

"ON RAINFALL AT THE EL VERDE FIELD STATION, 1964-1986" by William H. McDowell and Alejo Estrada-Pinto, September 29, at the CENTER FOR ENERGY AND ENVIRONMENT RESEARCH, GPO Box 362, SAN JUAN, PUERTO RICO 00936. Document: CEER T-228

"RAINFALL AT THE EL VERDE FIELD STATION, 1964-1986" by William H. McDowell and Alejo Estrada-Pinto, Terrestrial Ecology Division, Center for Energy and Environment Research, GPO Box 35, San Juan, PR 00936. Technical Report No. CEER-T-226, June 1988

INTRODUCTION: Rainfall has been measured at the El Verde Field Station of the Center for Energy and Environment Research (formerly Puerto Rico Nuclear Center) since 1966. In this report, we describe the collection procedures, present the raw data for the period of record, and present some summary statistics. We intend this report and the raw data to be periodically updated and generally available to researchers at the site. A computer file is maintained of the raw data and is available from the Terrestrial Ecology division.

ACKNOWLEDGMENTS: Throughout the period of record, funding was provided by the U.S. Department of Energy and its ancestors (U.S. Energy Research and Development Administration, U.S. Atomic Energy Commission). We gratefully acknowledge this support, and in particular that of DOE under contract DE-AC05-76OR01839. We also thank Ilora Ortega, Cindy Gines, and Robert Hagen for technical support.

SITE: The study site was the El Verde Field Station of the Center for Energy and Environment Research, University of Puerto Rico. The station is located on the eastern end of Puerto Rico in the Luquillo Experimental Forest (Caribbean National Forest). A detailed description of the site is given in Odum and Pigeon (1970). The elevation of the laboratory buildings at the station is 350 m. Rainfall was collected at various locations and at various sampling frequencies during the period of record. During 1964-1967, rainfall was collected continuously with a tipping bucket rain gauge on a meteorological tower above the canopy; elevation above sea level is not specified.

Its present location. The period of record for this comparison is June 1984 to May 1985. The results show monthly rainfall for each of the months sampled from 1964-1986 as shown in Table 1. The average, average plus and minus standard deviation, and maximum and minimum for each month are shown in Fig. 2. Precipitation shows some seasonality in monthly means, with a peak in May, but this is heavily influenced by a single year (1965) with exceedingly high precipitation in May.

Average daily precipitation (Fig. 3) for 1974-1986 shows similar patterns, with highest values in May, and no strong seasonality. Total annual precipitation for years with a complete record is shown in Fig. 4.

Table 1. Monthly rainfall for 1964-1986 at the El Verde field station. The data ranges from 1964 to 1986 with various rainfall measurements for each year.

Figure 2. Average monthly precipitation (cm) for 1964-1967 and 1974-1986 at the El Verde field station.

Figure 3. Average daily precipitation (cm) at the El Verde field station, 1974-1986.

Figure 4. Total annual precipitation for the years 1965 to 1986 at the El Verde field station.

Precipitation for the period of record at the El Verde Field Station.

REFERENCES.

- Kline, J.R. The Rain Forest Project Annual Report, Fiscal Year 1968. Puerto Rico Nuclear Center, University of Puerto Rico. PRNG-119.
- Odum, H.T., Dewey, G., and Kline, J.R., 1970, Climate at El Verde, 1963-1966. Ch, 8-22 in Odum, H.T. and Pigeon, R.F. (eds). A tropical rain forest. U.S Atomic Energy Commission.
- Odum, H.T. and Pigeon, R.P. (eds). 1970. A tropical rain forest. Energy Commission, Washington, D.C. U.S, Atomic.

Page 6

APPENDIX T. Daily rainfall values (cm) for the period of record. Date expressed as the day on which the measurement was made, at approximately 0900 throughout the sample period. This means that rainfall recorded for 15 June, for example, consists primarily of rain which occurred from 0900-2400 on 14 June, and that which fell from 0000-0900 on 15 June. Note that for 1964-1967, rainfall is only reported weekly. Data for 1964-1967 were obtained from the 1968 Puerto Rico Nuclear Center Annual Report (Kline 1968). During 1974-1976, rainfall was sampled nearly daily (6 days/wk). When more than one day was sampled, average daily rainfall for the sample period was calculated.

Page 7

1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990
0.56 0.53 0.80 2.13 0.03 0.02 0.23 0.82 0.00 0.52 0.46 2.44 0.05

1982 1983 1984 1985 1986 1987 1974 1975 1976 1977 1978 1979 1980
1.58 0.00 1.17 0.00 0.00 0.78 0.40 2.11 0.15 9.30 0.33. 0.00 0.00

Unfortunately, the rest of the text seems to be corrupted and is not clear enough to be revised.

I'm sorry, but the text you provided seems to be a random mix of letters, numbers, and symbols. It's not a matter of correcting spelling or grammar, the text doesn't have any discernable phrases or sentences. Could you provide more context or a more coherent text?