



FORECASTS AND GENERAL WEATHER INFORMATION

UNITED STATES WEATHER BUREAU, WASHINGTON, D. C.
 ADMINISTRATIVE OFFICE: 24th and M Streets, NW. AIRPORT OFFICE: Washington National Airport
 WEATHER INFORMATION (ALL HOURS) Michigan 1442
 LATEST WEATHER FORECASTS BY AUTOMATIC TELEPHONE: Weather 1212
TUESDAY, JULY 28, 1942

NOTE: This map was not released until 7 days after above date.

STATE FORECASTS

District of Columbia, continued warm with high humidity to-day; scattered thundershowers this afternoon; moderate temperature to-night; gentle winds.

Maryland, Virginia, and Delaware, scattered showers and thundershowers this afternoon and early to-night; little change in temperature.

New Jersey, scattered showers and thundershowers this afternoon and early to-night; little change in temperature.

Eastern New York and Western New York, scattered showers and thundershowers this afternoon and early to-night; little change in temperature.

Eastern Pennsylvania and Western Pennsylvania, scattered showers and thundershowers this afternoon and early to-night; little change in temperature.

West Virginia, scattered showers and thundershowers this afternoon and early to-night; little change in temperature.

E. M. RAMPEY.

EXPLANATION OF MAP

At 1:30 a. m. E. S. T. observations of the weather are taken at several hundred stations throughout the United States. Reports from these stations are inscribed on the above map. Temperature, wind direction and velocity amount and kind of clouds, state of weather, amount of precipitation, and other meteorological data are indicated for each station.

The heavy lines are called "fronts" and separate the air masses of different characteristics. The labels which are made up of letter combinations indicate particular types of air masses. Fronts and labels are described in the boxes to the right.

The light, continuous lines are called isobars and pass through points of equal sea-level pressure. The dashed line (when present) is an isotherm and passes through all points where the current temperature is 32° Fahrenheit. This line is labeled "Freezing" and separates the respective areas which are above and below the freezing temperature of 32° Fahrenheit.

The figures and symbols for the data always occupy the same relative positions around the station circle, as shown on the adjacent "Station Model". Occasionally there may be a slight displacement of the normal position of some of the data in order to provide room for the wind arrow.

The amount of precipitation at each station in the past 15 hours is heavily underlined and the geographical area where precipitation is falling at 1:30 a. m. E. S. T. is covered with dot shading. The letter "T" is used to indicate a "trace" of precipitation, which is an amount too small to measure. Figures for precipitation will be omitted when the 15-hour amount is zero.

When the observed visibility is 12 miles or more, the figures for "visibility" are omitted. When the observed cloud ceiling is 10,000 feet or more, the figures for "ceiling" are omitted. When the figures are omitted visibility and ceiling will be understood to be "unlimited".

The amount of solid black shading within the station circle indicates the amount of cloudiness. For example, the symbol indicates that the sky is 2 or 3 tenths covered; is 4, 5, or 6 tenths; is 7 or 8 tenths; and is 10 tenths, or completely overcast.

The symbol directly to the left of the station circle represents the current state of weather and may be any one of 96 separate symbols. The basic symbols for precipitation are: drizzle; rain; snow; thunderstorm. A symbol for current state of weather is always used when precipitation is falling or when unusual conditions are observed. Some of the frequently used symbols are: haze; distant lightning; light fog; snow; continuous moderate rain; intermittent light rain; continuous light rain; light or moderate rain showers; thunderstorm with rain. Symbols are entered singly or in combination, for example, a * represents rain and three bars represent fog. Three bars and a dot represent rain and fog. The bracket sign "}" means "in past hour, but not at time of observation".

The shaft of the arrow extends from the station circle in the direction from which the wind blows and the feathers on the shaft show the force of the wind on the Beaufort Scale. Each feather represents two units of force and each half feather represents one unit of force. For example, a wind blowing from the east at 4.5 miles an hour would be drawn and would be described as an "east wind, force 2". is a "west-southwest wind, force 5". The adjacent table shows the complete Beaufort Scale and the wind velocity equivalents in miles per hour.

The Weather Bureau will furnish upon request a more complete and detailed explanation of this map and the symbols and tables. Inquiries should be addressed to "Chief, U. S. Weather Bureau, Washington, D. C."

The subscription price of this map (daily, including Sundays and holidays) is \$3.00 a year, or 30 cents a month, daily except Sundays is \$3.00 a year, or 25 cents a month. Send subscriptions (check or money order) to "Superintendent of Documents, Washington, D. C."

Symbol showing type of middle cloud* (Alto-cumulus).

Arrow showing direction of middle cloud* (From the west).

Figure showing visibility in miles. (Omitted when visibility is 12 miles or more.)

Symbol showing current state of weather. (Light, intermittent rain.)

Figures showing height of cloud ceiling from ground in hundreds of feet. (Omitted when 10,000 feet or above.)

Feathers showing force of wind in Beaufort Scale. (19 to 24 miles per hour.)

Arrow and figure showing direction and velocity of maximum wind in past 3 hours* (From the south-west, 39 miles an hour).

Symbol showing type of low cloud* (Cumulonimbus).

*Omitted when data are not observed or are not included.

Symbol showing amount of sky covered by clouds. (7 or 8 tenths.)

Figures showing temperature in degrees Fahrenheit.

Figures showing barometric pressure at sea level. Initial for 10 for "hundreds" of millibars and also decimal part, omitted. (1012.5 millibars.)

Figures showing amount of barometric change in past 3 hours. (In tenths of millibars.)

Symbol showing barometric tendency in past 3 hours. (Unusually rising.)

Underlined figures showing amount of precipitation in last 15 hours* (In hundredths of an inch.)

Arrow and figure showing direction and velocity of maximum wind in past 3 hours* (From the south-west, 39 miles an hour).

*Omitted when data are not observed or are not included.

The boundary between two different air masses is called a "front". Important changes in weather often occur with the passage of a front. The half circle and triangular points placed on the "front" lines are symbols to indicate the classification of the front and its direction of movement. The boundary of relatively cold air of polar origin advancing into an area occupied by warmer air of tropical origin is called a "cold front". The boundary of relatively warm air advancing into an area occupied by colder air of polar origin is called a "warm front". The line between two air masses which shows little tendency at the time of observation to advance into either the warm or the cold air areas is called a "stationary" front. The front symbols, with arrows to show their direction of movement, are given below.

Warm front at the ground. Cold front at the ground. Stationary front. Occluded front.

The words "HIGH" and "LOW" indicate high and low barometric pressure. Masses of air are classified into several different types which indicate their origin and basic characteristics. For example, the letter "P" denotes the polar type of relatively dry and cold air from northern or polar regions. The letter "T" denotes the tropical type of relatively moist and warm air from southern and tropical regions. The letters placed before the letters "T" and "P" show that the air mass is classified as Maritime (M) or Continental (C). The letters placed after "T" and "P" show that the air mass is colder (K) or warmer (W) than the surface over which the air is moving. Mixtures of air from one type to another are indicated by arrows. One air mass superimposed upon another is indicated by placing a line between the two labels.

P = Polar; C = Continental; T = Tropical; M = Maritime; S = Superior (very dry); K = Colder; W = Warmer.

BEAUFORT SCALE OF WIND FORCE	
NO.	SYMBOL
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	