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? WHY THE WEATHER ? Mailed December 26, 1928

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CLIMATIC CONDITIONS AT AIRPORTS

As airports must be located near large centers of population, it might seem, at first sight, that climatic statistics could have no bearing upon the selection of their sites. We find, however, that some of the meteorological conditions of most importance in aviation vary widely within small areas. Thus in the environs of a given city there may be places that are decidedly more subject to fog than others. This is particularly true along the coasts of the oceans and the Great Lakes. Near San Francisco, for example, there is a very marked diversity in the average fog frequency of different localities. In general, low-lying districts, especially along streams, are foggier than uplands.

Where there is a decided predominance of winds from one quarter, the visibility may be expected to be better on the windward side of the city than on the leeward side owing to the drift of smoke and dust. Again, there are often great contrasts between neighboring localities in the average strength of the winds, and especially in their gustiness; as both of these factors are affected by topography. The prevailing direction of the winds is a matter of importance in connection with the orientation of hangars and the layout of runways. While average rainfall and snowfall may not vary much within small areas, there is frequently a marked difference between the facilities for drainage and snow removal at one place and those found at another, so that it may be of advantage to know how much precipitation is to be expected, on an average, and how it varies with season, etc.

In view of these facts, a thorough local meteorological survey is an advisable preliminary to establishing an airport. The site of the San Francisco Municipal Airport was selected on the basis of such a survey, which lasted a year and involved the use of elaborate equipment installed at the various proposed sites around the city.

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