

ABSTRACT

Abstract: *Check Dam* is part of the work on the project Supervision Rehabilitation Infrastructure Floods Building Control Tipar River and Tipar's Child River, Kebumen, Banyumas and Cilacap Regencies, Central of Java Province. *Check Dam* is located in the River Basin Area Tipar and Tipar's Child River, precisely in the River Petarangan, Hamlet Karangangin, Village Selanegara, District Sumpiuh, Banyumas Regency, with position $7^{\circ} 31' 20,27''$ LS and $109^{\circ} 07' 28,38''$ BT. *Check Dam* functions is to avoid river downstream, to control the flow of river surface downstream so as not to overflow, and to restore the capacity of river catchment in normal condition (before sedimentation). In writing this Final Project, obtained from several analyzes to design *Check Dam* conducted among them Hydrology and Sedimentation Analysis, and Hydraulic Analysis. From the result of Hydrology and Sedimentation Analysis, the amount of sedimentation is $24,785 \text{ m}^3/\text{s}$, the maximum flood discharge is $118,640 \text{ m}^3/\text{s}$, the capacity of the river before sedimentation is $98,875 \text{ m}^3/\text{s}$, and the river catch capacity after sedimentation $74,090 \text{ m}^3/\text{s}$. From the results of Hydraulic Analysis, to determine the Elevation of the sediment containment barrier is based on the amount of sedimentation that occurs that is $24.785 \text{ m}^3/\text{s}$. Meanwhile, to prevent flooding around the *Check Dam* site, a flood embankment is created based on the maximum flood discharge of $118.640 \text{ m}^3/\text{s}$.

Keywords: *Check, Dam, Hydrology, Sedimentation, Hydraulic*