

INSTRUCTIONS FOR W. B. FORM 1000—REVISED 1943

The Weather Bureau is making the fullest use of the weather observations which you enter on the enclosed form by transferring them to punched cards. This permits more detailed and earlier summarization of these data by machine, and makes the records more accessible for many purposes. It provides for national preparations as far as weather records are concerned. These card records make possible summaries helpful to agriculture, manufacturing, transportation, and other human activities.

In order to handle these records economically and rapidly, it is desired that the original and one carbon copy of your monthly observational form be forwarded promptly after the close of the month.

Taking and Recording Observations.

1. Begin a new form on the first of every month. Temperature at observation and precipitation beginnings and endings for the last day of the preceding month should be entered in the spaces just above the line for the first of the month. Each day's entries should be on a separate line. Fill in the heading completely.

2. Observations should be taken at a regular hour each day and this time should be entered in the heading. The preferred time is from 6 p. m. to 8 p. m. However, if it is necessary to measure precipitation in the morning, the thermometers should be read at the same time. Observations should be taken at the same time during the entire year. Take only one observation per day unless instructed otherwise. Continuity of record is very important. A member of the observer's family, or some other competent person, should, therefore, be taught to take and record observations in the event of the observer's absence or illness.

3. Temperature ($^{\circ}$ F.). To obtain maximum temperature, slowly lower the maximum thermometer to a vertical position. Then read the temperature shown by the top of the mercury column. The thermometer bulb should not be touched. The minimum temperature is obtained by reading the temperature scale opposite the end of the small index; that is, the end farthest from the bulb of the minimum thermometer. This is done while the thermometer is in its nearly horizontal position.

3a. The maximum thermometer is set by whirling it two or three times. It should then be returned to its nearly horizontal position, with the bulb slightly elevated. The minimum thermometer is set by raising the bulb 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 maximum and minimum thermometers should agree within one degree; a greater difference should be reported to the Section Center.

3b. The current temperature, or temperature at time of observation, may be obtained at any time by reading the end of the alcohol column in the minimum thermometer without disturbing the instrument. The current temperature may also be obtained by reading the maximum thermometer after it has been whirled while it is still in a vertical position.

3c. Enter maximum temperature, minimum temperature, and temperature at time of observation in the proper columns 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.

4. Precipitation. The correct measurement of precipitation is a vital part of the observational work. Show times of precipitation by a solid horizontal line through the hour columns for the period of occurrence of precipitation. If beginnings and endings were not observed, draw a wavy line through the period of probable occurrence. These lines should be entered on the dates of occurrence of the precipitation.

4a. 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.

4b. 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.

4c. If the amount of the catch is too small to measure, "T" (trace) will be entered as the amount.

4d. The total depth of rain, or the water resulting from melted hail, sleet or snow for the preceding 24 hours should always be entered on the date of observation in the column headed "Precipitation 24-hour Amounts, Liquid." This is the case regardless of whether the precipitation fell on the day of observation or after observation time on the preceding day.

4e. Every entry of measurable precipitation must be recorded to two decimal figures. The dotted vertical line on the form will take the place of the decimal point. Entries as 0.5 or just .5 should never be made. If the amount is .05 it should be entered as .05 and if it is .50 it should be entered as .50. When no precipitation falls during the entire month, a zero (0) should be entered in each space so that there will be no doubt as to whether any rain fell.

4f. 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 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 in paragraph 4a. 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 precipitation amount (liquid) column. The receiver of the gage makes a very convenient funnel for this operation.

4g. 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 proceed as follows:

Select a place where the new fall is as little disturbed as possible, cut out a section by sinking the inverted gage through the snow, sleet or other frozen precipitation and cover the mouth by slipping a sheet of tin or thin cardboard over it. Be careful to include only the precipitation that has fallen during the preceding 24 hours. This section should then be melted as indicated in paragraph 4f above and measured to obtain the water equivalent.

4h. Snow, Sleet, Hail (24 hours). 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 unmelted amount in inches and tenths. 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 is less than 0.1 (one-tenth) inch the amount should be entered as "T" (trace). If there is an entry in the snow, sleet, hail column, there must be an entry for the same date in the precipitation column to show the water equivalent.

5. Snow, Sleet, Ice on Ground. Under Snow, Sleet, Ice on Ground enter to the nearest inch the average depth remaining on the ground at time of observation in the vicinity of the station. 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. Enter "T" for one-half inch or less.

6. Weather. Under "Weather" enter an "X" in the proper space for each type or types that occur during the calendar day, midnight to midnight. Time of occurrence of unusual weather phenomena may be entered under "Remarks" at the side of the form.

7. Under "Remarks" write a brief report of any unusual weather conditions, giving times and dates. 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 with killing freeze temperatures and a heavy frost is not always an indication of a killing freeze.

8. 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.

9. Sums, means, and extremes need not be entered by the observer.

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
MONTHLY RECORD OF CLIMATOLOGICAL OBSERVATIONS

Budget Bureau No 41-R 230.2
Approval Expires Dec. 31, 1950

Month February -----, Year 19 50

Station Acadia National Park
County Hancock State Maine

Standard of Time in use EST Meridian _____
Time of Observation 5:20 PM. M(local time)

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
MONTHLY RECORD OF CLIMATOLOGICAL OBSERVATIONS

Budget Bureau No 41-R-230.2
Approval Expires Dec. 31, 1950

Month May Year 1950

Station Acadia Natl Park
County Hancock State Maine

Standard of Time in use EDST Meridian _____
Time of Observation 5:00 P.M. M (local time)

[illegible]

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
MONTHLY RECORD OF CLIMATOLOGICAL OBSERVATIONS

Budget Bureau No 41-R 230.2
Approval Expires Dec. 31, 1950

Month June Year 1950

Station Acadia National Park
County Hancock State Maine

Standard of Time in use EAST Meridian

Time of Observation 5:30 PM M (local time)[illegible]

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
MONTHLY RECORD OF CLIMATOLOGICAL OBSERVATIONS

Budget Bureau No 41-R 230.2
Approval Expires Dec. 31, 1950

Month July, Year 1930

Station Acadia National Park
County Hancock State Maine

Standard of Time in use EDST Meridian _____
Time of Observation 5:00 pm M (local time)

[illegible]

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
MONTHLY RECORD OF CLIMATOLOGICAL OBSERVATIONS

Budget Bureau No 41-R 230.2
Approval Expires Dec. 31, 1950

Month December, Year 19 50

Station Acadia Nat'l Park
County Hancock State Maine

Standard of Time in use E.S.T. Meridian _____
Time of Observation 1:30 M (local time)

[illegible]