ABSTRACT

Cirumput retention basin is located in the Cikendi watershed which located on Jalan Bratayuda, Kota Kulon, Garut Regency, West Java Province. Astronomically it is located at latitude = 7°13'36.43"S and longitude = 107°54'34.22"E. The purpose of this study is to analyze the flood discharge of the Cirumput retention basin plan and the effectiveness of the Cirumput retention basin for flood reduction by using the Analysis of rainfall frequency of selected plans with the Normal Log III method. Rain intensity analysis is calculated on re-periods of 2, 5, 10, 20 and 25 years, the recommended re-period is 2 – 5 years. The watershed of this area has a rain catchment area of ±24.24 ha. Regional discharge modeling using the help of HEC-HMS software. The function of this retention basin is to reduce/reduce the peak discharge of floods is very significant. From the results of the analysis, a decrease in flood discharge was obtained by 93.75% from 3.2 m^3/s to 0.2 m^3/s.

***Keyword** : Retention Basin, The Effectiveness, Catchment Area, HEC-HMS, Flood Discharge.*