METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR DECEMBER 1943

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

AEROLOGICAL OBSERVATIONS

NOTICE.— Effective with the December 1942 issue, the publication of table 1 (RAOB summaries) was discontinued indefinitely.—EDITOR.

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during December, 1943. 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.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (870 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (17 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 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	27	303	1.8	30	49	1.2	29	283	2.9	31	250	3.9	31	273	3.2	29	344	0.8	26	125	1.6	29	253	5.6	31	204	2.0	27	302	1.6	28	266	1.9	31	192	0.4	30	5	1.5
500	---	---	---	---	---	---	29	288	3.8	---	---	---	---	---	---	---	---	---	26	160	3.5	29	261	8.7	31	221	5.0	27	296	3.2	28	256	3.9	---	---	---	---	---	---
1,000	27	275	2.1	---	---	---	29	283	4.6	---	---	---	31	286	7.2	29	328	0.5	19	185	5.0	22	260	10.7	26	269	9.0	26	286	5.4	24	260	4.9	---	---	---	---	---	---
1,500	22	253	6.3	---	---	---	28	283	6.7	31	268	6.6	30	298	8.7	29	160	0.7	15	210	2.7	16	279	9.7	22	284	11.5	26	290	8.4	22	276	8.2	---	---	---	30	309	0.6
2,000	19	264	8.6	30	81	0.9	24	283	9.0	29	292	8.1	29	360	10.9	28	177	0.9	12	235	3.6	11	289	12.4	13	280	14.6	25	289	10.3	22	286	10.9	31	291	0.5	29	215	2.0
2,500	19	263	9.2	28	264	1.9	24	280	11.2	29	296	9.1	26	301	12.9	26	180	0.8	---	---	---	---	---	---	---	---	---	22	288	11.7	19	284	13.6	31	301	2.1	28	232	4.6
3,000	18	259	8.6	25	271	4.8	22	280	12.8	28	304	9.3	25	302	14.0	24	245	0.7	---	---	---	---	---	---	---	---	---	22	287	12.8	16	287	14.2	29	290	5.5	26	251	6.1
4,000	18	262	11.7	24	252	9.9	16	276	15.9	26	304	10.2	22	303	17.0	20	343	2.5	---	---	---	---	---	---	---	---	---	20	283	15.8	10	299	15.3	28	300	7.2	25	250	10.3
5,000	14	278	12.3	22	250	10.7	12	279	18.6	25	301	9.7	18	304	20.8	15	351	1.6	---	---	---	---	---	---	---	---	---	20	282	17.9	---	---	---	26	290	8.5	20	253	15.5
6,000	11	277	15.3	19	253	13.7	10	282	21.3	22	310	9.9	13	318	19.8	14	300	1.6	---	---	---	---	---	---	---	---	---	19	281	22.0	---	---	---	22	285	8.8	10	248	15.6
8,000	---	---	---	---	---	---	---	---	---	16	352	10.9	12	327	19.2	12	16	3.8	---	---	---	---	---	---	---	---	---	11	287	22.3	---	---	---	14	289	15.6	---	---	---
10,000	---	---	---	---	---	---	---	---	---	13	340	8.0	10	322	19.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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. (410 m.)			Miami, Fla. (15 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	29	2	1.3	29	298	0.9	28	240	1.2	31	253	3.8	28	1	0.9	31	254	3.5	31	44	2.4	23	301	0.7	26	338	0.3	30	95	1.1	24	298	0.6	26	301	1.1	30	288	5.4
500	---	---	---	---	---	---	28	262	2.5	---	---	---	28	289	2.6	31	269	5.3	---	---	---	23	285	1.6	26	329	0.4	30	67	2.4	24	279	1.2	26	266	1.7	30	280	7.6
1,000	---	---	---	---	---	---	28	270	4.1	31	260	6.5	26	272	4.1	30	275	7.4	31	31	2.9	21	298	2.7	24	142	2.1	30	76	1.6	23	279	3.6	22	269	4.5	29	288	10.1
1,500	---	---	---	29	307	0.8	26	289	8.2	31	277	8.5	26	270	6.7	25	281	9.2	30	34	2.9	17	311	5.5	22	160	1.8	27	134	0.3	22	270	5.2	20	280	6.2	25	296	10.8
2,000	29	349	1.1	29	350	1.0	26	286	11.2	29	294	9.8	25	274	7.8	24	294	12.6	28	33	0.9	16	288	8.0	22	161	1.5	24	238	0.9	22	278	6.7	17	293	8.5	23	290	12.7
2,500	29	80	0.5	27	192	1.4	22	284	15.1	28	301	10.4	24	271	9.7	22	296	14.2	27	8	1.3	14	291	9.9	20	109	0.7	19	231	1.4	18	275	8.2	17	293	11.3	17	292	12.5
3,000	28	164	0.6	24	231	2.4	21	281	16.4	26	301	11.2	23	276	10.0	22	295	15.8	27	9	0.9	14	287	11.6	16	59	3.5	17	283	2.6	16	272	10.0	16	290	14.4	12	288	13.2
4,000	22	210	0.6	17	259	4.2	15	283	17.0	18	298	10.2	20	284	12.5	13	308	17.1	24	320	2.6	12	286	17.8	12	16	5.5	14	294	5.6	13	260	11.2	13	291	17.6	---	---	---
5,000	19	324	2.8	12	261	4.1	14	283	19.8	13	288	10.4	20	280	15.2	11	309	21.0	23	331	4.3	---	---	---	10	12	9.6	13	295	7.3	---	---	---	12	297	20.4	---	---	---
6,000	18	331	3.5	11	283	5.5	12	275	20.6	---	---	---	20	282	18.5	---	---	---	21	338	5.7	---	---	---	---	---	---	13	284	8.9	---	---	---	10	298	25.4	---	---	---
8,000	10	280	6.8	---	---	---	---	---	---	---	---	---	14	277	22.4	---	---	---	15	330	8.4	---	---	---	---	---	---	13	276	11.3	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	272	15.8	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (402 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (388 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. (230 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
Surface	31	296	0.9	25	347	1.9	31	242	1.4	31	91	0.3	31	337	4.3	28	295	1.8	31	262	3.2	26	27	0.6	28	251	1.8	27	276	2.0	28	144	0.9	27	274	0.5	28	289	1.9
500	31	28	1.5	25	355	1.5	31	236	2.2	31	71	0.4	---	---	---	28	287	3.2	31	261	5.6	26	59	0.3	28	196	0.4	27	254	3.5	28	200	1.5	---	---	---	28	291	4.2
1,000	27	23	2.7	24	317	1.4	31	263	4.4	31	98	1.8	31	333	4.5	23	288	4.9	27	268	8.7	23	284	0.9	25	89	1.3	25	273	8.1	22	198	1.9	27	179	1.2	28	289	7.0
1,500	23	358	2.3	23	287	3.6	30	293	6.4	30	128	2.7	31	317	6.9	21	291	6.1	26	283	11.7	22	266	2.8	25	88	1.5	18	287	10.5	20	233	2.8	19	249	1.3	28	294	9.2
2,000	21	347	3.0	23	279	6.9	29	296	8.7	27	140	2.5	30	314	8.2	20	292	9.4	26	290	13.8	21	267	4.4	23	31	1.2	16	282	12.3	18	285	2.6	17	265	2.4	27	295	12.8
2,500	21	343	3.0	23	283	8.0	28	295	11.6	25	171	1.5	29	312	9.0	20	292	12.6	23	289	12.0	18	277	7.6	22	357	2.1	10	289	14.1	15	290	2.5	16	265	4.0	27	286	14.0
3,000	19	5	4.4	23	279	9.9	26	295	11.0	24	227	2.6	28	313	10.0	18	288	15.6	21	294	12.1	17	275	9.0	21	358	3.5	---	---	---	14	312	2.3	14	291	3.8	27	283	15.5
4,000	18	34	3.2	19	278	14.0	26	291	13.2	20	253	4.7	23	323	12.0	16	290	18.5	17	288	12.9	17	282	10.9	17	347	6.4	---	---	---	---	---	---	13	308	4.3	22	286	17.3
5,000	15	38	4.3	18	280	18.4	24	286	13.5	19	258	8.0	22	318	12.5	15	293	22.5	14	282	17.0	16	280	14.1	16	342	8.6	---	---	---	---	---	---	13	329	5.5	17	288	20.4
6,000	11	7	11.5	15	274	20.9	23	290	14.8	17	263	12.4	18	313	14.0	13	290	25.5	10	282	13.9	14	277	15.9	14	340	13.4	---	---	---	---	---	---	---	---	---	11	294	17.9
8,000	---	---	---	---	---	---	---	---	---	12	264	11.9	15	308	16.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

AEROLOGICAL OBSERVATIONS FOR THE YEAR 1943[1]

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during December, 1943. 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.	Abilene, Tex. (538 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (870 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (17 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 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	356	186	1.5	362	240	1.8	341	277	1.5	356	285	1.8	356	281	1.6	352	317	2.0	348	120	4.5	340	249	3.3	353	248	1.0	348	216	0.9	346	257	1.3	358	18	0.8	364	236	1.7
500	---	---	---	---	---	---	341	275	1.9	---	---	---	---	---	---	---	---	---	347	132	4.9	340	255	5.2	353	243	2.7	348	224	2.1	346	253	2.7	---	---	---	---	---	---
1,000	354	187	2.4	---	---	---	336	268	2.6	---	---	---	352	286	2.9	352	313	2.0	304	152	3.6	292	255	6.4	331	264	4.8	330	262	2.9	319	255	4.0	---	---	---	---	---	---
1,500	338	208	2.9	---	---	---	327	277	3.7	356	281	3.4	320	285	4.2	352	292	1.8	276	177	1.8	239	250	7.0	282	272	6.5	314	284	4.2	298	267	5.5	---	---	---	364	233	1.9
2,000	326	235	3.5	362	243	2.4	305	284	5.4	345	284	4.7	280	284	6.0	340	275	2.1	239	204	1.2	---	---	---	212	275	8.5	288	287	6.0	261	278	7.2	358	348	0.9	361	230	2.1
2,500	313	248	4.8	360	253	2.9	288	285	6.8	329	284	6.5	259	286	7.4	327	267	3.3	211	215	1.2	---	---	---	---	---	---	271	288	7.3	220	280	8.3	354	304	1.3	355	246	2.8
3,000	292	254	5.6	352	264	4.0	263	288	7.7	311	283	7.8	245	289	9.2	309	264	4.4	192	248	1.4	---	---	---	---	---	---	263	286	8.0	193	282	9.0	341	280	3.3	347	257	3.6
4,000	277	265	7.3	331	268	6.3	221	286	9.4	272	282	10.8	218	289	12.1	275	265	5.9	176	265	3.2	---	---	---	---	---	---	234	286	10.3	---	---	---	317	283	7.1	320	259	5.8
5,000	250	271	8.4	298	272	7.7	192	287	11.2	239	280	12.1	196	290	13.8	247	259	7.7	165	272	4.5	---	---	---	---	---	---	201	284	11.9	---	---	---	281	282	10.0	297	261	6.9
6,000	225	273	10.1	275	270	9.1	173	290	12.4	214	284	13.4	165	294	15.0	222	264	9.1	150	269	6.0	---	---	---	---	---	---	178	283	12.9	---	---	---	248	283	11.6	245	265	8.1
8,000	163	280	11.2	205	275	10.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	170	281	14.2	184	270	9.6
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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. (410 m.)			Miami, Fla. (15 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	358	251	1.1	353	311	1.3	339	246	1.4	336	270	2.1	351	95	2.0	346	262	2.0	365	161	0.9	348	211	0.8	344	314	1.3	356	110	2.2	337	202	0.5	349	271	1.4	342	267	2.1
500	---	---	---	---	---	---	339	246	2.4	---	---	---	351	138	0.8	346	265	3.0	---	---	---	348	218	1.6	344	314	1.6	355	100	3.2	336	209	1.0	349	261	2.2	341	265	4.2
1,000	---	---	---	---	---	---	332	253	3.5	334	267	3.8	328	244	1.7	332	269	4.6	364	180	1.5	332	246	2.2	341	291	1.1	336	99	1.7	310	283	1.2	332	260	3.0	317	279	6.0
1,500	---	---	---	353	301	1.7	326	269	5.1	327	274	5.2	322	269	3.3	302	274	6.3	363	203	1.9	320	263	3.8	335	237	1.7	315	94	2.0	286	310	2.4	306	270	4.3	296	282	7.5
2,000	358	225	1.9	353	283	2.1	312	283	7.1	318	277	6.0	308	277	4.3	264	280	8.3	357	219	2.5	302	273	5.4	318	227	2.3	276	266	0.8	267	303	3.6	277	277	5.9	242	286	8.7
2,500	358	225	2.5	348	252	2.8	290	286	8.8	292	279	7.5	290	276	5.2	234	286	9.7	353	230	2.8	270	279	6.9	286	233	2.3	242	252	1.3	234	297	4.5	265	281	7.5	194	290	9.8
3,000	349	234	2.7	338	249	4.1	263	286	10.3	266	277	8.7	277	277	5.8	215	288	10.7	347	243	3.4	250	282	7.8	254	237	2.2	222	260	2.0	205	299	4.8	238	285	9.1	---	---	---
4,000	298	257	4.0	296	260	5.5	232	285	11.8	196	278	10.3	247	279	6.8	---	---	---	330	259	4.9	210	286	10.0	222	260	3.3	188	270	2.4	164	286	6.0	203	290	11.3	---	---	---
5,000	255	265	6.2	217	271	6.6	196	285	13.8	---	---	---	214	276	8.1	---	---	---	306	268	6.3	172	285	10.4	201	278	4.7	166	279	3.6	---	---	---	172	291	13.3	---	---	---
6,000	229	268	8.4	172	273	7.4	167	285	15.2	---	---	---	190	279	9.7	---	---	---	292	270	7.5	---	---	---	---	---	---	145	284	4.5	---	---	---	---	---	---	---	---	---
8,000	177	269	10.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	245	274	10.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	207	265	14.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	170	266	15.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (402 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (388 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. (230 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
Surface	357	264	4.1	339	183	2.0	338	214	0.7	365	255	0.7	353	354	2.0	350	260	1.2	352	257	1.6	354	129	0.8	356	272	3.3	324	292	2.8	341	250	1.7	342	205	2.8	345	257	1.5
500	357	294	1.9	339	184	2.4	338	214	1.0	365	256	1.1	---	---	---	350	266	2.1	352	261	2.2	354	136	2.4	355	281	2.4	324	289	3.5	341	223	1.9	---	---	---	345	263	2.9
1,000	333	297	1.2	337	195	2.9	332	237	2.3	365	233	1.1	353	351	2.0	327	259	3.2	322	266	4.0	343	141	2.3	324	270	0.8	301	287	4.8	293	210	2.5	342	226	2.5	328	266	4.5
1,500	319	280	1.3	331	224	3.6	318	262	4.0	364	216	1.7	353	310	2.9	313	268	4.8	287	275	5.6	330	176	1.9	309	249	0.6	256	287	5.5	265	214	2.9	307	225	3.1	309	277	6.7
2,000	301	268	1.4	321	250	5.0	290	272	6.5	356	218	2.2	342	298	4.4	286	275	7.1	262	280	7.8	304	218	2.3	289	237	1.0	221	288	6.8	240	222	2.8	275	235	4.1	275	282	9.1
2,500	295	263	2.0	309	263	6.4	268	280	8.4	349	228	2.6	318	291	6.4	259	280	8.6	237	284	8.9	277	246	2.8	282	233	1.2	---	---	---	214	239	3.1	232	246	4.5	241	285	10.6
3,000	289	267	2.6	298	268	7.7	257	282	9.4	345	236	3.3	295	290	8.2	240	282	10.2	207	290	9.9	257	257	3.8	273	249	2.6	---	---	---	191	253	3.9	206	258	5.1	218	285	12.2
4,000	275	264	4.1	271	276	9.5	220	291	11.2	328	249	4.5	254	293	10.4	217	285	12.5	---	---	---	230	271	5.0	238	254	3.3	---	---	---	---	---	---	174	266	6.8	178	284	14.4
5,000	258	265	5.6	250	280	11.6	---	---	---	303	252	5.8	223	291	12.1	176	287	14.0	---	---	---	203	279	7.0	211	269	4.1	---	---	---	---	---	---	---	---	---	---	---	---
6,000	242	275	7.0	232	281	13.4	---	---	---	284	259	6.7	190	290	14.1	---	---	---	---	---	---	173	278	8.3	173	273	4.8	---	---	---	---	---	---	---	---	---	---	---	---
8,000	196	261	9.7	---	---	---	---	---	---	239	266	9.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[1] All data are based on observations during 12 months. At some stations data were missing during 1 or 2 months at higher levels. Data were not published for any level where observations were missing for more than 1 month in the same season or more than 2 months during the year.

TABLE 3.—*Maximum free-air wind velocities, (m. p. s.), for different sections of the United States, based on pilot-balloon observations during December, 1943*

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.)				
	Max. velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Max. velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Max. velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	51.2	NW.	2,080	28	Hartford, Conn.	57.5	WNW.	4,600	5	Boston, Mass.	64.8	WSW.	8,060	15	Philipsburg, Pa.
East Central [2]	47.6	NW.	1,800	11	Greensboro, N. C.	58.8	W.	4,780	13	Norfolk, Va.	82.0	WSW.	9,350	15	Huntington, W. Va.
Southeast [3]	32.1	WNW.	2,420	12	Atlanta, Ga.	39.8	WNW.	4,960	22	Charleston, S. C.	57.0	WSW.	16,280	14	Miami, Fla.
North Central [4]	52.2	NNW.	1,610	19	Duluth, Minn.	50.0	NW.	4,920	11	Bismarck, N. Dak.	65.0	W.	11,770	9	Bismarck, N. Dak.
Central [5]	40.0	WNW.	2,440	11	Moline, Ill.	53.6	NW.	4,770	10	Joliet, Ill.	71.6	WNW.	11,140	28	Wichita, Kans.
South Central [6]	35.6	WNW.	2,100	31	Tulsa, Okla.	40.0	SW.	4,360	27	Del Rio, Tex.	68.0	W.	10,060 11,200	30	Big Spring, Tex.
Northwest [7]	42.0	W.	2,480	3	Havre, Mont.	54.0	NNW.	5,000	8	Burns, Oreg.	84.6	NNW.	6,760	8	Burns, Oreg.
West Central [8]	35.4	NE.	2,080	9	Sacramento, Calif.	44.6	SE.	3,520	16	Oakland, Calif.	80.7	ENE.	9,230	9	Winnemucca, Nev.
Southwest [9]	33.1	E.	1,850	9	Albuquerque, N. Mex.	44.2	W.	4,370	7	Raton, N. Mex.	63.0	W.	10,280	29	Las Vegas, Nev.

[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.

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States, based on pilot-balloon observations during year 1943*

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.)				
	Max. velocity	Direction	Altitude (m) m. s. l.	Date	Station	Max. velocity	Direction	Altitude (m) m. s. l.	Date	Station	Max. velocity	Direction	Altitude (m) m. s. l.	Date	Station
Northeast [1]	60.0	W.	2,290	Apr. 28	Philipsburg, Pa.	57.5	WNW.	4,600	Dec. 5	Boston, Mass.	90.5	W.	13,550	Jan. 29	Portland, Maine.
East Central [2]	47.6	NW.	1,800	Dec. 11	Greensboro, N. C.	62.4	W.	5,000	Jan. 4	Greensboro, N. C.	82.0	WSW.	9,350	Dec. 15	Huntington, W. Va.
Southeast [3]	41.3	NW.	1,050	Feb. 14	Spartanburg, S. C.	58.0	W.	4,960	Feb. 14	Charleston, S. C.	66.0	W.	11,900	Feb. 7	Miami, Fla.
North Central [4]	52.2	NNW. W.	1,610 2,150	Dec. 19 Sept. 7	Duluth, Minn.	62.9	WNW.	5,000	Mar. 26	International Falls, Minn.	73.8	WNW.	12,420	Nov. 20	Detroit, Mich.
Central [5]	62.0	SSW.	2,380	Mar. 30	Dodge City, Kans.	54.4	W.	2,550	Mar. 17	Des Moines, Iowa	75.2	WNW.	14,700	Jan. 10	Wichita, Kans.
South Central [6]	52.4	NW.	1,380	Apr. 13	Tulsa, Okla.	55.3	NW.	5,000	Feb. 6	Waco, Tex.	113.0	SW.	17,090	Jan. 23	Amarillo, Tex.
Northwest [7]	54.6	S.	1,210	Oct. 24	Tatoosh Island, Wash.	60.0	WNW.	3,700	Jan. 15	Burns, Oreg.	84.6	NNW.	6,760	Dec. 8	Burns, Oreg.
West Central [8]	60.8	W.	2,480	Jan. 20	Cheyenne, Wyo.	67.0	WNW.	4,700	Jan. 15	Ely, Nev.	80.7	ENE.	9,230	Dec. 9	Winnemucca, Nev.
Southwest [9]	48.2	SW.	2,290	Mar. 18	Winslow, Ariz.	62.0	W.	4,800	Mar. 15	Roswell, N. Mex.	85.0	WSW.	9,110	Apr. 12	El Paso, Tex.

[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

PRECIPITATION during December 1943, was below normal over most of the northern and eastern parts of the country except locally in the South Atlantic States. On the Pacific coast normal conditions were completely reversed. Seattle, Wash., with a normal of 5.60 inches, received 1.27 inches, while San Diego, Calif., with a normal of 1.87 had 7.60 inches. Seattle had the driest December of record while the 7.60 inches at San Diego has been exceeded only twice in more than 90 years.

The seasonal snow cover had accumulated at the end of December to considerable depths in northern New England, in the Adirondacks, northern Michigan, and in the Rocky Mountains and western coastal ranges. Some of the greater depths in the Far West were 30 inches at Cumbres, Colo.; 41 inches at Silver Lake, Utah; 72 inches at Paradise Inn, Wash.; and 31 inches at Huntington Lake, Calif.

Conditions were extremely unfavorable for the maintenance of stream flow and ground-water levels. Stream flow was below normal in more than 80 percent of the country. December was the fourth consecutive month with no flooding of consequence. The Saluda River just reached flood stage at Pelzer, S. C., on December 27, and the Luckiamute River rose to a stage of 26.4 feet, 1.4 feet above flood stage, at Suver, Oreg., on December 5, as a result of moderately heavy rain along the northern Pacific coast on December 3–4. No damage resulted at either place.

FLOOD-STAGE REPORT FOR DECEMBER 1943

[All dates in December]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
	Feet			*Feet*	
ATLANTIC SLOPE DRAINAGE					
Saluda: Pelzer, S. C.	6	27	27	6	27
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Luckiamute: Suver, Oreg.	25	4	5	26.4	5