONOLULU	75 74	0	7.58	4.73	LAS VEGAS RENO	46 35	-1	1.15	-0.38	WACO WICHITA FALLS	49	1	0.68	-2.08
	LIHUE	73	0	19.47	14.69	WINNEMUCCA	27	-3	1.12	0.31	UT SALT LAKE CITY	30	0	1.28	0.05
ID	BOISE	32	1	1.75	0.37	NH CONCORD	27	1	4.64	1.68	VT BURLINGTON	25	0	2.93	0.71
	LEWISTON	30	-4	1.60	0.55	NJ ATLANTIC CITY	40	3	7.28	4.13	VA LYNCHBURG	39	1	3.52	0.29
п	POCATELLO CHICAGO/O'HARE	24 23	-1 -4	1.49	0.39	NEWARK NM ALBUQUERQUE	37 39	1	5.88	2.31		48 44	4	3.83	0.80
	MOLINE	21	-5	4.57	2.37	NY ALBANY	28	0	4.57	1.90	ROANOKE	42	3	2.25	-0.61
	PEORIA	24	-4	4.03	1.63	BINGHAMTON	27	0	3.63	0.60	WASH/DULLES	38	2	2.63	-0.44
	ROCKFORD	20	-4	4.01	1.95	BUFFALO	29	-1	6.79	2.99	WA OLYMPIA	35	-3	4.72	-3.17
IN	SPRINGFIELD	29	-1 -1	3.92	1.38	ROCHESTER	31 29	2	3.61	0.88	QUILLAYUTE SEATTLE-TACOMA	37	-4 -4	11.18 4.10	-3.32
	FORT WAYNE	28	-1	4.34	1.57	NC ASHEVILLE	42	3	4.75	1.36	SPOKANE	22	-5	4.05	1.80
	INDIANAPOLIS	31	-1	5.58	2.55	CHARLOTTE	47	3	3.23	0.05	YAKIMA	24	-5	0.83	-0.55
	SOUTH BEND	26	-3	3.79	0.70	GREENSBORO	44	3	3.30	0.24	WV BECKLEY	35	0	4.43	1.34
IA	BURLINGTON	26 16	-2 -8	3.98	1.88	HATTERAS RALEIGH	53 47	3	4.84	0.28	CHARLESTON ELKINS	38	0	5.08 4.98	1.76 1.54
	DES MOINES	22	-3	1.99	0.66	WILMINGTON	53	4	3.04	-0.74	HUNTINGTON	36	-1	4.41	1.04
	DUBUQUE	16	-6	3.02	1.33	ND BISMARCK	7	-8	1.41	0.97	WI EAU CLAIRE	12	-6	1.63	0.60
	SIOUX CITY	17	-5	1.46	0.80	DICKINSON	9	-9	0.79	0.45	GREEN BAY	15	-6	3.72	2.31
ĸ¢	WATERLOO CONCORDIA	15 27	-7	2.01	0.90		6	-7 _0	1.80	1.23	LA CROSSE MADISON	14 17	-8 -6	2.32	1.09
NO	DODGE CITY	33	0	0.15	-0.62	JAMESTOWN	5	-9	1.07	0.63	MILWAUKEE	22	-4	4.18	1.96
	GOODLAND	29	-1	0.19	-0.21	MINOT	5	-10	1.71	1.08	WAUSAU	12	-7	3.09	1.76
	HILL CITY	29	-2	0.28	-0.19	WILLISTON	5	-8	2.50	1.93	WY CASPER	20	-4	0.38	-0.24
		30	-1	1.49	0.07	OH AKRON-CANTON	31	0	3.44	0.46		25 22	-2 1	0.31	-0.15
КY	JACKSON	38	0	6.84	2.57	CLEVELAND	31	0	3.83	0.69	SHERIDAN	17	-5	0.66	-0.02

Based on 1971-2000 normals

January 8 ENSO Update



Figure 1: Area-averaged upper-ocean heat content anomalies (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). Heat content anomalies are computed as departures from the 1982-2004 base period weekly means.

Synopsis: Developing La Niña conditions are likely to continue into Northern Hemisphere Spring 2009.

During December 2008, negative equatorial sea surface temperature (SST) anomalies strengthened across central and east-central Pacific the Ocean. Correspondingly, the latest weekly SST index values were -0.3°C in Niño-1+2, -0.9°C in Niño 3, -1.1°C in Niño 3.4, and -0.7°C in Niño 4. The subsurface oceanic heat content anomalies (average temperatures in the upper 300m of the ocean, Fig. 1) also became increasingly negative as below-average temperatures at thermocline depth strengthened in the central and eastern Pacific. Convection remained suppressed near the International Date Line, and became more persistent near Indonesia during December. Low-level easterly winds and upperlevel westerly winds also strengthened across the equatorial Pacific Ocean. Collectively, these oceanic and atmospheric anomalies reflect the development of La Niña.

Nearly all of the recent forecasts for the Niño-3.4 region indicate a continuation of below-average SSTs through the first half of 2009, with at least one-half predicting La Niña conditions throughout the period. While the magnitude of cooling remains uncertain, NOAA's official La Niña threshold (3-month average of the Niño-3.4 index less than or equal to -0.5° C) is expected be met at least through January-March 2009. Therefore, based on current observations, recent trends, and model forecasts, La Niña conditions are likely to continue into the Northern Hemisphere Spring 2009.

Despite the unusually late start to this La Niña, expected impacts during January-March 2009 include above-average precipitation over Indonesia and belowaverage precipitation over the central and eastern equatorial Pacific. For the contiguous United States, potential impacts include above-average precipitation in the Ohio and Tennessee Valleys and below-average precipitation across the South, particularly in the southwestern and southeastern states. Other potential impacts include below-average temperatures in the Pacific Northwest and above-average temperatures across much of the southern United States.

This discussion is a consolidated effort of the National Atmospheric and Oceanic 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 5 February 2009. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: <u>ncep.list.enso-update@noaa.gov</u>.

International Weather and Crop Summary

January 4-10, 2009

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

HIGHLIGHTS

FSU-WESTERN: An adequate snow cover insulated winter grains from continued bitterly cold weather.

EUROPE: Bitter cold settled over central and eastern Europe, while unsettled weather lingered over southern crop areas.

MIDDLE EAST: Locally heavy rain benefited winter crops across the western half of the region, while dry, mild weather prevailed in Iran.

NORTHWEST AFRICA: Showers fell across the entire region, slowing fieldwork but providing Tunisian winter grains with much-needed moisture.

AUSTRALIA: Scattered, light showers maintained adequate moisture supplies for summer crop development.

SOUTHEAST ASIA: An active monsoon brought generally beneficial moisture to rice, corn, and oil palm but caused some flooding.

SOUTH ASIA: Unseasonable showers slowed harvesting in central India, while dry weather prevailed elsewhere.

ARGENTINA: Warmth and dryness maintained stress on corn and soybeans in eastern growing areas of central Argentina.

BRAZIL: Drier conditions returned to parts of southern Brazil, as abundant showers continued farther north.

SOUTH AFRICA: Beneficial rain improved conditions for germination in western sections of the corn belt.



EUROPE

Bitter cold over central and eastern Europe contrasted with unsettled weather across southern crops areas. A strong arctic high over the northern half of the continent ushered the coldest weather of the season into the region. Temperatures plunged to -28 degrees C in southwestern Poland, with minimum temperatures generally between -25 and -10 degrees C from Germany into the Baltics. However, the cold snap lasted no more than 2 days, and most areas were protected by 2 to 20 cm (1-8 inches) of snow cover. The greatest threat of freeze damage (minimum temperatures below -20 degrees C, snow cover 2 cm or less) was in central and northwestern Poland. Meanwhile, light to moderate rain and mountain snow (2-50 mm liquid equivalent) from southern France into Greece and the Balkans slowed late summer crop harvesting but maintained adequate to locally excessive moisture supplies for emerging winter grains. On the Iberian Peninsula, scattered showers (1-25 mm) provided additional soil moisture for winter grain establishment.



Bitterly cold weather continued to prevail across winter grain areas in Russia, Ukraine, and Belarus. In most areas, the frigid weather was accompanied by light to moderate snow (4-10 mm or more of liauid equivalent), increasing the protective snow cover. Greatest amounts of snow (10-15 mm of liquid equivalent) were observed in southern Belarus, eastern Ukraine, and the western portion of the Central District in Russia. Lowest temperatures were observed during the first half of the week, ranging from -30 to -15 degrees C as far south as southern Ukraine and the southern portion of the Southern District in Russia. An adequate snow cover existed in most winter grain areas, reducing the threat for widespread freeze damage. Weekly temperatures averaged from 4 to 7 degrees C below normal in Belarus and the western twothirds of Ukraine to at least 10 degrees C below normal in eastern Ukraine and the northern portion of the Russian Southern Warmer weather spread District. gradually eastward across the region towards the end of the week, improving overwintering conditions for winter grains.

SOUTH AFRICA

Rain (10-25 mm or more) overspread western sections of the corn belt, providing timely moisture for germination and establishment of summer crops. Western crops are usually planted later in the season, but fieldwork should be completed by mid January to lessen the risk of summer heat damage or an early autumn freeze. Pockets of dryness continued in central growing areas (including eastern North West, central Free State, and nearby locations in Gauteng) but heavier rain (10-25 mm, locally exceeding 50 mm) fell in the east, including key growing areas of Mpumalanga and eastern Free State. Earlier planted crops in these eastern sections of the corn belt are in or approaching reproduction, making the rainfall especially timely. Temperatures averaged near to above normal throughout the corn belt, with highs ranging from the lower 30s degrees C in the east to the middle 30s on the western fringes. Elsewhere, moderate to heavy rain (10-50 mm) covered most sugarcane areas of KwaZulu-Natal and southeastern Mpumalanga. Scattered showers (greater than 10 mm) were recorded in eastern growing areas of Eastern and Northern Cape Provinces but dry, seasonably warm weather prevailed elsewhere, favoring development irrigated of crops.





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TUNISIA

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A wet weather regime continued over most of the region's wheat belt. In Morocco and Algeria, another week of light to moderate rain (10-35 mm) maintained saturated topsoils and slowed winter grain planting. However, the rain boosted irrigation reserves and was beneficial for already-sown wheat and barley. In northern Tunisia, where satellite-derived vegetation indices indicated poor health due to acute dryness, the showers (10-20 mm) provided much-needed topsoil moisture for winter crop establishment.



NORTHWESTERN AFRICA

ALGERIA

Total Precipitation (mm) JAN 4 - 10, 2009

MIDDLE EAST

Occasional showers over western growing areas contrasted with warm, dry weather farther east. For the second consecutive week, locally heavy rain (20-100 mm) in western and southern Turkey provided additional moisture for semi-dormant winter grains. Light to moderate rain and mountain snow (5-70 mm liquid equivalent) across the remainder of Turkey boosted moisture reserves for dormant winter wheat and barley, although most lowland crop areas lost their protective snowpack. Showers (10-50 mm) also continued along the eastern Mediterranean Coast, benefiting vegetative winter crops. Unfavorably dry weather returned to central and eastern Syria, increasing irrigation demands in areas still trying to recover from longterm drought. In Iran, generally dry weather (rain less than 5 mm) and weekly average temperatures up to 3 degrees C above normal kept most crop areas devoid of a protective snow cover.



AUSTRALIA

Scattered, light showers (2-12 mm, locally more) fell across Queensland and northern New South Wales. Rainfall has averaged below normal in this region during the past few weeks, but this relatively dry weather comes on the heels of abundant to locally excessive November and early December rainfall. Thus, moisture supplies remained adequate for cotton and sorghum development, despite the recent dryness. Temperatures in major summer crop areas were generally seasonable. Elsewhere in Australia, dry weather in southeastern and western Australia allowed fieldwork to progress without delay. Winter grain harvesting was reportedly approaching completion in these areas.





SOUTH ASIA

Unseasonable showers in central India contrasted with mostly dry weather An upper-air disturbance elsewhere. triggered light to moderate showers (5-40 mm) from Madhya Pradesh eastward into West Bengal, India, slowing late summer crop harvesting. However, the majority of the rain fell in India's primary soybean region, where producers have typically wrapped up the harvest by late December. Dry weather across the remainder of the subcontinent favored summer crop maturation and harvesting in the south and winter wheat development in the north.

SOUTHEAST ASIA

persisted Heavy monsoon showers throughout the region. In Indonesia, 25 to 100 mm across Java maintained favorable soil moisture for rice, while nearly 200 mm in eastern areas caused some flooding. Meanwhile, rainfall was somewhat lighter in oil palm areas of Sumatra, favoring harvest activities, but copious rainfall amounts (50-100 mm, locally up to 200 mm) continued to slow oil palm harvesting elsewhere in Indonesia. Similarly in Malaysia, periods of dry weather in the west aided oil palm harvesting, while prodigious rainfall (100-400 mm) in eastern areas caused flooding and harvest delays, and was likely detrimental to reproductive oil palm. Shower activity in the eastern Philippines was also unusually heavy, causing some localized flooding in seasonally major rainfed rice areas. In contrast, southern corn areas of the Philippines received favorable rainfall (50-100 mm), while seasonably dry weather prevailed in irrigated rice areas. Meanwhile in Vietnam, ample sunshine in the south aided developing winter-spring rice.





BRAZIL

Following last week's beneficial rain, drier weather returned to much of southern Brazil, where moisture remained limited for development of corn and soybeans. Nearly all areas recorded less than 25 mm of rain, with rainfall below 10 mm over Mato Grosso do Sul and westernmost growing areas of Parana. Highs reached 35 degrees C in some of the driest locations. These areas need more consistent rainfall soybeans advance through as reproduction; this typically occurs during January in northern growing areas and February farther south, depending on actual planting dates. Farther north, scattered showers (locally exceeding 25 mm) stretched from southern Mato Grosso to Sao Paulo, with dry pockets returning to sovbean areas in and around southern Goias. Heavier rain (greater than 50 mm) fell from northern Mato Grosso to Espirito Santo, increasing moisture reserves for summer row crops, in particular soybeans, and coffee, although very heavy rain (greater than 100 mm) renewed local flooding concerns in coffee areas of eastern Minas Gerais and nearby locations of Espirito Santo and Rio de Janeiro. Seasonable dryness promoted sugarcane harvesting and other seasonal fieldwork in Brazil's northeastern tip.

ARGENTINA

Warm, mostly dry weather dominated major farming areas of central and northern Argentina. Highs briefly reached the middle 30s degrees C in many growing areas of La Pampa and Buenos Aires early in the week, compounding stress on summer grains and oilseeds. Scattered showers (locally exceeding 10 mm) brought some relief to southern sections of the area several days later, but amounts and coverage limited their benefit. Farther north, little, if any, rain fell over a broad area stretching from eastern Cordoba to Entre Rios, including much of northern Buenos Aires. Early-planted corn and soybeans are advancing through reproduction, and a return to a rainier and milder weather pattern is vital for normal crop development, else significant declines in vield potential will occur. Scattered showers (locally exceeding 25 mm) increased moisture reserves for cotton and other summer row crops in many northern growing areas, although somewhat drier conditions prevailed in some eastern growing areas of Santa Fe, Chaco, and Formosa. According to Argentina's ministry of agriculture (SAGPyA), corn and soybeans were 91 and 86 percent planted, respectively, as of January 8. In addition, winter wheat was 99 percent harvested, compared with 97 percent last year.

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