

A COMPUTER MODEL FOR SIMULATION OF
A WATER CONDENSATION SYSTEM

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Abstract

Pure drinking water and a sufficient household water supply are concerns of people everywhere, particularly in areas such as the United States Virgin Islands. Household water supplies of inadequate quality, especially on St. Thomas, can cause health problems, and insufficient water can be inconvenient, disruptive, and expensive.

The system modelled here produces distilled (pure) water by condensation from warm, moist air. Weather conditions such as air temperature and humidity determine the quantity of water actually produced. To simulate the operation of this unit, local FAA weather observations were compiled for a one-year period from July, 1984 through June, 1985.

Computer program listings for summarizing and averaging this data and for simulating the operation of the water condensation process are included. Formats of monthly weather observations and summarized data on computer disk files are also described.

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