

## Precipitation Summary for 1991

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1992

During 1991, Wisconsin experienced the third wettest year of the century. The statewide average of 38.1 inches of precipitation was surpassed only in 1938 (41.9 in.) and in 1951 (38.3 in.). The annual rainfall was 6.8 inches above the 30-year average of 31.3 inches, or 122 percent of the normal precipitation. Table 1 compares 1991 to 1990 precipitation; table 2 lists monthly totals and a statewide average. Precipitation was measured at more than 200 National Weather Service and other stations around Wisconsin (fig. 1).

Statewide, precipitation varied from more than 46 inches in the northwestern and southwestern parts of the state to less than 30 inches in east-central Wisconsin (fig. 2). The largest precipitation amounts resulted from a combination of heavy, localized rains in the summer months and a favorable location along the prevailing storm track in late autumn. Precipitation amounts in November were up to five times the normal amount (due to the Halloween snowstorm) and contributed to the high totals in the northwest. The highest annual rainfall

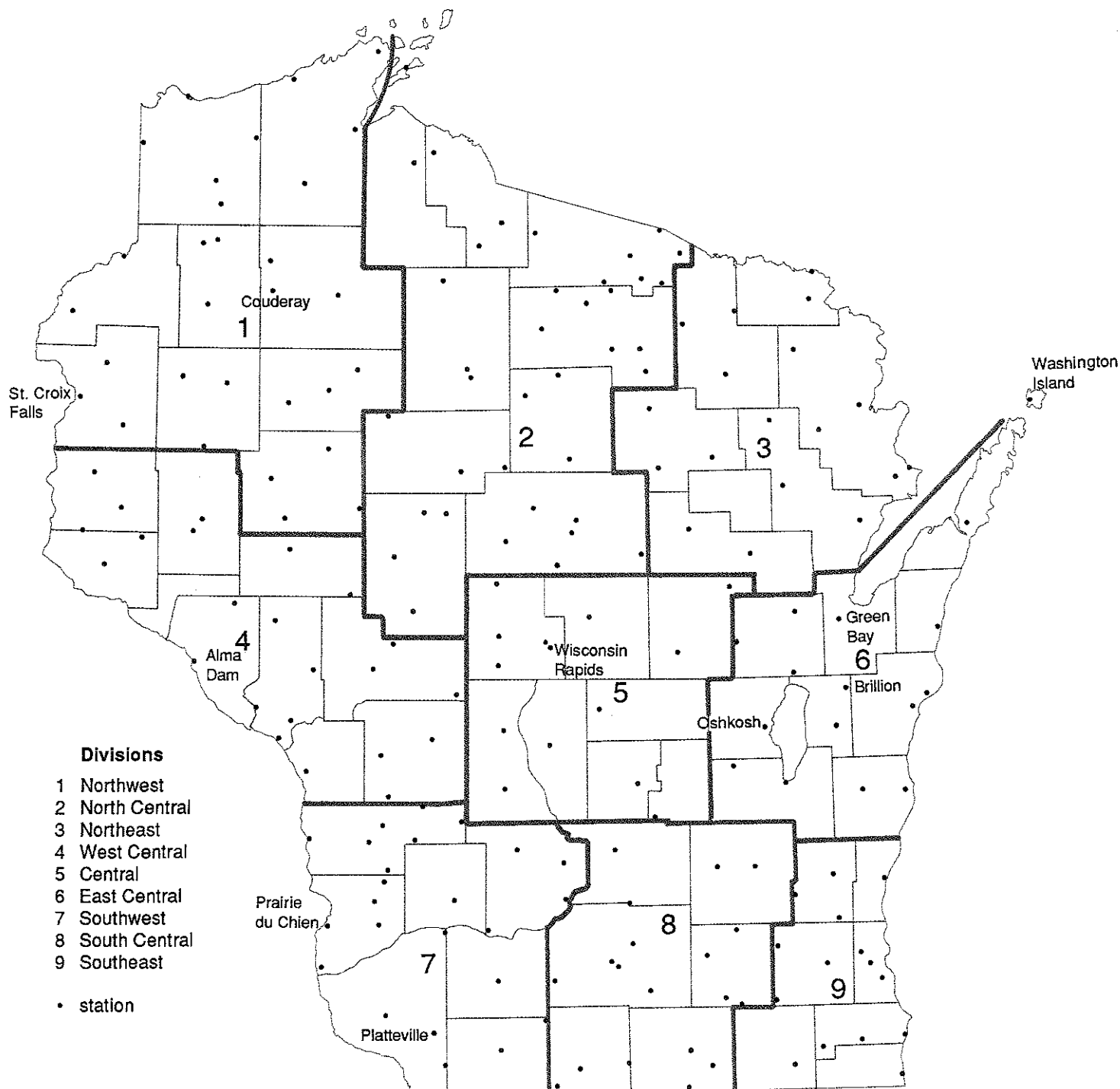
was reported at Alma Dam (50.97 inches, of which 5.91 inches fell on July 22). Other stations with high annual precipitation totals were Platteville (50.77 in.), Couderay (47.81 in.), Prairie du Chien (47.08 in.), and St. Croix Falls (46.83 in.).

The only parts of the state that experienced below-normal precipitation amounts were the lower Fox River valley and the central sands region in west-central Wisconsin (fig. 3). Stations having the lowest rainfall amounts were Green Bay (26.54 in.), Brillion (26.59 in.), Washington Island (27.59 in.), Wisconsin Rapids (28.17 in.), and Oshkosh (29.78 in.). All other stations having complete records measured at least 30 inches of precipitation during 1991.

Due to the abundant rainfall across most of the state, soils in most areas were moist to very wet by the end of the year. Surface water and groundwater levels (measured and published by the U.S. Geological Survey) have also risen in many places, probably reflecting the substantial rainfalls Wisconsin received over the past two years.

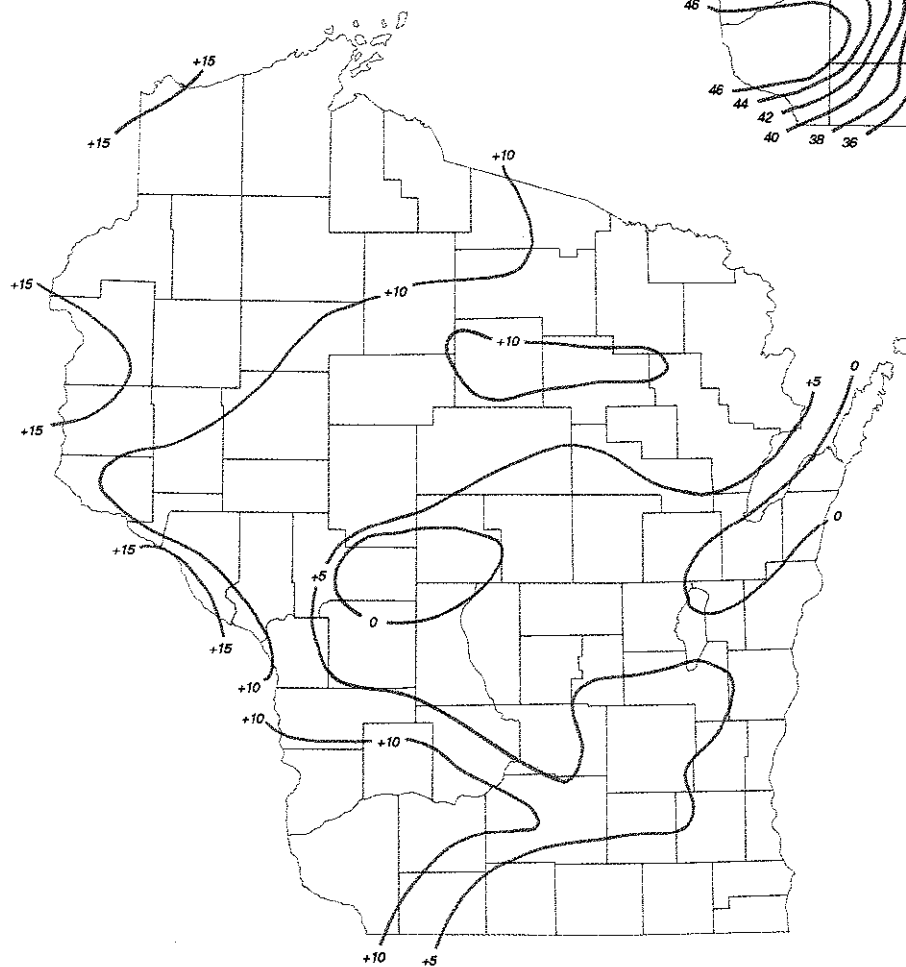
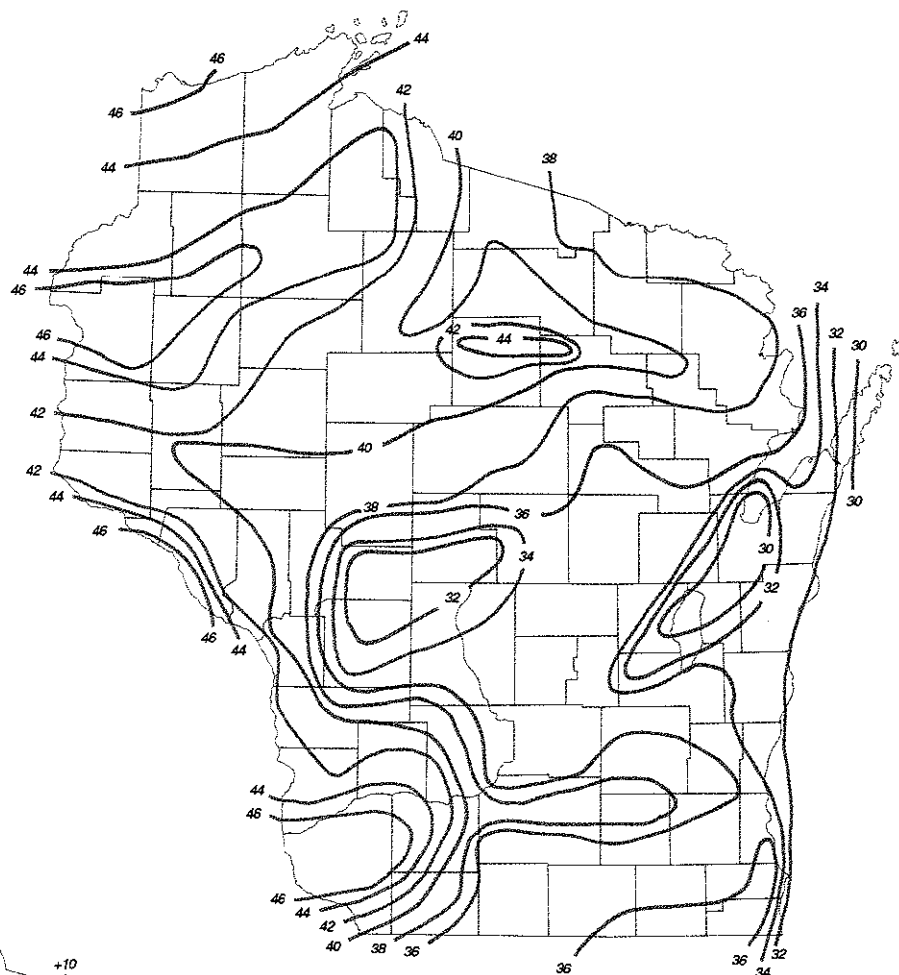
**Table 1.** Comparison of precipitation amounts for Wisconsin climatological divisions for 1991 and 1990. "Normal" is the 30-year average from 1951-80. Divisions are shown in figure 1.

Division	Total 1991 (in.)	Departure from normal	Total 1990 (in.)	Departure from normal
Northwest	42.6	+11.4	33.6	+2.3
North Central	40.3	+8.4	36.2	+4.3
Northeast	36.3	+5.2	34.0	+2.9
West Central	38.7	+7.2	37.7	+6.2
Central	33.2	+2.2	36.5	+5.5
East Central	32.4	+2.9	36.8	+7.3
Southwest	39.9	+8.0	37.6	+5.7
South Central	36.8	+5.0	36.7	+5.0
Southeast	35.3	+3.6	37.6	+5.9



**Figure 1.** Map of station locations and climatological divisions (adapted from *Climatological Data, Wisconsin*, National Oceanic and Atmospheric Administration, Climatic Data Center). Only stations that are discussed in text are named on this map.

**Figure 2. Total precipitation ►**  
in inches, 1991.



◄ **Figure 3. Departure from normal**  
precipitation in inches, 1991.

**Table 2.** Precipitation in 1991, averaged by climatological division.

Division	Monthly totals, 1991 (in inches)												Statistics, 1991			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	NORM	DEP	PCT
Northwest	0.57	0.87	2.67	3.25	5.93	5.19	5.68	2.20	7.16	1.86	6.38	0.89	42.65	31.27	11.38	136
North Central	0.58	0.88	3.07	3.78	5.17	4.67	5.53	2.16	4.58	2.76	5.98	1.14	40.30	31.89	8.41	126
Northeast	0.57	0.77	2.82	3.63	5.70	3.27	4.35	1.88	3.66	3.94	4.31	1.44	36.36	31.03	5.33	117
West Central	0.48	0.68	2.44	4.20	5.93	2.50	5.34	2.75	4.63	1.81	6.57	1.36	38.69	31.50	7.19	123
Central	0.58	0.59	2.10	4.29	4.41	1.61	4.80	2.38	3.30	3.07	4.62	1.42	33.17	30.97	2.20	107
East Central	0.76	0.49	2.59	3.17	2.83	2.24	5.91	2.09	2.74	4.66	3.32	1.64	32.44	29.53	2.91	110
Southwest	0.80	0.25	3.20	5.64	4.79	3.41	3.11	3.21	4.75	3.93	5.19	1.58	39.86	31.91	7.95	125
South Central	1.06	0.30	3.49	3.86	2.89	3.40	3.80	2.23	4.54	5.37	4.25	1.57	36.76	31.75	5.01	116
Southeast	1.17	0.34	3.75	3.52	3.13	2.52	3.28	2.32	4.39	5.83	3.38	1.64	35.27	31.71	3.56	111
State average	0.67	0.64	2.84	3.90	4.85	3.50	4.87	2.34	4.66	3.29	5.24	1.33	38.13	31.32	6.81	122
Normal, 1951-80	1.07	0.94	1.90	2.83	3.55	4.03	3.89	4.09	3.57	2.29	1.81	1.35	31.32			
Departure	-0.40	-0.30	0.94	1.07	1.30	-0.53	0.98	-1.75	1.09	1.00	3.43	-0.02	6.81			
Percent of normal	63	68	149	138	137	87	125	57	131	144	290	99	122			

**Cumulative statistics**

Total	0.67	1.31	4.15	8.05	12.90	16.40	21.27	23.61	28.27	31.56	36.80	38.13
Departure	-0.40	-0.70	0.24	1.31	2.61	2.08	3.06	1.31	2.40	3.40	6.83	6.81
Percent of normal	63	65	106	119	125	115	117	106	109	112	123	122

Division averages are based on arithmetic averages of available station precipitation measurements. These data are collected from National Weather Service offices, cooperative observers, and other participating agencies. Some values may differ from those in *Climatological Data, Wisconsin* (published by the National Oceanic and Atmospheric Administration, Climatic Data Center). Statewide precipitation is calculated using an area-weighted average of climatological division values.

Precipitation totals for individual stations can be obtained from the State Climatology Office, 1225 W. Dayton Street, Madison, Wisconsin 53706-1612, telephone 608/263.2374; FAX 608/262.5964. Consult the State Climatology Office before using the data for legal or regulatory purposes.

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