Calculating Evapotranspiration on Tutuila Island

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Evapotranspiration is a fundamental, but not widely understood, contributor to natural water cycles. This project incorporates a rigorous mathematical equation to help understand evapotranspiration on the Island of Tutuila, and the factoring components to this energy balance. Research grade instruments and sensors placed throughout the island of Tutuila provided high interval, meteorological data inputs for solving the (FAO)-56 Penman-Monteith Equation. This equation for calculating reference evapotranspiration was then coded using C++ to expedite the computational process and eliminate human error. This development produces important information for understanding and managing Tutuila's delicate freshwater resources.

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