

Calculating Evapotranspiration on Tutuila Island with Python

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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 Python to read the data and expedite the computational process. This Python program produces important information for understanding and managing Tutuila's delicate freshwater resources.