

ABSTRACT

Analysis of Discharge and Flood Water Level Plan for the Anak Kali Angke River (Case Study in Laverde Serpong Residential Area)

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The Anak Kali Angke River is one of the rivers that is prone to flooding, because it originates directly in an area that has high rainfall intensity, namely in the Bogor area. The river that does not match its storage capacity will cause the water discharge flowing in the river to exceed its drainage capacity, so flood control efforts are needed. Planning for flood control in the Laverde Serpong residential area can be done well if it is known the discharge and the planned height of the flood waters. For the first step to analyze is a hydrological analysis where the planned rainfall is calculated using the Log Pearson III method using rainfall data from 3 Rain Stations in the last 5 years at 5-year, 10-year, 50-year, and 100-year return periods. The results of this study get a flood discharge at 50 years by 54.962 m³/sec using a rational method, as well as hydraulic analysis to determine the flood water level in the river using HEC-RAS 6.1 software with a flood height of the river base 6.105 m and from the face Land by 0.605 m. The results of the discharge and flood water height when this obtained can be used for further research, especially for flood control buildings.

Keywords : *Flood, Flood discharge, Flood water level profile, HEC-RAS 6.1, Anak Kali Angke River.*

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