MONTHLY WEATHER REVIEW

Editor, EDGAR W. WOOLARD

VOL. 72, No. 8
W. B. No. 1418

AUGUST 1944

CLOSED OCTOBER 5, 1944
ISSUED NOVEMBER 1, 1944

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR AUGUST 1944

[Climate and Crop Weather Division, J. B. KINCER in charge]

AEROLOGICAL OBSERVATIONS

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees Centigrade, and relative humidities in percent, obtained by radiosondes during August 1944*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Springs, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relatibe humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,005	18.9	85	31	838	24.8	40	31	1,017	26.4	84	27	983	23.6	81	30	925	28.5	47	30	953	19.4	71	29	912	23.7	32
500	31	958	20.1	66					31	961	24.9	80	27	960	23.7	73												
1,000	31	904	17.3	66					31	908	21.9	75	27	907	20.7	74	30	902	27.4	46	30	899	18.7	57	29	899	25.3	24
1,500	31	853	13.6	69					31	857	18.8	70	27	856	17.4	71	30	852	23.7	48	30	468	15.4	61	29	849	21.7	24
2,000	31	802	10.1	69	31	802	22.8	38	31	808	15.8	63	27	807	14.4	67	30	804	19.8	53	30	799	12.1	61	29	800	17.5	26
2,500	31	756	7.4	59	31	757	19.1	40	31	762	13.0	61	27	761	11.4	64	30	758	16.0	55	30	753	9.0	58	29	754	13.3	30
3,000	31	711	4.6	54	31	714	15.3	41	31	718	10.0	61	27	716	8.7	62	30	715	12.5	54	30	708	5.9	57	29	711	9.2	32
4,000	31	628	− 0.8	45	31	634	7.4	50	31	636	4.1	63	27	634	3.2	57	30	634	5.6	55	30	626	− 0.4	50	29	629	1.2	39
5,000	31	554	− 6.4	42	31	560	− 0.4	59	31	562	− 1.3	55	27	560	− 2.1	52	30	560	− 1.1	50	30	552	− 7.2	45	29	554	− 6.0	36
6,000	31	486	−12.2	33	31	494	− 7.3	59	30	495	− 6.9	49	26	493	− 7.6	47	29	494	− 7.1	43	30	485	−13.4	35	29	488	−12.6	30
7,000	30	426	−18.7	36	31	434	−13.2	55	30	435	−13.1	46	25	433	−13.8	51	29	434	−13.3	40	28	424	−20.7	34	29	427	−19.8	28
8,000	30	372	−25.8	46	31	380	−20.0	51	30	380	−19.8	50	25	379	−20.3	49	29	379	−20.0	34	28	369	−27.9	----	29	372	−27.4	----
9,000	29	323	−32.7	----	30	331	−27.2	52	30	331	−27.1	48	23	330	−27.8	53	29	331	−27.2	----	28	320	−35.2	----	28	322	−35.1	----
10,000	28	280	−40.0	----	30	287	−34.6	45	30	288	−35.0	52	23	287	−35.4	54	28	287	−34.7	----	28	278	−42.3	----	27	280	−42.1	----
11,000	28	242	−45.7	----	30	248	−42.1	----	30	249	−43.4	----	23	248	−43.3	----	27	248	−42.9	----	28	239	−48.2	----	25	241	−47.2	----
12,000	27	208	−51.3	----	30	214	−49.0	----	29	214	−51.5	----	23	213	−51.1	----	25	213	−50.9	----	26	205	−51.2	----	25	207	−51.1	----
13,000	26	178	−55.9	----	26	184	−55.7	----	25	183	−58.9	----	21	183	−57.5	----	23	183	−58.0	----	24	175	−54.2	----	18	177	−53.4	----
14,000	22	152	−59.1	----	23	156	−62.0	----	9	157	−62.7	----	16	156	−61.4	----	15	156	−63.5	----	20	150	−56.0	----	17	152	−56.3	----
15,000	12	129	−60.4	----	15	133	−65.3	----									8	132	−68.0	----	17	128	−56.9	----	10	129	−59.6	----
16,000					7	113	−67.5	----													12	109	−57.0	----				
17,000																					7	93	−56.4	----				

Altitude (meters) M. S. L.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (193 m.)				Charleston, S. C.[1] (14 m.)				Denver, Colo. (1,616 m.)				Dodge City, Kans. (787 m.)				El Paso, Tex. (1,195 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,012	27.6	84	30	990	20.0	76	31	990	17.0	80	30	1,016	23.5	92	31	838	22.4	44	29	923	23.1	70	30	880	26.5	50
500	31	957	24.4	84	30	959	20.6	62	31	955	18.1	66	30	961	22.7	85												
1,000	31	904	21.7	71	30	905	17.6	61	31	902	15.0	67	30	908	20.3	80					29	901	24.2	59				
1,500	31	853	19.3	59	30	853	14.0	66	31	850	11.5	69	30	857	17.6	78					29	852	21.7	53	30	851	25.0	47
2,000	31	804	16.6	52	30	804	10.9	66	31	800	8.4	68	30	808	14.9	78	31	802	22.5	33	29	803	18.7	49	30	804	21.8	48
2,500	31	758	14.0	48	30	756	8.0	57	31	753	5.5	64	30	761	12.2	73	31	756	18.9	34	29	757	15.4	46	30	758	18.0	52
3,000	31	714	11.1	45	30	712	5.4	50	31	708	2.7	56	30	717	9.6	69	31	713	14.8	38	29	714	11.6	47	30	715	14.3	54
4,000	30	633	5.1	42	30	629	−0.5	44	31	625	−3.2	52	29	635	4.3	65	31	633	6.4	50	29	632	4.1	50	30	634	7.1	57
5,000	30	559	0.9	39	30	555	−5.8	38	30	550	−8.5	44	28	561	−0.9	63	31	560	−1.8	64	29	558	−2.6	50	30	561	−.3	66
6,000	30	493	−6.8	37	30	487	−11.7	36	30	483	−14.7	47	28	495	−6.6	62	31	493	−9.1	61	29	492	−9.2	47	30	494	−6.6	62
7,000	30	433	−13.0	32	30	427	−18.3	39	30	423	−21.1	42	25	435	−12.7	58	30	433	−15.7	53	29	431	−14.2	39	30	435	−12.6	51
8,000	30	379	−19.4	33	30	373	−25.3	44	29	368	−28.4	----	23	381	−19.4	52	28	378	−22.4	44	29	377	−22.3	39	30	380	−19.3	40
9,000	30	330	−26.8	----	30	323	−32.6	----	28	319	−35.8	----	23	332	−26.5	50	26	329	−29.5	----	28	328	−29.9	----	30	331	−26.6	----
10,000	30	287	−34.6	----	30	281	−39.5	----	27	276	−42.7	----	21	288	−33.8	53	24	285	−37.0	----	27	285	−37.5	----	30	288	−34.3	----
11,000	30	248	−42.6	----	29	242	−45.5	----	27	238	−48.4	----	18	250	−41.0	----	23	246	−44.0	----	26	246	−44.9	----	30	249	−42.0	----
12,000	29	213	−50.4	----	27	208	−51.5	----	27	204	−52.1	----	17	215	−48.4	----	21	212	−50.8	----	24	211	−51.3	----	30	214	−49.6	----
13,000	25	183	−57.9	----	24	178	−56.1	----	26	174	−54.2	----	13	184	−54.9	----	19	181	−56.6	----	24	181	−57.1	----	24	184	−57.2	----
14,000	23	155	−65.1	----	20	152	−58.7	----	25	150	−57.1	----	10	158	−60.2	----	17	154	−61.2	----	20	154	−62.6	----	19	157	−62.8	----
15,000	13	132	−69.7	----	11	129	−60.0	----	22	127	−57.3	----					7	131	−62.9	----	13	131	−66.3	----	8	134	−67.8	----
16,000									14	108	−57.0	----																
17,000									9	92	−55.4	----																
18,000									6	79	−54.0	----																

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees Centigrade, and relative humidities in percent, obtained by radiosondes during August 1944*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Ely, Nev.[3] (1,908 m.)				Glasgow, Mont. (648 m.)				Great Falls, Mont. (1,128 m.)				Greensboro, N. C. (273 m.)				Hatteras, N. C. (3 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	809	21.5	18	31	937	19.2	60	31	886	18.5	48	30	986	21.2	84	26	1,018	23.6	82	31	997	20.9	81	31	972	16.5	81
500													30	960	21.6	75	26	962	21.6	72	31	960	22.2	65	31	954	17.6	70
1,000					31	900	18.5	49					30	907	18.9	69	26	908	18.3	70	31	906	19.4	63	31	900	15.2	66
1,500					31	848	14.9	52	31	848	16.7	43	30	856	15.8	70	26	857	15.5	61	31	855	15.7	67	31	848	11.7	68
2,000	30	801	23.0	18	31	799	11.2	58	31	799	13.0	46	40	806	12.8	68	26	807	13.1	54	31	806	12.2	68	31	799	8.4	67
2,500	30	756	21.0	18	31	752	7.8	58	31	753	9.2	52	30	759	10.2	62	26	760	11.1	50	31	758	9.3	65	31	751	5.7	59
3,000	30	713	16.8	18	31	708	4.2	59	31	708	5.3	57	30	715	7.6	58	26	716	8.5	48	31	714	7.0	55	31	707	3.0	53
4,000	30	632	7.7	18	31	625	−2.4	54	31	626	−1.8	56	30	633	2.3	50	26	634	3.0	48	31	632	1.9	48	31	624	−2.6	41
5,000	30	560	−1.2	20	31	551	−8.8	48	31	551	−8.3	54	30	559	−3.0	49	25	560	−2.4	45	31	558	−3.3	45	31	549	−8.7	42
6,000	28	492	−8.8	21	31	483	−15.3	45	31	484	−15.1	51	30	492	−8.6	46	25	492	−8.0	42	31	491	−9.2	47	30	482	−15.5	44
7,000	28	432	−15.6	20	29	423	−22.6	48	31	423	−22.2	52	30	432	−14.8	47	25	433	−14.1	38	31	431	−15.4	50	30	421	−22.2	52
8,000	28	377	−23.2	20	29	368	−29.9	40	31	368	−29.9	45	29	377	−22.0	45	24	378	−21.2		31	376	−22.0	48	30	366	−29.2	46
9,000	27	328	−30.9	22	29	318	−37.1		31	319	−37.5		28	328	−29.3	47	24	329	−29.0		31	327	−29.2	47	29	318	−35.6	
10,000	26	284	−38.6	24	29	275	−44.0		31	276	−44.9		28	285	−37.3		23	286	−36.7		31	284	−36.9	54	28	275	−43.3	
11,000	26	245	−45.2		29	237	−49.7		31	237	−50.5		28	246	−45.3		23	246	−44.8		31	246	−44.8		28	237	−48.2	
12,000	25	211	−51.4		28	203	−51.4		29	203	−51.2		28	211	−53.0		23	212	−52.7		31	211	−52.1		23	203	−51.0	
13,000	22	180	−56.7		24	174	−53.3		27	174	−52.4		26	181	−59.0		21	181	−59.5		30	180	−58.1		20	174	−52.8	
14,000	18	154	−61.7		20	149	−54.0		20	149	−54.6		25	154	−63.6		13	154	−64.6		25	154	−61.6		14	148	−54.7	
15,000	9	131	−65.0		17	127	−56.5		10	127	−56.1		16	131	−66.0						15	131	−65.8		9	128	−56.4	
16,000					11	109	−56.9						5	111	−65.6						5	112	−67.2		6	109	−57.4	

Altitude (meters) m. s. l.	Jackson, Miss. (97 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Little Rock, Ark. (79 m.)				Louisville, Ky. (165 m.)				Mazatlan, Mexico (80 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,004	25.2	86	31	994	20.4	80	31	1,014	26.0	90	30	1,013	21.4	74	31	1,005	25.8	78	31	997	22.8	78	29	1,002	28.0	81
500	30	958	24.7	77	31	958	22.3	64	31	959	24.4	78	30	960	21.5	61	31	958	25.4	69	31	960	23.5	63	29	956	25.0	81
1,000	30	906	21.6	75	31	904	18.8	65	31	906	21.8	70	30	907	18.7	58	31	905	22.4	68	31	906	20.0	65	29	903	22.5	76
1,500	30	855	18.3	74	31	854	15.2	66	31	856	18.9	65	30	855	15.5	55	31	855	19.2	65	31	855	16.4	71	29	853	20.2	71
2,000	30	806	15.3	72	31	804	12.3	56	31	806	15.9	61	30	806	12.5	49	31	806	16.4	58	31	806	13.4	69	29	804	17.7	66
2,500	30	760	12.4	67	31	757	9.8	50	30	760	13.1	55	30	759	9.5	48	31	760	13.5	55	31	759	10.6	64	29	758	15.1	65
3,000	30	716	9.6	61	31	713	7.1	41	30	716	10.2	55	30	714	6.7	47	31	716	10.4	52	31	715	7.9	58	29	715	12.2	67
4,000	30	634	3.3	61	31	630	1.5	36	30	635	4.0	54	30	632	0.9	40	30	634	4.1	51	29	633	2.5	54	28	634	5.8	72
5,000	30	560	−2.5	53	31	556	−4.0	35	30	561	−1.5	46	30	558	−4.7	36	30	560	−1.7	50	29	559	−2.9	50	28	560	−.7	77
6,000	29	492	−8.5	46	31	489	−10.0	35	30	494	−7.0	39	30	490	−10.3	36	30	494	−7.3	50	29	492	−8.5	41	27	494	−6.4	71
7,000	27	432	−14.4	41	31	429	−16.5	35	30	434	−13.1	34	30	430	−16.3	36	30	433	−13.5	50	29	432	−14.5	39	27	434	−12.2	64
8,000	26	378	−21.1	46	31	375	−23.4		30	380	−19.8	38	29	375	−23.2		30	379	−20.2	42	29	377	−21.5	35	27	380	−18.8	54
9,000	25	329	−28.4		30	326	−30.4		30	330	−27.0		28	326	−30.7		30	330	−27.0	40	28	328	−28.9	46	25	331	−25.8	58
10,000	25	286	−36.3		30	283	−37.6		29	288	−34.7		28	283	−37.6		30	287	−34.2	43	28	286	−36.5		23	288	−33.8	
11,000	25	247	−44.4		29	244	−44.4		29	249	−42.7		28	245	−44.3		30	248	−41.8		28	247	−44.2		22	249	−41.7	
12,000	25	212	−52.5		29	211	−50.6		28	215	−50.9		28	210	−50.5		30	214	−49.4		27	212	−51.9		20	214	−50.3	
13,000	22	182	−59.2		27	180	−55.7		25	183	−58.6		27	180	−55.2		30	183	−56.5		25	182	−57.6		17	184	−58.0	
14,000	19	155	−65.3		23	153	−59.3		21	156	−65.3		19	154	−58.7		28	156	−62.4		22	154	−61.8		8	156	−65.6	
15,000	11	132	−67.0		16	131	−62.0		10	133	−68.5		12	132	−61.6		20	133	−65.6		14	132	−65.1					
16,000					9	111	−61.8						6	112	−64.0		13	114	−67.0		6	112	−66.9					
17,000																	5	96	−67.9									

Altitude (meters) m. s. l.	Medford Oreg.[3] (409 m.)				Miami, Fla.[3] (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (2 m.)				Ogden, Utah (1355 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	966	23.8	38	31	1,017	26.1	87	31	995	24.7	72	22	1,018	24.5	67	31	1,012	16.2	77	31	862	23.2	30	30	967	27.4	60
500	31	956	24.2	38	31	962	24.2	90	31	959	23.6	66	22	962	20.8	68	31	956	18.9	54					30	955	27.9	53
1,000	31	903	21.0	40	31	909	21.0	87	31	906	20.7	68	22	908	17.6	60	31	902	22.0	22					30	903	25.7	49
1,500	31	852	17.1	44	31	858	17.9	82	31	855	17.4	68	22	857	14.6	54	31	851	20.2	16	31	848	25.5	18	30	853	22.1	52
2,000	31	803	13.2	51	31	808	14.9	77	31	806	14.2	71	22	807	12.4	47	31	802	17.3	15	31	800	22.2	17	30	805	18.7	52
2,500	31	756	10.1	54	31	762	12.3	72	31	759	11.3	68	22	760	10.5	42	31	756	14.3	14	31	755	18.0	19	30	759	15.6	52
3,000	31	712	7.4	52	31	718	9.7	67	31	715	8.4	64	22	715	8.1	42	31	712	11.3	14	31	712	13.6	22	30	715	12.3	49
4,000	31	629	1.8	44	31	636	4.0	64	31	633	3.1	57	22	633	2.4		31	632	4.8		31	631	4.9	27	30	634	5.3	42
5,000	31	555	−4.6	38	31	562	−1.5	62	31	559	−2.1	49	22	559	−2.8		30	558	−1.7		30	557	−3.5	34	30	561	−1.0	41
6,000	30	488	−11.1	33	31	495	−7.3	57	29	493	−7.8	46	22	492	−8.5		30	491	−9.1		30	490	−10.9	41	29	494	−6.9	32
7,000	30	428	−18.1	32	30	435	−13.6	53	28	432	−14.0	52	21	432	−14.9		30	431	−16.5		30	430	−17.9		29	434	−13.0	32
8,000	30	374	−25.6	31	30	380	−20.1	53	28	378	−20.8	51	14	379	−21.2		30	376	−24.1		30	375	−25.5		29	379	−20.0	
9,000	30	324	−33.5	31	30	331	−27.3	50	28	329	−28.1	50	14	330	−28.2		30	327	−31.5		30	326	−33.4		29	331	−27.0	
10,000	26	281	−40.8		27	288	−34.9		27	286	−35.6		12	287	−35.8		30	284	−38.9		30	282	−40.7		29	288	−34.4	
11,000	25	242	−47.1		27	148	−43.0		25	247	−43.3		12	248	−43.4		30	244	−45.3		30	243	−47.1		28	248	−42.0	
12,000	25	208	−51.3		26	214	−51.1		23	213	−50.6		9	213	−51.5		30	210	−50.3		29	209	−51.8		28	214	−49.4	
13,000	25	178	−53.4		24	183	−58.0		20	183	−57.5		8	182	−57.2		28	180	−54.7		29	178	−56.1		25	183	−56.6	
14,000	23	152	−56.3		18	156	−63.8		12	156	−61.8		8	155	−61.4		28	154	−59.7		27	152	−60.6		23	157	−61.6	
15,000	15	131	−59.1		8	133	−68.3		7	132	−66.3		6	132	−64.4		21	131	−63.5		22	130	−63.6		16	133	−65.9	
16,000													6	112	−66.5		16	111	−64.1		16	110	−63.9					
17,000																	9	95	−62.6		9	93	−63.8					
18,000																					7	79	−62.9					

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees Centigrade, and relative humidities in percent, obtained by radiosondes during August 1944*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)				Portland, Maine[2] (20 m.)				Rapid City, S. Dak.[4] (981 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	978	22.9	78	31	967	32.4	37	31	972	21.1	72	31	1,012	18.0	83	----	----	----	----	31	994	24.2	68	31	986	21.7	69
500	31	956	22.6	75	31	950	35.1	25	31	960	21.4	66	31	957	20.9	58	----	----	----	----	31	958	23.6	60	31	955	20.7	61
1,000	31	902	20.5	68	31	899	31.6	25	31	906	19.1	60	31	903	18.2	55	----	----	----	----	31	905	20.1	63	31	902	17.3	63
1,500	31	852	18.2	62	31	850	27.6	28	31	855	15.7	62	31	852	14.7	58	----	----	----	----	31	854	16.7	65	31	850	13.9	64
2,000	31	803	16.0	54	31	803	23.4	31	31	805	12.3	60	31	802	11.1	62	----	----	----	----	31	804	14.0	60	31	801	11.3	59
2,500	31	757	13.6	46	31	758	19.2	36	31	758	9.2	59	31	755	7.9	63	----	----	----	----	31	758	11.4	52	31	754	8.7	51
3,000	31	713	10.3	45	31	715	15.2	37	31	714	6.4	51	31	711	4.9	60	----	----	----	----	31	714	8.7	48	31	710	6.0	48
4,000	31	632	3.7	42	31	634	7.5	38	30	631	1.6	40	31	628	−.3	53	----	----	----	----	31	632	3.0	44	31	627	.1	46
5,000	31	558	−2.9	39	31	561	−.1	46	29	557	−3.6	35	31	554	−6.0	49	----	----	----	----	30	558	−2.5	34	31	553	−6.1	49
6,000	31	491	−9.6	34	31	494	−6.4	39	29	490	−9.6	37	31	487	−11.7	46	----	----	----	----	30	491	−8.2	33	31	486	−12.4	48
7,000	31	431	−15.8	----	31	435	−12.3	29	29	430	−16.1	39	31	427	−18.1	45	----	----	----	----	29	431	−14.7	34	31	426	−19.0	46
8,000	30	376	−22.9	----	31	380	−19.3	----	29	375	−23.1	----	30	372	−25.1	44	----	----	----	----	29	377	−21.8	39	31	372	−25.9	----
9,000	30	327	−30.2	----	31	331	−26.7	----	29	326	−30.0	----	28	323	−32.5	44	----	----	----	----	29	328	−29.2	43	31	322	−33.1	----
10,000	30	284	−37.1	----	31	288	−34.4	----	29	284	−37.4	----	27	281	−39.1	34	----	----	----	----	28	285	−36.5	----	31	280	−40.0	----
11,000	30	245	−44.1	----	31	249	−41.8	----	29	244	−44.8	----	25	243	−45.0	----	----	----	----	----	27	246	−43.9	----	31	241	−46.3	----
12,000	29	211	−50.3	----	31	214	−48.8	----	29	210	−51.7	----	24	209	−50.6	----	----	----	----	----	27	212	−51.0	----	31	207	−50.6	----
13,000	26	181	−55.4	----	31	184	−55.6	----	28	180	−56.7	----	22	179	−54.6	----	----	----	----	----	27	181	−57.1	----	30	177	−54.4	----
14,000	24	154	−60.3	----	30	157	−61.8	----	26	153	−60.2	----	18	153	−57.9	----	----	----	----	----	22	155	−62.2	----	25	152	−58.2	----
15,000	14	131	−62.5	----	22	133	−66.0	----	21	130	−62.0	----	14	130	−60.0	----	----	----	----	----	15	131	−65.5	----	17	129	−60.1	----
16,000	7	112	−64.1	----	8	113	−68.2	----	16	111	−62.9	----	10	111	−61.9	----	----	----	----	----	10	111	−65.6	----	9	110	−59.1	----
17,000	----	----	----	----	6	96	−69.1	----	10	94	−62.6	----	7	94	−61.5	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	5	80	−59.9	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) M. S. L.	San Antonio, Tex. (240 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (71 m.)				S.S. Marie, Mich.[2] (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	985	28.3	64	31	1,008	18.8	84	31	1,014	26.4	86	31	1,004	13.8	85	29	988	15.9	86	29	1,013	20.5	63	31	942	22.5	38
500	31	956	26.4	68	31	954	20.1	49	31	956	23.0	83	31	955	18.5	63	29	957	17.5	72	29	958	16.7	67	----	----	----	----
1,000	31	904	23.0	70	31	900	23.7	22	31	906	19.9	78	31	902	23.6	18	29	902	16.1	64	29	904	13.2	71	31	899	20.5	34
1,500	31	854	19.8	72	31	850	22.9	20	31	855	17.0	73	31	851	21.7	15	29	851	13.2	61	29	852	10.0	71	31	849	16.2	39
2,000	31	805	16.5	73	31	802	20.7	19	31	806	14.6	63	31	803	18.6	16	29	801	10.5	58	29	801	7.5	65	31	800	11.8	47
2,500	21	759	14.1	59	31	757	17.7	19	31	759	12.2	52	31	757	15.3	16	29	755	7.8	56	29	754	5.2	61	31	753	7.6	55
3,000	31	716	11.3	54	31	713	14.3	21	31	716	9.6	44	31	713	12.1	17	29	710	5.0	53	29	709	2.4	56	31	708	3.7	59
4,000	31	634	5.4	47	31	633	7.0	25	31	634	4.0	38	31	632	5.8	----	29	628	−.1	45	29	626	−2.9	42	31	626	−2.7	50
5,000	31	561	−.6	43	31	560	.3	31	30	560	−1.5	33	31	558	−.6	----	28	553	−5.8	45	29	551	−8.6	36	31	551	−8.8	41
6,000	30	494	−6.4	38	31	493	−5.7	25	30	493	−7.3	31	31	492	−7.7	----	28	486	−11.8	45	28	484	−15.3	32	30	484	−15.5	36
7,000	30	434	−12.4	39	31	434	−12.5	----	28	433	−14.0	----	31	432	−14.8	----	28	426	−18.4	42	28	423	−22.8	----	30	423	−22.3	35
8,000	30	380	−18.8	42	27	380	−19.6	----	28	379	−21.1	----	31	377	−22.4	----	28	372	−25.6	40	27	368	−30.1	----	29	368	−29.6	----
9,000	30	331	−26.1	38	27	331	−27.2	----	25	329	−28.5	----	31	328	−29.8	----	27	322	−33.1	39	27	318	−37.7	----	28	318	−36.9	----
10,000	30	288	−33.8	----	27	288	−34.6	----	23	286	−36.5	----	31	285	−36.8	----	24	280	−39.8	39	27	275	−45.2	----	28	276	−43.8	----
11,000	30	249	−41.5	----	27	249	−41.6	----	22	247	−44.4	----	30	246	−43.9	----	22	242	−45.4	----	26	237	−51.1	----	28	237	−49.3	----
12,000	30	215	−49.1	----	27	214	−48.6	----	18	212	−52.8	----	30	212	−50.2	----	21	208	−50.3	----	25	202	−52.5	----	26	203	−51.6	----
13,000	30	184	−56.5	----	21	184	−55.4	----	13	181	−60.9	----	29	181	−56.7	----	20	178	−53.7	----	23	174	−54.1	----	24	174	−52.0	----
14,000	24	157	−63.3	----	17	157	−61.4	----	8	154	−66.7	----	28	154	−62.4	----	13	152	−56.4	----	21	148	−55.3	----	18	149	−53.1	----
15,000	12	133	−67.6	----	10	134	−67.1	----	----	----	----	----	23	131	−66.3	----	9	130	−58.5	----	21	127	−56.6	----	13	127	−54.6	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	11	112	−67.5	----	----	----	----	----	18	108	−56.4	----	7	109	−54.9	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11	93	−56.1	----	----	----	----	----

Altitude (meters) m. s. l.	Swan Island, W. I. (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tatoosh Island, Wash. (31 m.)				Toledo, Ohio (191 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,012	27.2	84	31	774	15.9	78	28	1,017	25.6	87	31	1,014	12.8	95	31	993	20.1	80	25	1,018	16.8	82	30	1,014	23.6	75
500	31	957	23.6	84	----	----	----	----	28	962	23.7	79	31	959	12.0	89	31	958	21.2	65	25	962	14.2	80	30	960	21.8	63
1,000	31	904	20.4	78	----	----	----	----	28	908	21.0	75	31	904	11.4	75	31	905	18.1	63	25	908	12.4	73	30	906	18.8	63
1,500	31	854	17.7	67	----	----	----	----	28	857	18.1	71	31	851	10.1	62	31	854	14.6	66	25	855	11.4	56	30	855	15.6	64
2,000	31	805	15.1	63	----	----	----	----	26	808	15.3	68	31	801	7.8	58	31	804	11.5	61	25	805	10.3	41	30	806	12.2	63
2,500	31	758	12.5	53	31	756	14.6	77	26	762	12.5	64	31	754	5.5	46	31	757	9.0	55	25	758	8.0	39	30	758	9.3	58
3,000	31	714	9.8	42	31	713	11.1	78	26	718	9.9	61	31	709	3.0	41	31	713	6.4	47	25	713	5.5	37	30	714	6.9	49
4,000	31	632	4.2	42	31	632	4.2	88	25	636	4.0	57	31	626	−2.7	39	31	630	0.9	38	25	630	−0.5	28	30	632	1.8	40
5,000	30	558	−1.4	36	30	559	−1.7	88	24	561	−1.7	56	31	551	−8.7	36	31	556	−5.5	35	25	555	−6.5	----	30	558	−3.6	39
6,000	27	492	−7.4	36	30	492	−7.2	77	23	494	−7.6	61	31	484	−15.2	38	31	488	−10.9	34	25	488	−12.9	----	30	490	−9.2	35
7,000	26	432	−13.7	43	28	432	−12.9	72	21	434	−13.7	59	31	423	−22.4	41	31	429	−17.1	31	25	427	−20.5	----	30	431	−15.8	37
8,000	24	378	−20.2	47	28	378	−19.7	72	21	380	−20.5	60	31	368	−30.0	38	31	374	−23.9	36	19	370	−29.7	----	30	376	−22.6	37
9,000	24	329	−27.2	47	28	329	−26.8	71	21	331	−27.8	52	31	319	−37.7	----	31	325	−30.6	40	19	322	−37.5	----	30	327	−29.8	----
10,000	23	287	−34.8	----	26	286	−35.1	68	18	287	−35.6	----	31	275	−44.9	----	30	282	−37.0	----	18	278	−44.3	----	30	284	−37.2	----
11,000	22	248	−43.2	----	25	247	−43.8	----	16	248	−43.6	----	29	237	−50.8	----	30	244	−43.9	----	17	239	−48.5	----	30	245	−44.7	----
12,000	20	213	−51.6	----	23	213	−52.3	----	15	213	−50.7	----	28	203	−52.6	----	29	210	−50.1	----	15	205	−50.9	----	30	211	−52.2	----
13,000	17	182	−59.1	----	17	182	−60.5	----	13	182	−58.7	----	26	174	−53.9	----	28	180	−55.0	----	15	176	−53.0	----	28	180	−57.9	----
14,000	9	156	−65.0	----	----	----	----	----	8	154	−65.6	----	21	148	−54.6	----	25	154	−57.9	----	14	150	−54.0	----	22	154	−62.2	----
15,000	----	----	----	----	----	----	----	----	----	----	----	----	10	127	−56.3	----	22	131	−60.4	----	11	128	−56.4	----	16	130	−64.6	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11	112	−62.2	----	9	110	−56.9	----	7	111	−63.7	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	96	−61.7	----	7	94	−55.8	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	80	−54.8	----	----	----	----	----

[1] U. S. Navy.
[2] Humidity data obtained by hair hygrometer, others using electric hygrometer.
[3] Insufficient observations.
[4] Data not yet received.

NOTE

All observations taken near 11:00 p. m., e. s. t., except at Mazatlan where they are taken near 9:00 p. m.

"Number of observations" refers to pressure only, as temperature and humidity data are sometimes missing for some observations at certain levels. Relative humidity data are not used in daily observations when the temperature is below −40.0° C.

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

Means for observations obtained by the electric hygrometer have been adjusted to compensate for the values occurring below the operating range of the humidity element.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees Centigrade, and relative humidities in percent, obtained by radiosondes during August 1944*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

LATE REPORT FOR JULY 1944

Altitude (meters) M. S. L.	Swan Island, W. I. (10 m.) Number of observations	Pressure	Temperature	Relative humidity	Altitude (meters) M. S. L.	Swan Island, W. I. (10 m.) Number of observations	Pressure	Temperature	Relative humidity	Altitude (meters) M. S. L.	Swan Island, W. I. (10 m.) Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,013	27.1	84	5,000	31	560	−1.3	42	13,000	24	183	−58.6	
500	31	958	23.8	86	6,000	29	493	−6.8	39	14,000	15	156	−65.4	
1,000	31	905	20.7	81	7,000	29	434	−13.2	36	15,000	9	132	−72.7	
1,500	31	854	17.9	74	8,000	29	379	−19.8	35	16,000				
2,000	31	806	15.5	65	9,000	29	330	−26.8	34	17,000				
2,500	31	759	13.1	55	10,000	28	287	−34.6		18,000				
3,000	31	716	10.5	46	11,000	27	248	−42.6						
4,000	31	634	4.5	43	12,000	26	214	−50.8						

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during August 1944. 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. (538 m.) Observations	Direction	Velocity	Albuquerque, N. Mex. (1,630 m.) Observations	Direction	Velocity	Atlanta, Ga. (299 m.) Observations	Direction	Velocity	Billings, Mont. (1,095 m.) Observations	Direction	Velocity	Bismarck, N. Dak. (512 m.) Observations	Direction	Velocity	Boise, Idaho (870 m.) Observations	Direction	Velocity	Brownsville, Tex. (7 m.) Observations	Direction	Velocity	Buffalo, N. Y. (220 m.) Observations	Direction	Velocity	Burlington, Vt. (132 m.) Observations	Direction	Velocity	Charleston, S. C. (17 m.) Observations	Direction	Velocity	Cincinnati, Ohio (152 m.) Observations	Direction	Velocity	Denver, Colo. (1,627 m.) Observations	Direction	Velocity	El Paso, Tex. (1,196 m.) Observations	Direction	Velocity
Surface	31	159	4.7	31	198	1.5	30	175	0.8	31	1	2.1	30	204	1.0	31	324	4.6	31	133	6.3	31	247	2.5	30	238	2.1	31	143	2.0	30	248	1.1	31	80	2.0	31	163	2.5
500							30	178	0.9										31	135	8.3	31	254	4.2	30	234	4.1	31	173	3.6	30	238	1.9						
1,000	31	168	5.3				30	192	1.6				30	261	0.9	31	324	4.8	30	144	8.2	30	248	5.3	30	259	4.6	28	206	3.2	28	253	2.5						
1,500	31	170	5.2				28	234	1.4	31	332	0.4	30	241	1.8	31	319	4.5	29	146	7.4	27	250	5.5	30	272	5.5	26	235	3.7	28	245	2.7				31	164	2.5
2,000	29	170	4.8	31	195	2.9	24	262	1.4	31	286	1.8	29	255	2.7	31	295	3.7	23	142	5.9	27	260	6.2	28	274	6.8	24	252	3.5	26	254	2.2	31	95	2.0	31	165	1.6
2,500	25	173	3.9	31	210	2.1	21	281	2.2	31	273	3.9	25	269	5.8	31	264	5.1	22	140	5.1	24	278	5.8	24	279	7.9	19	263	3.7	24	264	2.8	31	93	1.2	31	182	1.1
3,000	25	171	2.3	31	252	2.2	16	299	3.8	31	269	7.0	20	272	8.2	31	247	5.6	19	139	4.5	21	278	6.2	23	283	8.4	19	259	2.9	21	283	2.2	31	131	0.9	31	185	0.7
4,000	24	178	1.0	30	293	3.0	11	296	3.7	29	258	11.0	17	261	13.6	31	248	9.3	14	144	3.8	19	286	6.2	19	289	8.5	16	238	3.1	15	285	3.9	29	251	3.6	27	51	0.5
5,000	21	307	1.1	28	303	4.5				28	261	14.0	14	268	15.7	30	253	11.6	14	154	3.2	17	293	7.0	18	289	10.2	14	260	2.1	11	292	6.1	25	274	6.9	23	70	1.2
6,000	16	301	1.6	25	305	4.0				25	262	18.2	10	275	18.6	29	252	13.5	12	130	2.3	15	309	7.9	17	295	11.0	10	305	2.0				23	271	9.5	20	22	1.6
8,000	14	349	1.7	22	288	4.9				23	267	21.0				24	252	20.0	11	111	1.6	10	307	8.8										16	277	13.6	18	302	2.1
10,000				21	287	7.3				16	271	21.5				11	256	26.6																11	292	15.5	15	297	4.3
12,000				15	287	9.3				10	275	19.3																											
14,000				14	287	10.2																																	
16,000				12	287	8.1																																	

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.) Observations	Direction	Velocity	Grand Junction, Colo. (1,413 m.) Observations	Direction	Velocity	Greensboro, N. C. (271 m.) Observations	Direction	Velocity	Havre, Mont. (767 m.) Observations	Direction	Velocity	Jacksonville, Fla. (16 m.) Observations	Direction	Velocity	Joliet, Ill. (178 m.) Observations	Direction	Velocity	Las Vegas, Nev. (573 m.) Observations	Direction	Velocity	Little Rock, Ark. (88 m.) Observations	Direction	Velocity	Medford, Oreg. (410 m.) Observations	Direction	Velocity	Miami, Fla. (15 m.) Observations	Direction	Velocity	Mobile, Ala. (66 m.) Observations	Direction	Velocity	Nashville, Tenn. (194 m.) Observations	Direction	Velocity	New York, N. Y. (15 m.) Observations	Direction	Velocity
Surface	31	215	3.7	30	336	1.7	28	207	1.5	30	264	1.8	31	121	2.4	30	205	1.9	31	159	2.6	29	125	1.3	31	300	2.2	31	125	3.1	29	176	2.8	31	171	1.8	30	210	1.8
500							28	208	2.1				31	153	3.8	30	222	2.1				29	130	1.1	31	302	2.4	31	122	5.3	29	189	3.7	31	182	2.1	30	249	3.1
1,000							28	223	2.2	30	263	3.1	31	178	2.7	29	214	2.0	31	177	3.5	29	182	1.0	31	319	2.7	30	125	5.0	22	217	3.1	29	213	1.7	30	269	4.2
1,500				30	323	1.8	28	260	2.6	30	270	3.3	28	212	2.4	28	248	2.8	31	187	3.5	28	255	1.5	31	298	2.2	30	121	3.8	18	244	2.9	27	240	2.4	29	291	5.1
2,000	31	215	3.7	30	286	2.5	28	277	3.1	29	254	3.9	27	235	2.1	22	267	2.8	31	202	3.7	27	277	2.2	31	257	2.4	29	121	3.0	15	249	3.0	27	257	2.7	25	314	5.3
2,500	31	222	3.9	30	269	3.4	24	283	3.9	29	263	4.6	23	262	2.2	21	265	4.1	31	215	4.7	25	279	2.2	31	240	3.3	27	116	2.8	13	241	1.7	22	254	3.1	23	311	5.4
3,000	31	225	4.1	29	266	5.0	20	278	5.4	25	268	6.2	20	262	2.2	21	279	4.5	30	227	6.2	24	302	3.4	30	238	3.8	25	123	3.3	10	316	1.1	18	260	4.1	18	326	5.2
4,000	31	246	5.1	28	262	5.8	14	297	4.9	16	245	7.5	14	260	2.0	14	295	4.9	28	231	7.6	21	304	5.2	29	249	5.1	25	114	2.8				14	279	5.0	10	317	4.5
5,000	31	241	7.8	25	258	5.6				14	251	11.7	11	268	2.7	10	286	6.5	28	239	5.8	20	301	5.5	28	246	6.8	23	129	2.1				11	297	7.0			
6,000	29	240	9.9	19	259	7.3							10	272	2.8				27	242	6.6	18	317	5.6	28	252	8.7	23	137	1.3									
8,000	27	246	15.2																26	242	9.9	13	334	5.2	28	257	12.7	19	75	2.5									
10,000	24	244	21.1																22	256	13.8				18	276	13.0	16	58	6.6									
12,000	17	256	23.0																18	256	17.1				13	269	19.6												
14,000	10	266	17.0																12	247	11.0																		

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during August 1944. 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. (402 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. (12 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	Observations	Direction	Velocity
Surface	31	276	5.1	31	177	5.3	29	149	2.4	31	264	0.9	31	6	1.4	30	202	1.6	30	208	2.9	31	144	4.3	31	270	3.7	30	266	3.4	30	273	2.3	31	227	2.0	30	188	2.3
500	30	281	3.9	31	179	5.4	29	166	3.3	31	242	1.4	---	---	---	30	212	1.7	30	202	2.6	31	145	4.4	31	289	2.8	30	264	4.4	30	227	1.6	---	---	---	30	217	2.3
1,000	30	285	3.4	31	185	5.6	29	176	4.4	31	245	2.1	31	346	1.6	29	202	1.8	29	215	3.7	31	154	4.3	30	280	2.0	30	264	6.0	25	247	0.9	31	229	2.8	29	242	3.0
1,500	30	291	3.3	30	195	5.9	28	201	4.3	31	234	2.1	31	347	0.6	27	234	1.7	29	220	5.4	28	152	5.2	30	285	2.0	28	258	6.4	21	286	1.1	31	232	2.3	27	274	3.0
2,000	29	269	2.7	30	207	5.6	23	213	4.6	30	254	2.3	29	246	1.7	25	258	3.1	27	233	6.8	27	149	5.3	30	260	2.7	28	262	7.4	18	290	1.6	31	242	3.7	27	292	3.6
2,500	29	255	3.2	30	223	4.6	19	219	5.0	30	258	2.4	28	253	5.2	24	266	4.8	20	252	7.2	26	157	3.7	30	240	3.3	26	265	9.5	17	286	2.7	30	240	4.0	25	294	4.7
3,000	29	242	3.8	27	232	4.3	17	243	4.7	30	257	2.7	27	250	7.2	23	271	5.5	20	262	7.6	22	146	2.7	29	225	4.0	23	267	9.1	16	273	4.0	26	243	4.8	24	293	5.3
4,000	28	234	5.4	25	255	4.1	14	278	6.8	30	241	2.4	24	268	10.9	22	286	6.8	18	267	11.6	19	142	2.5	29	217	4.4	22	273	11.5	14	270	4.6	20	253	6.8	20	283	4.7
5,000	26	240	6.9	20	294	5.2	11	292	8.9	29	237	2.5	21	275	13.4	18	305	8.0	12	273	14.6	13	79	1.5	27	222	5.2	21	283	10.1	12	289	5.0	19	254	8.6	18	291	5.4
6,000	25	239	9.0	14	296	3.6	10	293	10.3	29	249	2.1	17	272	15.4	15	313	8.9	10	280	17.7	11	4	4.2	26	224	4.3	20	277	12.3	---	---	---	17	252	9.7	14	300	7.7
8,000	22	239	12.1	---	---	---	---	---	---	25	249	4.9	10	277	20.1	11	300	10.3	---	---	---	---	---	---	22	242	5.6	---	---	---	---	---	---	16	250	13.2	12	298	9.4
10,000	21	238	19.4	---	---	---	---	---	---	24	257	8.2	---	---	---	---	---	---	---	---	---	---	---	---	20	234	10.3	---	---	---	---	---	---	13	254	15.3	10	305	9.2
12,000	17	239	28.8	---	---	---	---	---	---	24	268	9.0	---	---	---	---	---	---	---	---	---	---	---	---	19	246	12.8	---	---	---	---	---	---	10	244	18.2	---	---	---	---	---	---
14,000	10	243	24.6	---	---	---	---	---	---	17	251	6.8	---	---	---	---	---	---	---	---	---	---	---	---	17	243	10.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16,000	---	---	---	---	---	---	---	---	---	11	199	5.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free air wind velocities, (m. p. s.) for different sections of the United States based on pilot-balloon observations during August 1944*

Section	Surface to 2,500 meters (m. s. l.)					Above 2,500 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]	31.0	W.	2,170	12	Burlington, Vt.	47.2	N.	5,000	25	Albany, N. Y.	55.4	WSW.	11,622	7	Portland, Maine.
East-Central [2]	32.2	NNW.	1,401	18	Charlotte, N. C.	36.0	W.	4,777	26	Hatteras, N. C.	40.0	NNW.	7,817 8,357	25	Huntington, W. Va.
Southeast [3]	24.1	E.	1,367	20	Charleston, S. C.	22.6	SW.	4,248	31	Birmingham, Ala.	28.6	W.	19,100	30	Jacksonville, Fla.
North-Central [4]	44.6	SW.	1,575	10	St. Paul, Minn.	42.5	NNW.	3,202	31	Bismarck, N. Dak.	55.0	NW.	9,510	24	St. Paul, Minn.
Central [5]	44.2	S.	1,585	14	Kansas City, Mo.	38.0	WNW.	4,389	5	Sioux City, Iowa.	40.0	NW.	9,537	25	Indianapolis, Ind.
South-Central [6]	37.3	S.	818	25	Tulsa, Okla.	27.4	N.	4,286	30	Big Spring, Tex.	40.0	SW.	13,229	31	Waco, Tex.
Northwest [7]	34.6	WNW.	2,500	10	Ellensburg, Wash.	38.8	WNW.	4,704	10	Great Falls, Mont.	62.0	SW.	11,761	18	Pendleton, Oreg.
West-Central [8]	24.8	S.	2,464	21	Salt Lake City, Utah	33.9	WSW.	5,000	31	Reno, Nevada.	62.0	SW.	10,365	2	Ely, Nev.
Southwest [9]	34.0	W.	2,304	22	Mt. Laguna, Calif.	33.9	W.	4,014	15	Raton, N. Mex.	53.2	WSW.	11,963	2	Santa Maria, Calif.

[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

By C. R. JORDAN

DROUGHT conditions continued during the month over most of the country east of the Mississippi River with precipitation averaging only about 50 percent of normal over a considerable area. Heavy precipitation occurred in southern Texas, the lower Missouri Valley, the northern Great Plains, and in a few other limited areas. Precipitation west of the Rockies was less than 50 percent of normal over much of the area, with California, Nevada, and portions of Oregon, Idaho, Wyoming, Utah, and Arizona reporting no appreciable rainfall.

Streamflow declined more than seasonally along the Atlantic Coast and runoff during August averaged only 50 percent of normal in a region extending from Virginia to Nova Scotia, according to the monthly review of the U. S. Geological Survey. The stage of the Scioto River at Chillicothe, Ohio, fell to a stage of 0.9 foot from August 9–14, 1944, 0.1 foot lower than any previous stage of record, and undoubtedly the lowest river stage at Chillicothe since the great drought of 1908. Local flooding was reported in eastern Maryland during the first few days of August from torrential rainfall that accompanied the passing of a tropical storm. Flooding also occurred in Iowa, Missouri, Kansas, Nebraska, and Texas.

Atlantic Slope Drainage.—A tropical storm moved inland at Wilmington, N. C., on August 1, passed north through Virginia and northeast across Maryland, passing Annapolis, Md., early on August 3. The maximum official rainfall measurement reported was 7.72 inches at Cheltenham, Md., but it is estimated that amounts from 12 to 15 inches occurred in the area just west of Annapolis. Local flooding occurred, particularly on the Bacon Ridge Branch and North River. Record stages occurred on both streams.

Otherwise river stages continued generally low.

Upper Mississippi Basin.—Stream flow was considerably above normal, especially in the western portion of the basin. Local flooding was reported in central Iowa near the end of the month.

Missouri Basin.—Slight overflow of the Solomon River at Beloit, Kans., occurred on the 3d, 27th, and 31st.

In the Republican Basin, slight overflows occurred in Sappa Creek near Beaver City, Nebr., and along Prairie Dog Creek at Norton, Kans. No overflows were reported