STUDI ALTERNATIF PENGENDALIAN BANJIR
SUNGAI TANRU TEDONG KABUPATEN SIDENRENG RAPPANG
PROPINSI SULAWESI SELATAN

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ABSTRACT

Tanru Tedong River that is located in Sidenreng Rappang Regency is one of the rivers across the Tanru Tedong City which causes flood disaster periodically. Along Tanru Tedong River resided a crowd settlement growth where inundation of the area is unavoidable during the flood event. Therefore, measures to control the inundation impacts on these settlement areas are necessary to reduce the loss and damages.

This research is aimed to analyze flood control system as a flood disaster mitigation in Sidenreng Rappang Regency. Simulation of Tanru Tedong River along 7.3 km areas in risk of innundation (within Tanru Tedong City) was carried out. Hydraulic analysis was performed to comprehend the cause of flood, in order to determine applicable alternative measures to control and mitigate the flood. This research was done by analyzing the hydraulic storage capacity of the river to carry 466 cubic per second of peak discharge with 20 years of return period using *Software Hydrologic Engineering Center-River Analysis System* (HEC-RAS) *Version 4.0.*

Result of the simulation shows that runoff along the existing sides of the river is obvious at the height of ±0.5 meter to ±1.0 m where the main cause of inundation along Tanru Tedong river is the low *bank full capacity. Thus, recommended alternative solutions are river normalization and heightening of levee* Result of simulation with the normalization at River Station 3000 to River Station 4750 with 30,165 m3 reveals maximal water surface elevation. However, there still occur run off, so it is necessary to heighten levee of ±1m to ±2m.

Keywords:
flood disaster, HEC-RAS