

**CAPACITY REVIEW STUDY OF LOCATION DRAINAGE  
CHANNELS IN PENAMPI VILLAGE, BEGKALIS DISTRICT**  
(A Case Study on Jl. Suka Maju, Penampi Village, District  
Bengkalis)

Rona Sofyan Sinulingga \*)  
Zulkarnain, MT. \*\*)

- \*) Students of Diploma III Department of Civil Engineering, State Polytechnic  
Bengkalis  
\*\*) Bengkalis State Polytechnic Civil Engineering Lecturer as Supervisor

**ABSTRACT**

Visually, the drainage being reviewed is still in good condition even though there is a little damage to the drainage walls, however this cannot be ascertained as the cause of inundation in the area. Therefore, the authors want to know what caused this. Whether the dimensions of the channel are sufficient to accommodate the discharge that occurs in the channel, therefore it is necessary to research this matter by directly measuring the space and analyzing the results obtained.

The method used in analyzing the rainfall intensity is to use the Gumbel distribution and the Mononobe method with rainfall data obtained from each other. system, stations located in the New Strait in 2014-2018. Meanwhile, to analyze the rainfall discharge and river channel discharge using the Rational method based on data obtained from the field, including measurement data of drainage profiles, measurement of flow velocity and measurement of existing water levels.

From the results of data analysis, it is found that the average existing drainage discharge from sta 0 + 000 to sta 0 + 260 at high tide is 1.415 m<sup>3</sup> / second and the tide condition due to rainwater is 0.285 m<sup>3</sup> / second, so that if there is a tide and rain will produce 1, 7 m<sup>3</sup> / second, while at low tide the average is 0.333 m<sup>3</sup> / second.

Keywords: Review, Capacity, Dimension, Drainage.