

ABSTRACT

Analysis of Bankfull Capacity and Flood Water for the Kali Angke River(Case Study in Kelurahan Padurenan Tangerang Area)

Muhammad Taswin Kusuma¹⁾, Rizka Arbaningrum²⁾, Tri Nugraha Adi Kesuma³⁾

1) *Student of Civil Engineering, Pembangunan Jaya University*

2) *Lecturer of Civil Engineering, Pembangunan Jaya University*

The Kali Angke's 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. A 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 Padurenan Village area can be carried out properly if the planned flood discharge and water level are known. 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 10 years at the return period of 2 years, 5 years, 10 years, 50 years, and 100 years. The results of this study found that the flood discharge at the 100-year return period was 57,537 m³/second using the Rational method, as well as hydraulics analysis to determine the flood water level in the river using HEC-RAS 4.1 software with a flood height of 5.541 m from the riverbed and from the face of the river. land of 0.7 m. The results of the discharge and flood water level during the return period can be used for further research, especially for flood control buildings.

Keywords : *Flood, Flood discharge, Flood water level profile, HEC-RAS 4.1, Kali Angke River.*

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