

INSTRUCTIONS FOR W. B. FORM 612-14 (Formerly 1009)

1. Observations should be taken at a regular hour each day, preferably between 5 p. m. and 8 p. m., since normally the thermometers then register the highest and lowest temperature for the day. Observations should be taken at approximately the same time during the entire year. If you have been instructed to measure the precipitation in the morning, or if it is necessary for any reason that you read the thermometers in the morning, an evening temperature observation should also be taken. If thermometers are read twice daily, they should be set only at the evening observation. Temperatures entered on this form will then be for the 24 hours ending at time of evening observations, while the precipitation will be for the 24 hours ending at time of morning observations. The time (or times) of the observations should be entered in the heading on the form. W. B. Form 612-7 (formerly 1011) "Official Weather Observer's Record" may be used to record the observations as they are taken. If Form 612-7 (formerly 1011) is used the data should be promptly copied into Form 612-14. Form 612-7 (formerly 1011) may be retained by the observer. Additional instructions may be found in Circular B and other special circulars as issued, and they should be studied carefully by every observer.
2. Begin a new form on the first of every month. Fill in the heading completely. Enter the station name as it appears in "Climatological Data." Standard of time in use should be shown by the letters E, C, M, or P for Eastern, Central, Mountain, or Pacific. If your report is prepared in Daylight Saving time, the letter D should be entered just after the letters E, C, M, or P, as E.D, C.D, M.D, or P.D. Enter the temperature at time of observation and precipitation beginnings and endings for the last day of the preceding month in the space provided just above the line for the first of the month.
3. The following order should be followed in making temperature observations:
 - (a) Read minimum thermometer and record the reading; (b) read maximum thermometer and record the reading; (c) set the maximum thermometer; (d) set the minimum thermometer.
4. MINIMUM TEMPERATURE.—The minimum thermometer is read while in the "set" position. The reading is taken from the upper or right-hand end of the small index. It should be read before the maximum thermometer, so that the index in the minimum will not be jarred or disturbed before the reading is made.
5. MAXIMUM TEMPERATURE.—To obtain the maximum temperature, slowly lower the maximum thermometer to a vertical position, with the bulb down. Then read the temperature shown by the top of the mercury column. The thermometer bulb must not be touched.
6. CURRENT TEMPERATURE AT TIME OF OBSERVATION.—The current temperature may be obtained at any time by reading the end of the alcohol column in the minimum thermometer without disturbing the instrument. This temperature may also be obtained from the maximum thermometer at observation time after it has been whirled, while it is still in a vertical position.
7. SETTING THE THERMOMETERS.—After both maximum and minimum temperatures have been obtained, the maximum thermometer is set by whirling it in a clockwise direction until the reading is the same as that shown by the end of the alcohol column in the minimum thermometer. It should then be returned to its nearly horizontal position, with the bulb end slightly elevated. The minimum thermometer is set by raising the bulb end sufficiently to allow the small index to slide to the end of the alcohol column and then lowering the thermometer to a nearly horizontal position. After setting, the temperatures shown by the respective thermometers should agree within one degree; a greater difference should be indicated under remarks on the right of the form.
8. RECORDING THE TEMPERATURES.—Enter maximum temperature, minimum temperature, and temperature at time of observation in the proper column to the nearest whole degree. Enter on line for date of observation. If the temperature is below zero, place a minus sign in front of the reading.
9. PRECIPITATION, TIMES OF BEGINNING AND ENDING.—Beginnings and endings must always be entered on the calendar date(s) on which they actually occur. Show the hours during which precipitation fell by drawing a solid horizontal line through the hour columns for the period of actual observed occurrence. If the beginnings and endings were not observed, draw a wavy line through the hours of probable occurrence. This is a vital part of the record and should be kept as complete and accurate as possible.
10. PRECIPITATION, 24-HOUR TOTAL ENDING AT OBSERVATION.—Record in the column headed "Rain, Melted Snow, etc.," the total depth of rain or the water resulting from melted hail, sleet, or snow for the preceding 24 hours, regardless of whether it fell on the day of observation or after observation time on the preceding day. *The amount should always be entered on the date(s) of measurement.* Every entry of measurable precipitation should be recorded to two decimal places and the decimal point should be carefully entered in its proper place. If the amount is .05 (five hundredths) it should be entered as .05, if it is .50 (fifty hundredths) it should be entered as .50, and if it is one inch and sixty hundredths as 1.60. *When no precipitation falls during the 24-hour observational period, a "0" (zero) should be entered so there will be no doubt as to whether any precipitation fell.*
11. MEASURING LIQUID PRECIPITATION.—It is not necessary to remove the measuring tube to make a measurement. Insert a dry measuring stick into the measuring tube. Permit the stick to rest on the bottom of the tube for 2 or 3 seconds. Withdraw the stick and read the depth of precipitation at the upper limit of the wet portion of the stick. This amount should be entered on the date of measurement. The gage is so constructed that the depth of water in the measuring tube is magnified ten times by allowing it to collect in the smaller tube. The measuring stick supplied with the gage is graduated in such a manner that its smallest division represents .01 inch of actual precipitation. The measuring tube should be emptied

and replaced in the large can after the measurement has been noted. If the measuring tube of the gage is full (this equals 2 inches of precipitation), carefully remove it from the overflow container and empty it. Pour the overflow into the measuring tube, measure it, and add the value to the 2 inches emptied from the tube. If, in removing the full measuring tube, some water is spilled into the overflow container, measure the amount remaining in the tube before measuring the amount of the overflow. The total precipitation is then the sum of the individual measurements. When measurement is completed, empty the measuring tube and reassemble the gage.

12. MEASURING FROZEN PRECIPITATION.—When frozen precipitation is likely to fall, remove the funnel and inner tube of the rain gage and leave only the large can exposed. Melt the catch of snow or ice by the following method. Pour a measured quantity of warm water into the overflow container of the gage to melt the collected snow or ice. Pour the entire contents into the measuring tube. Measure the water as outlined above. To obtain the water equivalent of the precipitation, subtract the amount of water used to melt the solid precipitation from the total measurement. This water equivalent should be entered in the "Rain, Melted Snow, etc.," column. The receiver of the gage makes a very convenient funnel for this operation.

If solid precipitation falls when the funnel and tube have not been removed and it is thought the gage has caught only a portion of the fall, it will provide a more accurate measurement to discard the questionable amount in the gage and then to proceed as follows: Select a place where the new fall is as little disturbed as possible, cut out a section by sinking the inverted overflow can through the frozen precipitation and cover the mouth by slipping a sheet of tin or thin board under it. Be careful to include only the precipitation that fell during the preceding 24 hours. This section should then be melted as indicated above and measured to obtain the water equivalent.

13. NEW SNOWFALL, SLEET, OR HAIL, 24-HOUR FALL.—Measure the depth of new snow, sleet, or hail which has fallen during the preceding 24 hours only. Separate falls which melt during the 24-hour period are to be added together. Enter the total amount in inches and tenths in the column headed "24-hr. amounts, Snow, Sleet, Hail." Where drifting occurs, measurements should be made at several points where drifting is least and the average of these should be entered. If frozen precipitation melts as it falls, enter the amount as "T" (trace) with a note "Melted as it fell." If the total unmelted fall measures less than half the distance from the end of the measuring stick to the first etched mark, the amount should be entered as "T" (trace). If there is an entry in this column there must be an entry for the same date in the "Rain, Melted Snow, etc.," column to show the water equivalent.

14. TOTAL SNOW, SLEET, HAIL, ICE DEPTH ON GROUND AT OBSERVATION.—The average depth remaining on the ground at time of observation in the vicinity of the station should be entered to the nearest inch (no decimals or fractions to be used) in the column headed "At obsn. Snow, Sleet, Hail, Ice on ground." This measurement should be made by taking the average of the depths at three or more places least affected by drifting. This depth includes any new fall accumulated on top of older snow, sleet, ice, or hail. An entry should be made each day in this space as long as snow, sleet, or ice remains on the ground. For the day on which the covering melts completely, enter "0." Omit entries thereafter until the next accumulation. Enter "T" for less than one-half inch.

15. WEATHER.—Under "Weather" enter an "X" in the proper space for each type or types that occur during the calendar day midnight to midnight. A brief explanation of the six types carried in this block follows:

Fog: Minute water droplets suspended in the air.
 Sleet: Transparent, hard pellets of ice. Temperature is usually below freezing when sleet occurs.
 Glaze: (From freezing rain or freezing drizzle). Rain or drizzle that falls in liquid form but freezes to the exposed surfaces of the ground, or to unheated objects, forming a smooth coating of ice.
 Thunder: Thunder heard at the station, whether or not rain fell.
 Hail: Ice balls which usually fall during thunderstorms, when the temperature is considerably above freezing.

Damaging winds: Winds resulting in damage to vegetation, buildings, or other property.
 16. The next column headed "Time of Observation if Different from the Above" is to be used only when for some reason it has been impossible to take the observation at the proper time (or within one hour of the proper time). On such days the actual time of the observation should be entered in this column. In the event the time refers to the precipitation only, the time entry should be circled.

17. In the next column headed "Important Weather Conditions not Included in Weather Block, Remarks, etc.," additional information such as time and intensity may be given about any of the items checked in the weather block or any other weather information such as periods of dry or wet, severe storms, etc. Deaths and damage due to weather should be noted. Also record here the dates of "killing freeze," in the spring and fall. A "freeze" may or may not be accompanied by an actual deposit of frost. A "killing freeze" is a freezing condition capable of having widely destructive effects on staple vegetation, usually accompanied by temperatures observed in the instrument shelter below 32° F. Under arid or windy conditions, frost does not always form when a killing freeze occurs. Heavy frost is not always an indication of a killing freeze. If additional space is required, place a check at the bottom of the page and write the additional remarks on a continuation sheet. Number of copies and distribution of the continuation sheet should be the same as for Form 612-14.

18. Enter station, month, year, and your name on the bottom of the form. Enter name of your post office, only if it is different from the name of your station.

19. Sums, averages, and extremes need not be entered by the observer.

20. Always forward promptly the original and one copy of your monthly report to the designated office after the close of each month, unless instructed otherwise.

RECORD OF CLIMATOLOGICAL OBSERVATIONS

Station _____ your station _____
County _____ your County _____
State _____ your State _____

RECORD OF CLIMATOLOGICAL OBSERVATIONS

Time of observation (local time) if once daily 6 P

Month Sample, 1956
Standard time in use F

Standard time in use 5

TEMPERATURE °F			PRECIPITATION														WEATHER (CALENDAR DAY)		Time of Observation		Important weather conditions not included in 'Weather' block, remarks, etc.											
24 hrs. ending at observation			Draw a straight line (—) through hours precipitation was observed, and a wavy line (~~~~) through hours precipitation probably occurred unobserved.														Mark 'X' for all types occurring each day		If different from the above													
Date	Max	Min	A.M. P.M.																								Fog	Sleet	Glaze	Thunder	Hail	Damaging Wind
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12						
1	93	61	82																													
2	101	57	86																								X	X	X			
3	97	67	82																								X	X	X			
4	100	71	87																													
5	88	63	73																													8P
6	84	59	75																													
7	81	49	72																													
8	79	53	71																													
9	74	47	64																													
10	69	38	60																													
11	63	34	55																													
12	58	46	54																													
13	63	50	57																													
14	59	45	53																													
15	54	43	45																													
16	49	26	32																													
17	34	15	19																													
18	23	0	5																													
19	8	9	-5																													
20	-4	-18	8																													
21	0	-10	0																													
22	19	0	11																													
23	28	8	25																													
24	32	22	30																													
25	44	27	41																													
26	47	26	43																													
27	53	34	46																													
28	58	38	49																													
29	52	33	35																													
30	49	28	43																													
31	57	42	51																													
Sum																																
Avg																																
Ex- treme																																

Check ☒ when additional sheet is used for remarks

Carbon paper, envelopes & continuation sheet

Station Your station Month January Year 1955

Observer Your name

Post Office

17-0371-3

Table with columns for Date, Max, Min, and various weather observation fields. Includes handwritten data for May 1958.

RECORD OF CLIMATOLOGICAL OBSERVATIONS
Time of observation (local time) if over 4:00 PM
MAY 1958
EST

Table with columns for Temperature, Precipitation, and various weather observation fields. Includes handwritten data for May 1958.

Handwritten weather observations on a grid. Includes temperature, wind, and cloud data. Station: Hancock, Maine. Date: July 1958.

RECORD OF CLIMATOLOGICAL OBSERVATIONS
Station: Hancock, Maine
Date: July 1958
Time of observation (local time) if not daily: 11:00 AM

TEMPERATURE		WIND		PRECIPITATION		WEATHER		CALENDAR DAY		Remarks	
Max.	Min.	Dir.	Speed	Amount	Time	Time	Time	Month	Day	Time	Remarks
78	57	74						July	1		Clear
87	65	82						July	2		Part Cloudy
82	64	77						July	3		Clear
78	54	73						July	4		Clear
72	52	65						July	5		Cloudy
65	56	60						July	6		Clear
61	54	56						July	7		Clear
59	54	59						July	8		Cloudy
78	56	77						July	9		Clear
78	60	76						July	10		Clear
78	56	68						July	11		Cloudy
71	50	71						July	12		Cloudy
68	61	77						July	13		Clear
70	66	72						July	14		Part Cloudy
72	59	72						July	15		Part Cloudy
66	59	62						July	16		Clear
72	59	72						July	17		Clear
71	56	70						July	18		Cloudy
70	56	59						July	19		Cloudy
67	55	67						July	20		Part Cloudy
76	54	74						July	21		Cloudy
74	59	66						July	22		Clear
82	54	82						July	23		Cloudy
82	62	63						July	24		Cloudy
63	56	57						July	25		Cloudy
58	54	58						July	26		Cloudy
62	54	62						July	27		Cloudy
68	61	67						July	28		Clear
70	55	77						July	29		Cloudy
78	57	73						July	30		Cloudy
81	54	70						July	31		Cloudy
Sum		2184	1709								
Avg		72.8	57.0								
Ex-											
treme											

Station HANCOCK
 County MAINE
 Date SEPTEMBER 1958
 Time of observation (local time) if once daily 5:00 PM
 If at different times, temperature _____, precipitation _____
 Standard time in use EST

Transit	Station	Month	19
		ACADIA NATIONAL PARK	
		BAR HARBOR, MAINE	
		17-0371-33	
		4.4	
		3.2	
		1/10	

Station: HANCOCK, MAINE
Date: OCTOBER 1958
Time of observation: 5:00 PM
Record of climatological observations
Temperature, precipitation, wind, etc.

Station: HANCOCK, MAINE
Date: OCTOBER 1958
Time of observation: 5:00 PM
Record of climatological observations
Temperature, precipitation, wind, etc.

Station	17-0371-3																							
County	MAINE																							
City	HARCOCK																							
State	MAINE																							
Latitude	44° 30' N																							
Longitude	68° 15' W																							
Altitude	100 ft																							
Population	100																							
Remarks	No precipitation observed																							

Station HARCOCK County MAINE State MAINE
Latitude 44° 30' N Longitude 68° 15' W Altitude 100 ft
Population 100 Remarks No precipitation observed

TEMPERATURE		PRECIPITATION		WIND		WEATHER		REMARKS		NOTES	
Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp
1	46	29	36	1	46	29	36	1	46	29	36
2	48	38	37	2	48	38	37	2	48	38	37
3	41	30	39	3	41	30	39	3	41	30	39
4	51	38	43	4	51	38	43	4	51	38	43
5	53	34	48	5	53	34	48	5	53	34	48
6	56	48	53	6	56	48	53	6	56	48	53
7	54	36	47	7	54	36	47	7	54	36	47
8	46	32	39	8	46	32	39	8	46	32	39
9	47	31	45	9	47	31	45	9	47	31	45
10	48	36	38	10	48	36	38	10	48	36	38
11	47	35	44	11	47	35	44	11	47	35	44
12	50	39	44	12	50	39	44	12	50	39	44
13	51	34	45	13	51	34	45	13	51	34	45
14	47	27	47	14	47	27	47	14	47	27	47
15	52	44	49	15	52	44	49	15	52	44	49
16	60	49	39	16	60	49	39	16	60	49	39
17	57	32	45	17	57	32	45	17	57	32	45
18	48	36	39	18	48	36	39	18	48	36	39
19	56	37	52	19	56	37	52	19	56	37	52
20	52	43	47	20	52	43	47	20	52	43	47
21	50	37	39	21	50	37	39	21	50	37	39
22	59	24	30	22	59	24	30	22	59	24	30
23	59	24	29	23	59	24	29	23	59	24	29
24	49	29	44	24	49	29	44	24	49	29	44
25	44	23	37	25	44	23	37	25	44	23	37
26	47	23	41	26	47	23	41	26	47	23	41
27	52	31	32	27	52	31	32	27	52	31	32
28	34	17	34	28	34	17	34	28	34	17	34
29	54	32	53	29	54	32	53	29	54	32	53
30	32	15	15	30	32	15	15	30	32	15	15
31				31				31			
Sum	1444	961		Sum	1444	961		Sum	1444	961	
Avg	46.1	32.0		Avg	46.1	32.0		Avg	46.1	32.0	
Ex-Items				Ex-Items				Ex-Items			

