
Journal of Environmental Hydrology

ISSN 1058-3912

Electronic journal of the International Association for Environmental Hydrology

On the World Wide Web at <http://www.hydroweb.com>

JEH Volume 6 (1998), Paper 2, April 1998
April 5, 1998

Posted

SYNTHETIC STORM GENERATION IN A FLATLAND REGION, SANTA FE, ARGENTINA

Erik D. Zimmermann

Hydroenvironmental Research Center, University of Rosario, Rosario, Argentina

ABSTRACT

The critical floods on flatland areas are generally a result of successive rainfall events. The object of this paper consists of synthetic construction of storm series with similar characteristics to measured events. Data were analyzed by means of five variables: duration of the rain, time between events, an average and maximum intensity of the rain, and storm advance coefficient. The variables were classified as independent and dependent and probability distribution functions were fitted for the independent variables. Multiplicative relationships were proposed for dependent variables and their coefficients were adjusted previously. A methodology was proposed to generate a synthetic series of storms of twenty years duration. Finally, the statistical characteristics of the synthetic series were calculated and compared with the data series. A good agreement between calculated and measured series was obtained.

Reference: Zimmermann, E.D.; Synthetic Storm Generation in a Flatland Region, Santa Fe, Argentina, Journal of Environmental Hydrology, Vol. 6, Paper 2, April 1998.

CONTACT:

*Erik D. Zimmermann
Hydroenvironmental Research Center
University of Rosario
Rosario, Argentina*

E-mail : erikz@fceia.unr.edu.ar

[HOME](#)