

A Science Service Feature

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? WHY THE WEATHER ?

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MEASURING DESERT EVAPORATION

One of the most remarkable series of evaporation measurements ever made was the result of a disastrous flood that occurred in the desert region of southern California in the year 1905. The breaking of dams constructed in connection with an irrigation project allowed the water of the Colorado River to flow into a large depression, below sea level, known as the Salton Sink. By the time the break was closed, at the end of 1906, the flood had formed a lake 475 square miles in extent—the Salton Sea.

After its principal supply of water was cut off, the lake diminished rapidly in depth and area for many years, on account of the great excess of evaporation over the very scanty rainfall. The United States Weather Bureau installed elaborate apparatus here and utilized the Salton Sea as a mammoth "evaporimeter". The measurements showed an average evaporation from its surface of nearly 70 inches a year.

This figure, large as it is, does not adequately represent the evaporative power of the air in that region, since the blanket of water vapor that forms over a large body of water prevents the wind from exercising its full effect in promoting evaporation. Measurements made with small isolated evaporation-pans in the same desert give values nearly twice as great. Even more remarkable are the measurements made under the almost cloudless skies of the upper Nile Valley, in Egypt, where, at Wadi Halfa, the depth of water evaporated amounts to more than 19 feet a year.

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