

ABSTRACT

Flood Control In Kali Angke With Retaining Wall (Case Study Of Villa Pamulang Area)

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Rivers are a network of grooves on the earth's naturally formed surface, ranging from small shapes upstream to large in the downstream. But rivers that do not meet capacity will experience flooding. Flooding is the occurrence of inundation in floodplains as a result of water and river runoff caused by the discharge of water flowing in the river exceeds its flow capacity, therefore, it is necessary to make efforts to prevent flooding, one of which is using a retaining wall. For the first step in making the retaining wall design in order to increase the capacity of Kali Angke. Hydraulic simulation process is needed that is facilitated by using Hydrologic Engineering Center-River Analysis System (HEC-RAS) Program. The HEC-RAS program can help model the cross-sectional flow of the river in existing conditions and the addition of retaining walls with high guard height using the Steady flow option and data input in the form of maximum discharge plan. The output of modeling using HEC-RAS program is in the form of images and tables that present the characteristics of the river cross-section. Kali Angke in Villa Pamulang area that is included in the analysis along 0.5 km and has a watershed of 56.88². The flood discharge plan used in this study is the 20 year return period (Q20) with a value of 175.879 m³/ second.

Keywords: *River, Flood, River Retaining Wall, Software HEC-RAS.*

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