

Relative Humidity.—For every temperature there is a maximum amount of water vapour which can exist in a given volume of air. In general, the existing amount of water vapour in a space is less than the maximum possible amount. The relative humidity (per cent) is the percentage of the maximum that is actually present in the air at the time of the observation. Humidity data are obtained regularly from the readings of dry- and wet-bulb thermometers which are housed in the thermometer shelter. The dry- and wet-bulb thermometers are usually artificially ventilated. When the dry-bulb temperature and the difference between the dry- and wet-bulbs are known the relative humidity may be obtained from tables. The relative humidity is ordinarily least in the early afternoon and greatest about dawn. Mean values are given in the tables for six-hour intervals for the ten-year period 1941 to 1950 at most stations.

Precipitation.—The official Canadian rain gauge is a small cylinder with a cross-sectional area of 10 square inches. The gauge is placed in such a position that it is free from all obstructions which might interfere with the catch. The rim of the gauge is one foot above the level ground. The rain is caught in the gauge and is then measured to one-hundredth of an inch with a simple measuring device. The total rainfall for any month is the accumulated total of the daily rainfall amounts. To obtain the mean values of the total rainfall for a certain number of years for any month, the monthly values are added and averaged.

In Canada, freshly fallen snow is measured directly in inches and tenths as it lies on the ground. Observations are made as representative as possible by averaging several measurements and by avoiding snow drifts and wind-swept bare spots. The daily totals of freshly fallen snow are added to give the total snowfall for any month and these monthly totals are averaged for the period of record to give the mean monthly amount.

It has been found that the depth of water obtained from melting newly fallen snow is, on the average, one-tenth of the depth of the snow. Thus, the total precipitation for any month is obtained by adding together the total rainfall and one-tenth of the depth of newly fallen snow. A day with rain is, for the purpose of these tables, one on which one-hundredth of an inch or more has fallen, and a day with snow is one with at least one-tenth of an inch of newly fallen snow.

Other Meteorological Parameters.—Wind data have been obtained from three-cup anemometers with continuously recording anemographs or from hourly observations made from dial-type recorders. The most prevalent direction and average wind speed have been derived from these hourly wind data.

The Campbell-Stokes sunshine recorder is used to measure bright sunshine. With this instrument the bright sunshine is focussed sharply on a card and leaves a burn for the portion of the day during which the sun is shining. Daily and monthly totals of bright sunshine are so obtained and the mean for any particular month is obtained by averaging the individual monthly values.

The average number of days in each month when "thunder" has been heard at least once in the twenty-four hours is listed.

The average number of days each month on which the minimum temperature in the thermometer shelter falls to 32°F. or lower is listed under the heading "freezing temperatures"

For the purpose of these summaries, a frost is said to occur if the minimum thermometer in the thermometer shelter falls to 32°F. or lower. Average dates are given for the last spring frost and first fall frost. The period between these two dates is the average length of the frost-free season.

Symbols.—The interpretation of the symbols used in the climatic tables is as follows:—

... indicates that figures are not appropriate or not applicable.

T indicates a trace of precipitation; in the case of rain or total precipitation, T indicates an average less than 0.005 inch while for snow T indicates an average less than 0.05 inch.