MONTHLY WEATHER REVIEW

Acting Editor, Robert N. Culnan

VOL. 74, No. 5
W. B. No. 1470

MAY 1946

CLOSED JULY 5, 1946
ISSUED AUGUST 15, 1946

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR MAY 1946

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,003.6 mb.)				Albuquerque, N. Mex. (833.1 mb.)				Apalachicola, Fla. (1,014.0 mb.)				Atlanta, Ga. (980.2 mb.)				Big Spring, Tex. (921.9 mb.)				Bismarck, N. Dak. (953.5 mb.)				Boise, Idaho (912.1 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	93	11.1	75	31	1,620	19.4	25	31	5	22.7	86	31	300	18.9	79	31	774	21.4	48	31	505	11.4	55	31	868	15.9	47
1,000	31	123	(*)	----	31	9	(*)	----	31	127	22.7	80	31	128	(*)	----	31	59	(*)	----	31	102	(*)	----	31	75	(*)	----
950	31	552	10.1	71	31	468	(*)	----	31	576	20.6	72	31	573	18.4	71	31	514	(*)	----	31	536	(*)	----	31	527	(*)	----
900	31	999	8.1	70	31	945	(*)	----	31	1,039	17.8	68	31	1,031	15.5	72	31	982	21.7	45	31	986	10.0	52	31	981	16.3	40
850	31	1,469	5.8	68	31	1,444	(*)	----	31	1,526	14.8	65	31	1,514	12.2	75	31	1,475	18.9	43	31	1,458	6.7	56	31	1,465	12.8	40
800	31	1,963	3.2	70	31	1,964	17.4	24	31	2,037	12.0	60	31	2,020	9.6	65	31	1,993	16.1	37	31	1,953	3.3	64	31	1,970	8.6	44
750	31	2,489	0.8	67	31	2,511	12.7	26	31	2,578	8.8	53	31	2,560	6.7	56	30	2,538	12.2	38	31	2,476	−0.2	68	31	2,502	4.3	49
700	31	3,036	−1.8	66	31	3,086	7.6	31	31	3,142	5.5	48	31	3,118	3.7	53	30	3,111	8.1	34	31	3,022	−3.5	65	31	3,058	0.0	51
650	30	3,626	−5.0	68	31	3,687	2.2	36	31	3,747	1.9	46	31	3,718	0.3	48	30	3,715	3.3	36	31	3,606	−6.9	59	31	3,650	−4.1	54
600	29	4,252	−7.9	61	31	4,331	−3.1	48	31	4,385	−1.9	49	31	4,354	−3.6	45	30	4,360	−2.0	38	31	4,225	−10.5	53	31	4,274	−8.4	52
550	29	4,927	−11.8	54	31	5,008	−9.2	60	30	5,073	−5.8	48	31	5,037	−7.7	46	30	5,041	−7.2	38	31	4,890	−14.7	51	31	4,947	−13.0	49
500	28	5,651	−16.2	----	31	5,742	−15.0	74	30	5,815	−10.0	47	31	5,771	−12.4	47	30	5,781	−11.9	----	31	5,605	−19.4	46	31	5,665	−17.8	48
450	28	6,441	−21.2	----	31	6,533	−20.7	68	29	6,623	−15.5	49	31	6,578	−17.7	46	30	6,585	−17.4	----	31	6,389	−24.5	----	30	6,451	−23.6	----
400	28	7,296	−26.9	----	31	7,392	−26.9	----	29	7,497	−21.5	----	31	7,440	−23.9	----	30	7,450	−23.5	----	31	7,227	−30.7	----	30	7,298	−30.0	----
350	28	8,244	−33.9	----	31	8,341	−33.7	----	29	8,467	−28.5	----	30	8,397	−31.4	----	28	8,411	−30.8	----	30	8,168	−37.4	----	30	8,235	−36.9	----
300	28	9,306	−41.7	----	31	9,404	−41.6	----	29	9,552	−36.9	----	30	9,470	−39.7	----	26	9,480	−39.1	----	30	9,215	−44.5	----	30	9,284	−44.9	----
250	28	10,518	−50.6	----	30	10,616	−50.1	----	29	10,787	−46.5	----	30	10,691	−49.0	----	23	10,703	−47.8	----	29	10,412	−51.6	----	27	10,477	−53.0	----
200	27	11,948	−58.1	----	28	12,052	−56.7	----	29	12,231	−57.7	----	28	12,123	−59.1	----	20	12,136	−56.2	----	29	11,845	−54.4	----	25	11,897	−57.0	----
175	23	12,779	−59.2	----	27	12,894	−58.4	----	28	13,062	−63.0	----	27	12,950	−62.0	----	17	12,993	−59.7	----	29	12,702	−53.5	----	22	12,735	−56.5	----
150	17	13,714	−57.8	----	20	13,865	−59.0	----	27	14,001	−65.6	----	21	13,897	−62.7	----	11	13,954	−61.4	----	24	13,704	−53.8	----	19	13,714	−56.8	----
125	14	14,874	−58.2	----	15	15,015	−61.0	----	19	15,109	−66.9	----	16	14,998	−63.1	----	5	15,076	−62.2	----	19	14,843	−54.5	----	12	14,869	−57.6	----
100	9	16,281	−59.8	----	----	----	----	----	10	16,444	−70.3	----	6	16,384	−63.2	----	----	----	----	----	8	16,249	−55.4	----	5	16,309	−58.5	----
80	5	17,640	−59.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

	Brownsville, Tex. (1,008.7 mb.)				Buffalo, N. Y. (988.0 mb.)				Burrwood, La. (1,013.5 mb.)				Caribou, Maine (990.2 mb.)				Charleston, S. C. (1,013.9 mb.)				Ciudad Victoria, Mexico (969.0 mb.)				Clovis, N. Mex. (865.9 mb.)			
Surface	31	6	25.6	87	31	221	11.4	71	31	2	23.3	88	31	191	8.1	73	31	14	19.7	92	29	335	27.8	73	31	1,306	16.9	41
1,000	31	82	25.1	87	31	119	(*)	----	31	120	23.1	84	31	108	(*)	----	31	133	20.1	87	29	53	(*)	----	31	50	(*)	----
950	31	537	22.8	82	31	551	10.9	62	31	569	20.8	77	31	532	8.3	64	31	578	18.9	77	29	513	27.0	71	31	508	(*)	----
900	31	1,005	21.4	69	31	998	8.6	66	31	1,034	18.7	65	31	979	5.8	65	31	1,039	16.2	74	29	988	24.1	71	31	977	(*)	----
850	31	1,500	19.6	55	31	1,469	5.9	67	31	1,523	16.3	63	31	1,444	2.6	71	31	1,524	13.0	71	29	1,487	20.6	73	31	1,464	18.3	38
800	31	2,020	16.9	49	31	1,963	3.3	66	31	2,037	13.7	55	31	1,932	−0.3	73	31	2,031	10.0	65	29	2,009	17.2	70	31	1,980	14.9	39
750	31	2,573	14.0	41	31	2,492	0.7	64	31	2,581	11.1	44	31	2,447	−2.6	70	31	2,570	7.2	62	29	2,563	14.5	62	31	2,524	11.2	39
700	31	3,147	10.4	39	31	3,036	−2.2	60	31	3,151	7.6	42	31	2,991	−5.3	68	31	3,131	4.1	56	29	3,139	11.4	56	31	3,094	7.1	39
650	31	3,762	6.1	39	31	3,625	−5.4	56	31	3,759	3.7	40	30	3,570	−8.3	58	30	3,729	0.8	46	28	3,755	7.1	52	31	3,699	2.2	42
600	30	4,410	1.2	44	31	4,245	−9.0	53	31	4,403	−0.7	41	30	4,188	−11.5	56	29	4,367	−3.1	48	28	4,408	2.1	52	31	4,337	−3.3	48
550	30	5,101	−4.0	51	30	4,917	−13.1	50	31	5,089	−4.8	43	30	4,851	−15.7	54	29	5,049	−7.3	51	27	5,100	−2.9	56	31	5,020	−9.0	56
500	30	5,849	−9.2	56	30	5,637	−17.7	48	31	5,837	−9.2	41	30	5,562	−20.3	55	29	5,788	−11.8	45	27	5,851	−8.0	58	31	5,749	−14.5	56
450	29	6,661	−14.5	54	30	6,420	−22.8	----	31	6,649	−14.4	----	30	6,341	−25.6	----	29	6,591	−17.2	49	27	6,669	−13.4	58	31	6,546	−19.6	----
400	29	7,541	−20.6	54	29	7,270	−28.7	----	30	7,531	−20.2	----	30	7,179	−31.4	----	28	7,461	−23.0	----	27	7,550	−19.0	57	31	7,403	−25.8	----
350	28	8,518	−27.2	----	29	8,212	−35.4	----	30	8,505	−27.4	----	30	8,110	−38.3	----	28	8,424	−30.6	----	27	8,529	−26.1	----	30	8,356	−33.0	----
300	28	9,609	−35.4	----	29	9,269	−42.6	----	30	9,596	−35.5	----	30	9,154	−45.4	----	28	9,499	−39.1	----	26	9,626	−34.4	----	30	9,422	−41.1	----
250	26	10,850	−45.0	----	27	10,494	−50.0	----	30	10,840	−44.8	----	30	10,353	−52.0	----	28	10,721	−49.3	----	24	10,876	−44.2	----	29	10,634	−50.0	----
200	25	12,301	−56.2	----	26	11,925	−57.2	----	28	12,296	−55.1	----	30	11,781	−56.6	----	28	12,147	−59.7	----	22	12,341	−55.3	----	29	12,063	−57.8	----
175	23	13,136	−61.9	----	21	12,764	−58.5	----	27	13,137	−60.0	----	27	12,623	−56.3	----	25	12,977	−64.1	----	19	13,182	−61.0	----	24	12,904	−59.9	----
150	18	14,079	−66.2	----	15	13,703	−56.0	----	17	14,092	−62.7	----	24	13,586	−54.9	----	21	13,927	−65.7	----	17	14,132	−65.7	----	18	13,850	−60.7	----
125	10	15,198	−69.0	----	7	14,852	−57.6	----	8	15,202	−65.6	----	20	14,747	−54.8	----	18	15,033	−66.2	----	5	15,210	−70.2	----	15	14,972	−61.6	----
100	----	----	----	----	----	----	----	----	----	----	----	----	13	16,173	−56.0	----	6	16,375	−66.3	----	----	----	----	----	7	16,323	−61.4	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Columbia, Mo. (984.4 mb.)				Dodge City, Kans. (921.2 mb.)				El Paso, Tex. (876.9 mb.)				Ely, Nev. (805.6 mb.)				Fort Worth, Tex. (986.8 mb.)				Glasgow, Mont. (938.1 mb.)				Grand Junction, Colo. (848.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	234	15.1	78	31	787	14.5	63	31	1,195	24.1	19	31	1,908	11.4	45	30	211	21.3	73	31	648	12.1	49	31	1,474	15.5	37
1,000	31	100	(*)	----	31	82	(*)	----	31	25	(*)	----	31	57	(*)	----	30	95	(*)	----	31	104	(*)	----	31	51	(*)	----
950	31	542	14.6	70	31	524	(*)	----	31	489	(*)	----	31	508	(*)	----	30	541	20.1	68	31	543	(*)	----	31	504	(*)	----
900	31	991	12.0	74	31	983	14.4	59	31	968	(*)	----	31	974	(*)	----	30	1,005	17.5	67	31	594	10.3	48	31	971	(*)	----
850	31	1,467	9.6	72	31	1,465	12.1	54	31	1,463	23.0	19	31	1,455	(*)	----	30	1,492	15.1	67	31	1,466	6.7	53	31	1,459	(*)	----
800	31	1,969	6.8	67	31	1,971	9.8	52	31	1,986	18.5	20	31	1,967	11.8	43	30	2,004	12.9	60	31	1,960	2.9	59	31	1,971	12.8	37
750	31	2,501	4.0	62	31	2,510	6.8	51	31	2,535	13.6	22	31	2,507	8.1	43	30	2,547	10.3	51	31	2,484	−0.5	62	31	2,511	8.4	40
700	31	3,055	1.1	56	31	3,068	3.5	47	31	3,109	8.5	25	31	3,068	3.1	49	30	3,115	6.8	42	31	3,029	−3.8	65	31	3,075	3.7	45
650	31	3,652	−2.4	49	31	3,667	−0.6	46	31	3,714	3.2	28	31	3,665	−1.8	58	30	3,717	2.7	34	31	3,612	−7.3	61	31	3,670	−1.4	55
600	31	4,280	−6.1	43	31	4,300	−5.2	49	31	4,357	−2.3	34	31	4,295	−6.7	66	30	4,361	−2.1	33	31	4,230	−11.0	59	31	4,303	−6.5	65
550	31	4,960	−10.4	40	31	4,978	−10.0	51	31	5,041	−7.6	36	30	4,967	−11.7	66	30	5,045	−7.1	35	31	4,895	−15.3	56	31	4,977	−11.9	72
500	30	5,686	−14.8	----	30	5,707	−15.0	47	31	5,775	−13.0	38	30	5,690	−17.0	59	29	5,784	−11.7	----	31	5,606	−20.1	55	31	5,699	−17.0	66
450	30	6,483	−20.3	----	30	6,499	−20.3	----	31	6,575	−18.5	----	30	6,479	−22.4	----	29	6,589	−16.8	----	31	6,383	−25.6	----	31	6,488	−22.7	----
400	29	7,338	−26.7	----	30	7,357	−26.5	----	31	7,438	−24.6	----	30	7,328	−28.7	----	27	7,642	−22.9	----	31	7,222	−31.6	----	31	7,335	−29.0	----
350	29	8,288	−33.7	----	29	8,301	−33.9	----	31	8,395	−32.1	----	30	8,269	−35.8	----	27	8,246	−30.0	----	31	8,152	−38.6	----	31	8,275	−36.3	----
300	28	9,351	−41.9	----	28	9,362	−41.9	----	30	9,465	−40.4	----	30	9,323	−43.8	----	27	9,506	−38.1	----	31	9,195	−45.8	----	31	9,325	−44.6	----
250	26	10,561	−50.2	----	27	10,569	−50.7	----	30	10,683	−49.5	----	30	10,525	−51.9	----	26	10,738	−47.0	----	28	10,397	−52.8	----	29	10,523	−52.5	----
200	21	11,993	−56.7	----	25	11,995	−58.2	----	28	12,116	−58.5	----	30	11,946	−58.4	----	24	12,180	−56.2	----	23	11,824	−55.4	----	23	11,949	−57.6	----
175	19	12,826	−57.8	----	22	12,828	−58.8	----	25	12,947	−61.0	----	26	12,781	−58.2	----	23	13,106	−59.9	----	20	12,686	−54.6	----	21	12,794	−56.9	----
150	13	13,800	−57.8	----	19	13,795	−59.1	----	20	13,899	−60.9	----	19	13,739	−58.2	----	17	13,968	−61.2	----	16	13,653	−53.7	----	18	13,768	−57.1	----
125	9	14,905	−58.1	----	14	14,942	−59.7	----	8	15,036	−63.0	----	11	14,862	−58.6	----	12	15,113	−62.7	----	9	14,835	−54.5	----	10	14,920	−57.8	----
100	----	----	----	----	10	16,352	−60.6	----	----	----	----	----	----	----	----	----	----	----	----	----	6	16,240	−54.9	----	5	16,330	−59.4	----

Standard pressure surface (mb.)	Great Falls, Mont. (886.3 mb.)				Greensboro, N. C. (984.0 mb.)				Hatteras, N. C. (1,015.6 mb.)				Havana, Cuba [1] (---- mb.)				Honolulu, T. H.[2] (---- mb.)				Huntington, W. Va. (994.0 mb.)				International Falls, Minn. (972.8 mb.)			
Surface	31	1,128	11.4	52	31	273	16.0	85	31	3	19.3	88	----	----	----	----	----	----	----	----	31	172	14.3	89	31	343	9.7	65
1,000	31	103	(*)	----	31	134	(*)	----	31	136	19.3	85	----	----	----	----	----	----	----	----	31	120	(*)	----	31	112	(*)	----
950	31	545	(*)	----	31	573	16.4	74	31	577	17.7	75	----	----	----	----	----	----	----	----	31	559	15.2	75	31	540	10.1	61
900	31	1,001	(*)	----	31	1,032	13.7	76	31	1,038	15.0	72	----	----	----	----	----	----	----	----	31	1,012	12.4	74	31	987	6.7	63
850	31	1,475	9.0	52	31	1,512	10.7	78	31	1,523	12.5	69	----	----	----	----	----	----	----	----	31	1,490	9.3	79	31	1,454	3.5	68
800	31	1,974	4.9	59	31	2,015	7.7	73	31	2,027	9.8	65	----	----	----	----	----	----	----	----	31	1,990	6.2	79	31	1,943	0.2	73
750	32	2,498	0.6	67	31	2,548	4.8	65	31	2,564	7.2	60	----	----	----	----	----	----	----	----	31	2,520	3.3	73	31	2,463	−2.9	71
700	31	3,047	−3.3	72	31	3,104	1.9	52	31	3,126	4.2	62	----	----	----	----	----	----	----	----	31	3,074	0.4	69	31	3,002	−5.9	63
650	31	3,631	−7.1	70	31	3,698	−1.5	52	31	3,727	0.8	63	----	----	----	----	----	----	----	----	31	3,668	−2.7	62	31	3,585	−9.3	59
600	31	4,250	−10.9	62	31	4,332	−4.6	44	31	4,365	−3.0	62	----	----	----	----	----	----	----	----	31	4,297	−6.1	54	30	4,197	−12.7	51
550	31	4,914	−15.1	56	31	5,012	−8.6	45	30	5,051	−6.9	59	----	----	----	----	----	----	----	----	30	4,977	−9.9	52	30	4,859	−16.7	51
500	31	5,628	−19.8	52	31	5,745	−13.2	50	30	5,789	−11.7	57	----	----	----	----	----	----	----	----	30	5,703	−14.3	49	30	5,565	−21.3	----
450	31	6,410	−25.2	----	31	6,546	−18.5	49	30	6,596	−16.9	62	----	----	----	----	----	----	----	----	29	6,498	−19.6	----	30	6,341	−26.3	----
400	30	7,244	−31.9	----	31	7,408	−24.6	----	29	7,465	−22.7	----	----	----	----	----	----	----	----	----	29	7,360	−25.5	----	30	7,177	−32.3	----
350	30	8,173	−39.2	----	30	8,365	−31.7	----	29	8,430	−29.9	----	----	----	----	----	----	----	----	----	29	8,315	−32.6	----	30	8,106	−39.0	----
300	30	9,211	−47.0	----	29	9,437	−39.7	----	27	9,507	−38.1	----	----	----	----	----	----	----	----	----	27	9,382	−40.8	----	30	9,147	−46.1	----
250	29	10,404	−54.4	----	29	10,658	−49.3	----	26	10,737	−47.0	----	----	----	----	----	----	----	----	----	26	10,600	−49.5	----	28	10,350	−52.8	----
200	26	11,812	−56.4	----	28	12,083	−59.2	----	24	12,185	−56.8	----	----	----	----	----	----	----	----	----	24	12,037	−58.0	----	24	11,778	−56.2	----
175	24	12,669	−55.1	----	26	12,908	−62.4	----	21	13,020	−60.9	----	----	----	----	----	----	----	----	----	21	12,873	−60.9	----	22	12,639	55.3	----
150	21	13,646	−55.4	----	19	13,857	−64.0	----	14	14,009	−63.8	----	----	----	----	----	----	----	----	----	14	13,821	−60.6	----	20	13,614	−54.6	----
125	13	14,798	−55.8	----	13	14,963	−62.6	----	6	15,101	−64.7	----	----	----	----	----	----	----	----	----	9	14,970	−60.3	----	17	14,795	−55.1	----
100	7	16,181	−56.6	----	6	16,346	−62.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	16,264	−56.4	----
80	5	17,589	−56.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Joliet, Ill. (992.2 mb.)				Lake Charles, La. (1,011.7 mb.)				Lander, Wyo.[3] (834.5 mb.)				Las Vegas, Nev. (941.0 mb.)				Little Rock, Ark. (1,003.5 mb.)				Mazatlan, Mexico (1,002.5 mb.)				Medford, Oreg. (966.2 mb.)			
Surface	31	178	11.9	79	30	5	22.7	87	28	1,632	9.3	62	31	574	25.9	18	30	79	18.9	81	31	79	24.5	81	31	401	18.7	47
1,000	31	111	(*)	----	30	107	22.7	82	31	96	(*)	----	31	32	(*)	----	30	110	19.0	79	31	101	24.3	79	31	102	(*)	----
950	31	547	12.7	68	30	559	20.6	74	31	539	(*)	----	31	492	(*)	----	30	554	18.0	71	31	555	23.9	43	31	549	18.3	45
900	31	996	10.4	69	30	1,020	18.4	68	31	995	(*)	----	31	963	23.5	19	30	1,011	14.9	73	31	1,022	23.0	41	31	1,005	14.6	48
850	31	1,470	7.5	71	30	1,508	15.7	65	31	1,474	(*)	----	31	1,457	19.1	20	30	1,493	12.4	70	31	1,518	20.9	35	31	1,485	10.8	53
800	31	1,967	4.7	71	30	2,022	13.2	58	31	1,978	7.5	59	31	1,972	14.5	23	30	2,000	10.4	56	31	2,040	18.4	25	31	1,987	6.9	56
750	31	2,495	2.0	70	30	2,571	10.5	48	31	2,509	3.6	63	31	2,515	9.7	28	30	2,542	7.8	54	31	2,593	14.9	21	31	2,518	3.5	53
700	31	3,045	−1.1	67	30	3,133	6.8	46	31	3,062	−0.5	37	31	3,080	4.5	34	30	3,101	4.7	52	31	3,168	10.8	24	31	3,070	−0.3	51
650	30	3,639	−4.1	58	30	3,740	2.5	43	31	3,654	−4.8	70	31	3,677	−0.7	43	30	3,705	1.0	50	30	3,787	6.7	23	31	3,662	−4.0	43
600	30	4,264	−7.4	53	30	4,379	−1.6	37	31	4,275	−9.2	75	31	4,311	−5.6	48	30	4,341	−3.4	53	30	4,433	1.9	26	31	4,285	−7.7	40
550	30	4,936	−11.7	49	30	5,068	−6.1	32	31	4,945	−13.7	67	31	4,990	−10.4	48	30	5,026	−7.8	51	29	5,131	−3.3	28	31	4,956	−12.2	41
500	30	5,660	−16.5	46	30	5,805	−11.0	36	31	5,660	−18.8	63	31	5,715	−15.4	46	30	5,758	−12.6	50	29	5,877	−8.4	30	31	5,678	−17.1	42
450	30	6,447	−21.9	----	30	6,618	−16.1	36	30	6,444	−24.2	----	31	6,506	−20.8	----	30	6,565	−17.7	51	28	6,693	−14.4	----	30	6,464	−22.7	----
400	29	7,307	−27.9	----	30	7,485	−22.4	----	30	7,286	−30.5	----	31	7,360	−27.6	----	30	7,427	−23.6	----	28	7,570	−20.6	----	30	7,315	−28.7	----
350	29	8,252	−35.0	----	29	8,453	−29.7	----	30	8,220	−37.7	----	31	8,306	−34.6	----	30	8,388	−30.9	----	28	8,543	−28.0	----	30	8,256	−35.8	----
300	29	9,310	−42.8	----	29	9,534	−37.8	----	30	9,264	−45.8	----	31	9,365	−42.9	----	30	9,462	−39.2	----	25	9,632	−36.5	----	30	9,310	−43.6	----
250	29	10,515	−51.7	----	28	10,766	−47.5	----	30	10,455	−54.0	----	31	10,571	−51.7	----	30	10,686	−48.3	----	25	10,870	−46.0	----	30	10,512	−51.9	----
200	26	11,936	−57.9	----	27	12,209	−58.1	----	27	11,866	−58.7	----	30	11,988	−58.2	----	29	12,121	−57.7	----	23	12,318	−57.1	----	30	11,932	−58.4	----
175	24	12,785	−57.9	----	25	13,042	−62.9	----	23	12,709	−57.0	----	27	12,829	−58.7	----	27	12,948	−60.7	----	19	13,154	−62.3	----	28	12,769	−58.8	----
150	20	13,756	−57.7	----	23	13,980	−65.7	----	21	13,676	−56.8	----	27	13,796	−59.0	----	21	13,909	−60.8	----	8	14,115	−67.2	----	18	13,734	−57.4	----
125	15	14,842	−58.1	----	18	15,084	−65.6	----	14	14,827	−58.5	----	21	14,928	−61.0	----	18	15,041	−61.0	----	----	----	----	----	10	14,874	−57.5	----
100	8	16,309	−59.5	----	7	16,432	−66.9	----	8	16,245	−59.5	----	12	16,316	−61.6	----	9	16,427	−63.1	----	----	----	----	----	----	----	----	----
80	----	----	----	----	----	----	----	----	----	----	----	----	6	17,702	−62.2	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Merida, Mexico (1,006.4 mb.)				Miami, Fla. (1,015.5 mb.)				Nantucket, Mass.[2] (____ mb.)				Nashville, Tenn. (993.0 mb.)				North Platte, Nebr. (914.9 mb.)				Oakland, Calif. (1,014.3 mb.)				Ogden, Utah (860.9 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	27	29.9	63	31	4	24.4	84	----	----	----	----	31	180	18.0	78	31	849	12.0	69	31	2	14.1	73	31	1,355	13.7	45
1,000	31	84	29.2	63	31	140	23.9	83	----	----	----	----	31	120	(*)	----	31	92	(*)	----	31	121	12.8	75	31	69	(*)	----
950	31	545	26.1	64	31	589	21.0	82	----	----	----	----	31	561	16.9	70	31	534	(*)	----	31	558	11.3	70	31	517	(*)	----
900	31	1,016	23.2	64	31	1,055	18.3	75	----	----	----	----	31	1,018	13.9	72	31	986	12.5	64	31	1,004	12.6	52	31	979	(*)	----
850	31	1,512	19.8	68	31	1,543	15.3	74	----	----	----	----	31	1,498	10.8	72	31	1,464	9.8	61	31	1,482	11.8	40	31	1,462	13.8	41
800	31	2,023	15.9	72	31	2,054	12.2	74	----	----	----	----	31	2,002	8.2	66	31	1,965	6.4	64	31	1,987	9.7	32	31	1,970	10.3	39
750	31	2,580	12.7	65	31	2,595	9.1	70	----	----	----	----	31	2,536	5.9	58	31	2,494	3.0	65	31	2,524	6.5	31	31	2,505	5.9	45
700	31	3,156	9.6	53	31	3,162	5.8	65	----	----	----	----	31	3,095	2.8	53	31	3,047	−0.5	67	31	3,082	3.1	29	31	3,063	1.1	53
650	30	3,770	6.1	43	30	3,766	2.7	54	----	----	----	----	31	3,691	−0.5	52	31	3,638	−4.1	65	31	3,681	−0.6	----	31	3,654	−3.7	61
600	30	4,420	2.1	41	30	4,409	−0.9	53	----	----	----	----	31	4,328	−4.0	49	31	4,263	−8.0	60	31	4,313	−4.6	----	31	4,281	−8.2	63
550	29	5,117	−2.0	41	30	5,096	−5.0	49	----	----	----	----	30	5,011	−8.0	43	30	4,940	−12.0	57	30	4,992	−9.1	----	31	4,951	−12.7	62
500	27	5,869	−6.8	44	30	5,841	−9.6	51	----	----	----	----	29	5,745	−12.4	38	30	5,659	−17.0	53	29	5,722	−13.9	----	30	5,674	−17.4	57
450	25	6,689	−12.3	----	30	6,649	−14.9	50	----	----	----	----	29	6,549	−18.0	----	30	6,448	−22.3	----	29	6,520	−19.2	----	30	6,461	−23.0	----
400	25	7,576	−18.4	----	30	7,530	−20.7	----	----	----	----	----	28	7,414	−24.1	----	30	7,236	−28.5	----	28	7,379	−25.3	----	30	7,307	−29.4	----
350	24	8,557	−25.8	----	30	8,503	−28.2	----	----	----	----	----	28	8,374	−31.2	----	30	8,238	−35.7	----	28	8,334	−32.7	----	30	8,247	−36.5	----
300	23	9,655	−34.5	----	29	9,588	−36.7	----	----	----	----	----	28	9,448	−39.2	----	30	9,292	−43.6	----	28	9,399	−40.8	----	30	9,297	−44.8	----
250	23	10,903	−44.5	----	29	10,825	−46.5	----	----	----	----	----	27	10,669	−48.4	----	30	10,495	−51.9	----	26	10,619	−49.3	----	29	10,491	−52.5	----
200	23	12,361	−55.7	----	25	12,274	−57.9	----	----	----	----	----	24	12,104	−56.9	----	30	11,918	−57.0	----	24	12,062	−57.5	----	29	11,913	−57.4	----
175	21	13,210	−61.5	----	25	13,104	−63.0	----	----	----	----	----	21	12,930	−59.5	----	30	12,764	−57.3	----	23	12,897	−59.5	----	27	12,764	−57.0	----
150	17	14,157	−66.9	----	21	14,042	−66.0	----	----	----	----	----	16	13,876	−59.2	----	28	13,739	−56.6	----	16	13,875	−59.6	----	23	13,737	−56.8	----
125	5	15,228	−70.4	----	12	15,148	−70.0	----	----	----	----	----	9	14,995	−59.2	----	18	14,909	−57.2	----	10	15,018	−59.1	----	12	14,897	−57.4	----
100	----	----	----	----	----	----	----	----	----	----	----	----	6	16,398	−60.8	----	13	16,316	−58.9	----	----	----	----	----	8	16,276	−58.3	----

Standard pressure surface (mb.)	Oklahoma City, Okla. (966.1 mb.)				Omaha, Nebr. (976.0 mb.)				Phoenix, Ariz. (967.9 mb.)				Pittsburgh, Pa. (969.8 mb.)				Portland, Maine (1,012.3 mb.)				Rapid City, S. Dak. (900.9 mb.)				St. Paul, Minn. (986.5 mb.)			
Surface	31	391	17.7	71	31	308	15.0	71	31	339	26.7	23	31	382	14.3	71	31	20	9.0	82	31	981	9.7	74	30	225	13.5	62
1,000	31	92	(*)	----	31	101	(*)	----	31	47	(*)	----	31	120	(*)	----	31	121	10.6	74	31	97	(*)	----	30	109	(*)	----
950	31	536	17.8	64	31	541	14.2	67	31	505	28.4	18	31	564	14.1	69	31	555	10.3	66	31	536	(*)	----	30	545	12.0	58
900	31	996	15.7	62	31	991	11.0	71	31	980	24.5	19	31	1,011	11.9	68	31	998	8.2	67	31	989	8.2	70	30	992	8.7	62
850	31	1,479	13.0	61	31	1,466	8.1	72	31	1,475	20.0	22	31	1,488	9.3	69	31	1,468	5.6	67	31	1,463	8.2	64	30	1,462	5.4	66
800	31	1,987	10.6	57	31	1,965	5.7	66	31	1,992	15.2	26	31	1,988	6.0	70	31	1,962	3.3	63	31	1,961	4.5	70	30	1,955	2.5	64
750	31	2,525	8.0	52	31	2,496	2.8	65	31	2,534	10.3	29	31	2,518	3.0	63	31	2,490	0.9	59	31	2,487	0.9	74	30	2,480	−0.3	56
700	31	3,089	4.6	46	31	3,047	−0.1	60	31	3,102	5.3	33	31	3,070	0.1	57	31	3,036	−1.9	55	28	3,036	−2.5	69	30	3,024	−3.5	58
650	31	3,691	0.5	45	31	3,638	−3.6	55	31	3,704	0.7	35	31	3,664	−3.0	51	31	3,625	−5.1	55	28	3,623	−6.1	65	27	3,613	−6.6	48
600	31	4,325	−4.2	45	31	4,265	−7.2	49	31	4,340	−3.7	30	31	4,291	−6.4	51	30	4,244	−8.8	53	28	4,242	−9.8	63	27	4,231	−9.8	50
550	31	5,008	−8.9	46	31	4,939	−11.1	47	31	5,024	−8.5	34	31	4,967	−10.4	45	30	4,913	−13.0	53	28	4,909	−13.9	59	27	4,899	−13.7	53
500	31	5,738	−13.8	43	30	5,662	−15.9	43	31	5,753	−13.7	----	31	5,694	−15.0	44	28	5,629	−18.0	55	28	5,626	−18.7	58	27	5,617	−18.4	52
450	31	6,537	−19.2	----	29	6,455	−21.3	----	31	6,550	−19.5	----	31	6,493	−20.2	46	28	6,410	−23.2	----	28	6,408	−24.2	----	26	6,406	−24.0	----
400	31	7,396	−25.5	----	29	7,308	−28.0	----	31	7,410	−25.9	----	31	7,347	−26.0	----	27	7,261	−28.8	----	28	7,251	−30.4	----	26	7,250	−29.9	----
350	31	8,349	−32.6	----	29	8,252	−35.0	----	31	8,362	−33.3	----	31	8,300	−32.9	----	26	8,202	−35.7	----	27	8,187	−37.3	----	26	8,187	−36.9	----
300	31	9,417	−40.5	----	29	9,310	−43.0	----	31	9,426	−41.3	----	31	9,367	−40.7	----	26	9,256	−43.5	----	27	9,232	−45.5	----	26	9,236	−44.6	----
250	30	10,637	−49.7	----	28	10,517	−51.6	----	31	10,640	−50.0	----	30	10,584	−49.3	----	25	10,470	−52.2	----	27	10,425	−53.7	----	26	10,435	−52.4	----
200	30	12,086	−58.1	----	27	11,929	−57.4	----	30	12,067	−58.1	----	29	12,011	−57.4	----	23	11,893	−58.4	----	25	11,852	−57.9	----	25	11,858	−57.4	----
175	27	12,895	−60.4	----	21	12,771	−57.3	----	28	12,905	−60.2	----	22	12,862	−58.8	----	20	12,731	−59.3	----	23	12,686	−56.4	----	21	12,708	−56.1	----
150	25	13,860	−60.1	----	18	13,744	−56.9	----	21	13,850	−61.1	----	16	13,816	−57.5	----	16	13,681	−58.4	----	18	13,657	−55.6	----	17	13,679	−55.8	----
125	21	14,993	−60.8	----	15	14,890	−57.8	----	13	14,958	−61.4	----	10	14,968	−57.5	----	8	14,778	−57.2	----	14	14,819	−56.7	----	13	14,821	−55.8	----
100	16	16,378	−61.4	----	5	16,313	−59.0	----	7	16,332	−62.5	----	6	16,363	−57.1	----	5	16,138	−57.7	----	6	16,261	−57.5	----	10	16,240	−56.7	----
80	9	17,746	−61.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (982.9 mb.)				San Juan, P. R. (1,015.6 mb.)				Santa Maria, Calif. (1,006.4 mb.)				Sault Ste. Marie, Mich. (987.4 mb.)				Spokane, Wash. (942.8 mb.)				Swan Island, W. I.[1] (____ mb.)				Tacubaya, Mexico (773.3 mb.)			
Surface	29	240	22.3	85	31	15	25.0	82	31	71	12.7	79	31	221	7.1	76	31	598	16.4	48	----	----	----	----	31	2,306	18.8	53
1,000	29	89	(*)	----	31	151	23.9	84	31	125	11.9	80	31	115	(*)	----	31	92	(*)	----	----	----	----	----	31	28	(*)	----
950	29	540	22.0	79	31	603	20.6	89	31	559	10.7	76	31	546	8.5	63	31	535	(*)	----	----	----	----	----	31	495	(*)	----
900	29	1,006	20.1	78	31	1,066	17.5	87	31	1,004	11.4	63	31	986	6.6	60	31	991	14.4	42	----	----	----	----	31	979	(*)	----
850	29	1,498	18.2	66	31	1,553	14.6	83	31	1,482	11.9	45	31	1,453	4.3	59	31	1,471	10.4	44	----	----	----	----	31	1,479	(*)	----
800	29	2,016	15.7	57	31	2,064	12.0	79	31	1,987	9.5	39	31	1,944	1.6	57	31	1,972	6.3	50	----	----	----	----	31	2,013	(*)	----
750	29	2,567	12.3	50	31	2,606	9.9	62	31	2,523	6.5	31	31	2,466	−1.4	53	31	2,501	2.2	55	----	----	----	----	31	2,571	17.0	52
700	29	3,136	8.7	45	31	3,174	7.4	44	31	3,082	3.1	30	31	3,008	−4.3	56	31	3,051	−2.1	60	----	----	----	----	31	3,152	12.3	55
650	29	3,744	4.3	43	31	3,785	4.4	42	31	3,680	−0.4	30	30	3,596	−7.3	53	31	3,639	−5.8	57	----	----	----	----	31	3,773	7.3	63
600	28	4,391	−0.4	39	31	4,429	1.3	35	30	4,313	−4.4	30	30	4,210	−10.9	53	31	4,258	−9.4	46	----	----	----	----	31	4,424	2.2	71
550	28	5,078	−5.1	44	31	5,125	−2.8	40	30	4,994	−9.0	33	30	4,878	−14.6	53	30	4,924	−13.7	43	----	----	----	----	30	5,121	−2.7	75
500	27	5,823	−10.0	41	31	5,872	−7.5	45	30	5,723	−13.8	----	29	5,591	−19.0	52	30	5,640	−18.7	42	----	----	----	----	30	5,872	−7.8	73
450	27	6,634	−15.3	----	31	6,693	−12.5	46	30	6,519	−19.6	----	29	6,371	−24.2	----	30	6,425	−24.3	----	----	----	----	----	30	6,694	−12.6	66
400	27	7,507	−21.2	----	31	7,576	−18.2	51	30	7,379	−26.0	----	29	7,217	−30.4	----	30	7,264	−30.4	----	----	----	----	----	30	7,576	−18.1	53
350	26	8,478	−28.1	----	31	8,560	−25.1	----	30	8,330	−33.4	----	29	8,152	−37.5	----	30	8,198	−37.8	----	----	----	----	----	30	8,560	−25.3	----
300	26	9,564	−36.6	----	31	9,661	−33.2	----	30	9,395	−41.5	----	29	9,199	−44.8	----	29	9,243	−45.9	----	----	----	----	----	29	9,663	−33.5	----
250	25	10,804	−45.5	----	31	10,914	−43.2	----	30	10,607	−50.1	----	27	10,403	−51.7	----	29	10,432	−54.2	----	----	----	----	----	29	10,916	−43.4	----
200	25	12,260	−54.7	----	30	12,381	−54.3	----	27	12,033	−58.0	----	25	11,821	−55.8	----	26	11,845	−57.5	----	----	----	----	----	23	12,382	−55.4	----
175	21	13,095	−59.6	----	29	13,223	−60.3	----	22	12,865	−58.8	----	23	12,669	−55.4	----	23	12,676	−55.6	----	----	----	----	----	12	13,227	−61.9	----
150	12	14,034	−61.7	----	16	14,155	−65.6	----	18	13,820	−59.1	----	20	13,652	−55.3	----	21	13,662	−55.4	----	----	----	----	----	----	----	----	----
125	6	15,111	−62.9	----	----	----	----	----	13	14,960	−60.2	----	15	14,831	−55.6	----	18	14,827	−56.5	----	----	----	----	----	----	----	----	----
100	----	----	----	----	----	----	----	----	6	16,340	−61.1	----	11	16,261	−55.9	----	10	16,259	−57.4	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,015.5 mb.)				Tatoosh Island, Wash. (1,013.3 mb.)				Toledo, Ohio (991.0 mb.)				Washington, D. C. (1,012.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	3	23.9	82	31	31	10.5	86	31	191	12.1	74	30	25	17.1	76
1,000	31	138	23.1	81	31	141	10.1	84	31	115	(*)	----	30	129	17.0	72
950	31	585	20.6	79	31	573	9.2	72	31	546	12.3	63	30	568	16.2	66
900	31	1,051	18.0	76	31	1,015	8.9	58	31	998	10.4	65	30	1,022	12.4	67
850	31	1,539	15.0	75	31	1,487	7.1	53	31	1,472	7.6	66	30	1,500	10.0	67
800	31	2,051	12.1	67	31	1,983	4.5	49	31	1,969	5.0	63	30	2,001	6.9	69
750	31	2,593	9.0	62	31	2,511	1.4	46	31	2,498	2.2	58	30	2,532	3.8	69
700	31	3,158	6.1	54	31	3,058	−1.9	48	31	3,047	−0.9	57	30	3,086	0.8	66
650	31	3,765	2.7	49	31	3,647	−5.2	46	30	3,641	−3.7	50	30	3,680	−2.6	56
600	31	4,405	−1.1	50	31	4,266	−9.1	42	29	4,267	−7.2	46	30	4,310	−5.8	49
550	30	5,091	−5.1	47	31	4,938	−13.2	41	29	4,941	−11.1	47	30	4,989	−9.7	45
500	30	5,836	−9.7	46	30	5,651	−18.1	39	29	5,667	−15.8	53	30	5,718	−14.1	46
450	30	6,648	−15.0	41	30	6,435	−23.5	----	29	6,460	−21.0	----	28	6,510	−19.8	48
400	30	7,523	−21.4	----	29	7,284	−29.6	----	29	7,313	−26.9	----	28	7,370	−26.2	----
350	30	8,490	−28.4	----	29	8,223	−36.3	----	28	8,258	−34.4	----	28	8,322	−33.3	----
300	30	9,576	−36.8	----	29	9,275	−43.9	----	28	9,318	−42.3	----	28	9,387	−41.4	----
250	30	10,811	−46.8	----	26	10,483	−51.8	----	28	10,527	−51.2	----	28	10,599	−50.6	----
200	29	12,253	−58.4	----	22	11,900	−56.5	----	27	11,949	−57.8	----	24	12,025	−59.7	----
175	29	13,081	−63.5	----	19	12,745	−55.5	----	25	12,790	−58.7	----	19	12,852	−62.1	----
150	24	14,025	−66.0	----	16	13,737	−53.9	----	19	13,740	−58.8	----	16	13,812	−63.1	----
125	19	15,127	−68.0	----	7	14,889	−55.1	----	15	14,868	−57.9	----	10	14,942	−61.5	----
100	8	16,460	−70.6	----	----	----	----	----	11	16,273	−57.8	----	7	16,339	−62.4	----
80	----	----	----	----	----	----	----	----	8	17,672	−57.7	----	----	----	----	----

[1] Data not yet received.
[2] Insufficient 0400 observations taken during May.
[3] Surface data for old location only, 1,632 meters. Upper levels for old and new location, 1,696 meters.
*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Mazatlan and Merida, where they are taken near 0200, G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during May 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (150 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	132	2.2	31	221	4.1	30	236	1.9	31	359	1.5	31	52	0.9	31	305	2.8	31	133	6.5	29	260	2.0	30	268	1.5	30	159	1.5	29	250	1.2	28	58	1.5	31	243	4.7
500	----	----	----	----	----	----	30	221	2.5	----	----	----	----	----	----	----	----	----	31	141	7.6	29	267	4.0	30	245	2.6	30	188	4.7	29	221	2.0	----	----	----	----	----	----
1,000	31	151	2.3	----	----	----	30	226	3.8	----	----	----	30	82	0.9	31	300	3.6	22	160	5.8	28	236	4.0	29	246	3.6	27	211	4.6	28	220	3.6	----	----	----	----	----	----
1,500	29	185	1.9	----	----	----	30	231	5.0	31	6	2.0	29	100	0.2	31	301	3.9	19	170	4.8	27	254	4.9	26	261	5.4	25	237	5.3	22	228	5.3	----	----	----	31	238	5.5
2,000	26	227	3.3	31	226	4.9	27	256	5.9	31	354	2.4	26	230	1.8	31	293	2.8	17	173	4.2	22	253	7.1	21	265	7.0	21	254	6.9	15	229	5.6	28	72	2.1	31	236	5.1
2,500	24	245	5.8	31	228	5.2	26	260	7.8	29	346	2.4	21	263	2.7	29	310	2.8	14	195	3.0	20	266	7.8	18	280	9.3	20	253	8.2	13	249	6.9	26	124	0.8	30	238	5.6
3,000	23	252	8.1	31	237	5.6	19	255	9.3	25	318	2.3	17	268	4.5	28	310	2.8	13	241	2.8	14	287	7.9	15	289	12.5	19	258	8.3	10	233	7.7	24	244	1.2	30	241	6.8
4,000	22	261	11.0	30	260	8.4	11	271	11.1	16	305	3.2	10	280	5.4	26	323	3.3	11	274	4.4	11	285	11.9	12	286	14.4	12	249	8.9	----	----	----	22	268	6.1	27	251	10.6
5,000	20	261	12.8	29	261	10.5	----	----	----	13	282	6.0	10	282	5.6	23	317	5.4	----	----	----	11	279	13.2	----	----	----	10	249	10.4	----	----	----	17	263	9.0	26	260	15.0
6,000	19	261	14.4	26	264	12.6	----	----	----	----	----	----	----	----	----	23	308	5.8	----	----	----	----	----	----	----	----	----	10	257	12.6	----	----	----	13	275	10.9	24	267	16.7
8,000	16	264	18.2	14	266	18.6	----	----	----	----	----	----	----	----	----	17	326	10.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	21	266	22.0
10,000	10	259	24.1	12	272	21.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	278	1.7	29	251	3.9	25	223	2.4	29	359	1.4	31	114	2.7	30	167	0.6	31	191	2.1	31	129	0.7	31	317	2.4	31	147	3.7	31	181	1.6	31	257	1.8	28	205	2.0
500	----	----	----	----	----	----	25	231	4.0	----	----	----	31	158	2.5	30	243	1.0	----	----	----	31	210	1.0	31	317	2.4	31	151	5.1	31	205	2.6	31	240	3.3	28	232	3.1
1,000	----	----	----	----	----	----	25	235	4.8	29	344	1.7	29	223	3.2	27	200	2.7	31	196	3.9	27	236	2.5	31	302	1.9	31	162	3.6	29	246	3.6	31	237	3.9	26	250	4.3
1,500	----	----	----	29	251	3.6	24	243	5.0	29	336	1.8	27	242	6.2	25	234	2.8	31	198	3.3	23	260	3.9	31	291	1.0	30	194	2.1	24	272	5.1	30	239	4.3	24	271	6.0
2,000	30	266	2.0	29	256	3.3	23	256	6.0	28	304	1.8	26	257	6.9	18	276	3.6	31	215	3.1	22	283	5.2	30	307	1.7	29	232	1.7	21	277	7.4	26	235	5.7	20	273	6.1
2,500	30	252	3.4	29	249	3.7	20	270	6.5	22	287	2.6	24	259	7.9	15	282	4.1	31	220	3.3	21	281	7.9	29	226	0.8	27	241	2.3	16	286	9.1	22	270	7.5	19	278	7.9
3,000	30	260	2.8	29	252	4.5	18	270	7.0	17	263	2.4	20	260	9.3	12	287	10.2	31	231	4.0	19	271	10.5	29	195	1.2	26	248	2.8	15	283	9.2	20	269	10.1	12	292	10.0
4,000	24	254	3.6	29	252	5.8	16	269	10.6	13	319	2.8	16	267	10.9	----	----	----	27	267	5.1	13	270	12.5	27	326	2.1	22	254	4.5	10	287	11.2	15	271	12.1	----	----	----
5,000	20	270	5.8	23	265	7.1	14	266	13.0	----	----	----	12	271	8.5	----	----	----	24	272	7.1	12	274	13.5	25	302	5.4	19	264	5.0	----	----	----	10	274	13.4	----	----	----
6,000	18	288	7.7	18	267	9.2	13	266	14.5	----	----	----	----	----	----	----	----	----	24	275	7.7	10	275	17.2	25	293	7.8	16	268	6.7	----	----	----	10	279	14.6	----	----	----
8,000	12	296	11.5	----	----	----	10	273	17.7	----	----	----	----	----	----	----	----	----	19	284	12.0	----	----	----	20	295	12.4	----	----	----	----	----	----	----	----	----	----	----	----
10,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	282	12.8	----	----	----	11	312	12.8	----	----	----	----	----	----	----	----	----	----	----	----
12,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10	305	11.7	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during May 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*—Continued

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	268	6.1	30	174	1.0	31	202	0.6	31	260	1.6	29	346	3.0	30	236	1.2	30	228	0.8	31	114	3.2	31	264	4.0	27	285	2.3	31	281	1.2	30	305	0.5	27	225	3.1
500	31	275	5.0	30	169	1.3	31	198	1.1	31	253	2.5	---	---	---	30	245	2.9	30	212	1.2	31	128	3.4	31	274	3.3	27	304	3.8	31	288	1.1	---	---	---	26	211	4.7
1,000	26	275	3.4	29	183	1.8	28	198	2.4	31	243	3.5	29	347	3.0	28	235	4.4	27	214	2.2	28	149	3.5	25	287	1.6	26	302	2.9	30	263	0.7	30	239	0.5	25	229	5.5
1,500	22	310	3.1	26	238	1.8	26	232	3.3	31	236	3.3	29	347	3.1	25	245	4.8	25	222	2.4	24	182	4.3	20	267	2.9	25	317	3.2	27	251	0.4	30	287	0.3	24	251	6.5
2,000	22	309	3.3	23	257	4.3	25	265	4.5	31	228	3.5	27	323	2.4	18	250	6.2	21	249	2.2	21	198	4.3	17	241	2.6	22	309	3.9	23	267	0.6	29	320	0.6	24	257	7.6
2,500	22	314	2.8	23	263	7.2	19	262	6.3	31	233	4.3	24	271	3.3	14	260	6.9	20	245	2.1	15	231	5.2	17	228	2.5	19	321	5.2	20	242	0.4	26	312	0.8	22	270	8.7
3,000	22	310	3.3	23	261	9.1	14	259	6.6	31	235	5.1	17	279	5.6	11	283	7.9	15	230	3.1	13	243	5.0	17	240	2.6	16	327	7.1	19	196	0.8	26	346	1.3	20	270	9.7
4,000	20	304	6.1	19	267	14.6	11	257	9.9	31	249	6.7	14	286	7.7	---	---	---	13	266	4.6	10	262	7.6	16	302	4.1	14	317	0.4	16	35	0.9	21	334	3.5	16	261	12.4
5,000	19	309	7.7	19	270	15.6	10	269	12.7	31	253	8.7	11	285	9.6	---	---	---	13	263	7.7	---	---	---	16	300	7.6	14	310	11.6	13	325	1.9	15	338	6.1	10	270	14.1
6,000	19	303	8.9	15	274	16.2	---	---	---	29	264	11.0	---	---	---	---	---	---	10	265	4.8	---	---	---	14	292	8.6	---	---	---	12	298	1.6	14	343	6.0	---	---	---
8,000	16	309	13.5	10	275	17.7	---	---	---	25	269	17.1	---	---	---	---	---	---	---	---	---	---	---	---	13	291	11.0	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	14	275	18.5	---	---	---	---	---	---	---	---	---	---	---	---	11	299	12.5	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during May 1946*

Section	Surface to 2,500 meters (m. s. l.)					2,501 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	39.2	WNW.	2,500	2	Hartford, Conn.	49.9	WNW.	5,000	3	Boston, Mass.	73.2	WNW.	6,125	2	Burlington, Vt.
East-Central [2]	31.4	SSW.	1,830	16	Knoxville, Tenn.	36.5	W.	5,000	5	Huntington, W. Va.	98.0	WSW.	11,830	13	Huntington, W. Va.
Southeast [3]	38.0	WSW.	2,142	16	Spartanburg, S. C.	32.2	W.	2,986	28	Jacksonville, Fla.	50.0	W.	13,691	12	Charleston, S. C.
North-Central [4]	34.6	W.	1,908	6	Muskegon, Mich.	35.3	WNW.	5,000	11	Huron, S. Dak.	84.5	WSW.	13,897	14	Marquette, Mich.
Central [5]	45.4	SSE.	1,725	27	Goodland, Kans.	43.0	W.	3,328	5	Joliet, Ill.	67.0	SW.	10,499	13	Columbia, Mo.
South-Central [6]	39.2	WSW.	2,082	23	Amarillo, Tex.	48.0	WSW.	4,300	20	Burrwood, La.	92.0	WSW.	8,870	20	Burrwood, La.
Northwest [7]	46.5	SW.	1,884	7	Burns, Oreg.	32.9	NNE.	5,000	7	Medford, Oreg.	74.4	W.	8,801	7	Medford, Oreg.
West-Central [8]	43.5	SW.	2,500	7	Ely, Nev.	48.5	SW.	2,580	7	Ely, Nev.	59.6	W.	7,491	1	Pueblo, Colo.
Southwest [9]	39.2	SSE.	2,458	27	Roswell, N. Mex.	36.1	NW.	2,547	29	Sandberg, Calif.	78.0	W.	12,350	16	Albuquerque, N. Mex.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

RIVER STAGES AND FLOODS FOR MAY 1946

C. R. JORDAN

Precipitation during May was above normal over the eastern half of the country except in the western Lakes region. It was also wetter than usual from Nebraska and South Dakota westward through Wyoming, southern Idaho, northern Utah, and large portions of Oregon, Nevada, and northeastern California. Amounts were much above normal in Pennsylvania, the lower Mississippi Valley, and much of Nevada. Rainfall was generally below normal over the northern and southern parts of the western half of the country, with no measurable precipitation reported at several stations in southern Arizona.

Severe floods occurred in western New York and north-central Pennsylvania. All previous flood stages of record were exceeded in many of the headwater tributaries of the Susquehanna River. Drought conditions continued in the southwestern states.

Atlantic Slope drainage.—A major flood occurred in the Susquehanna River Basin during the last few days of May as a result of heavy rain during the period May 26–29, following a period of above-normal rainfall. Many of the northern tributaries of the West Branch of the Susquehanna River reached heights that exceeded any previously recorded stages by 2 to 4 feet. Flooding was severe on the Tioga, Chemung, and Canisteo Rivers and other smaller streams. Several lives were lost and there was considerable property damage. A more detailed report of this flood will be included in the next issue of the REVIEW.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.—Heavy rains over the headwaters of the Des Moines River during the last week of May caused considerable overflow in the upper reaches of the Raccoon and Des Moines Rivers and contributed to slight overflow downstream on the Des Moines at both Eddyville and Ottumwa, Iowa.

Missouri Basin.—Light to moderate overflow occurred at scattered points in Kansas and Missouri.

An excessively heavy rainstorm occurred in the vicinity of Ewing and Orchard, Nebr., on the afternoon of May 23. Ewing reported 3.57 inches of rain, with approximately 3 inches occurring within an hour. At Orchard the total fall was 5.22 inches, with about 4 inches within an hour. Unofficial reports indicate that the peak rainfall occurred 5 or 6 miles west of Ewing and about the same distance south of Orchard, with amounts ranging up to 7.50 inches.