

Regionalization of IDF Curves, by Interpolating Intensity and Adjustment Parameters - Application to Boyacá, Colombia

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Abstract : This research presents the regionalization of IDF curves for the department of Boyacá, Colombia, which comprises 16 towns, including the provincial capital, Tunja. For regionalization adjustment parameters (U and alpha) of the IDF curves stations referred to in the studied area were used. Similar regionalization is used by the interpolation of intensities. In the case of regionalization by parameters found by the construction of the curves intensity, duration and frequency estimation methods using ordinary moments and maximum likelihood. Regionalization and interpolation of data were performed with the assistance of Arcgis software. Within the development of the project the best choice to provide a level of reliability such as to determine which of the options and ways to regionalize is best sought. The resulting isolines maps were made in the case of regionalization intensities, each map is associated with a different return period and duration in order to build IDF curves in the studied area. In the case of the regionalization maps parameters associated with each parameter were performed last.

Keywords : intensity duration, frequency curves, regionalization, hydrology

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