

## ABSTRAK

Kawasan Selakaso Kota Tasikmalaya sering kali mengalami genangan saat terjadi hujan dengan intensitas tinggi. Hal ini dikarenakan pada Kawasan Selakaso merupakan kawasan industri sehingga kurangnya daerah resapan air. Sedimentasi dan dimensi saluran yang beragam juga mengakibatkan kapasitas pada saluran tidak optimum. Sehingga dibutuhkan evaluasi sistem drainase pada kawasan tersebut. Pengukuran debit dan limpasan dilakukan menggunakan *software environment Protection Agency Storm Water Management Model (EPA SWMM 5.2)* dengan input data curah hujan, data Daerah Tangkapan Air (DTA), dan data fisik saluran. Dari hasil simulasi menggunakan EPA SWMM diperoleh data saluran yang mengalami *overflow* sebanyak 41 titik saluran dengan kala ulang yang direncanakan. Debit banjir terbesar terdapat pada titik Con16IR yaitu sebesar 5,716 m<sup>3</sup>/det. Alternatif penanganan banjir yang dilakukan diantaranya redesain perubahan dimensi dan perubahan elevasi. Selain itu dikarenakan keterbatasan lahan pada kawasan selakaso maka dibangun *Long Storage* agar limpasan tertampung sementara tidak mengalir langsung ke saluran drainase eksisting. *Long Storage* direncanakan pada Jalan Petaruman dan Jalan Tentara Pelajar. *Long Storage* direncanakan menggunakan fungsi *storage unit* dengan pengontrol pintu menggunakan *orifice*.

**Kata Kunci : Drainase, EPA SWMM 5.2, Long Storage**

## **ABSTRACT**

*The Selakaso area of Tasikmalaya City frequently faces flooding during periods of heavy rainfall. This is primarily due to the area's industrial nature, which results in a lack of sufficient water catchment areas. Additionally, sedimentation and varying channel dimensions contribute to suboptimal channel capacity. Therefore, it is crucial to conduct an evaluation of the drainage system in the area. Discharge and runoff measurements were conducted using the Environmental Protection Agency Storm Water Management Model (EPA SWMM 5.2) software, incorporating rainfall data, Catchment Area (DTA) data, and physical channel data. Based on the simulation results using EPA SWMM, it was found that 41 channel points experienced data overflow within the planned return periods. The Con16IR point has the largest flood discharge, reaching 5,716 m<sup>3</sup>/sec. Alternatives for flood management include redesigning, making dimensional changes, and implementing elevation changes. Additionally, due to limited land availability in the Selakaso area, Long Storage structures were constructed to temporarily accommodate runoff and prevent it from directly flowing into the existing drainage channel. The Long Storage structures are planned to be located on Jalan Petaruman and Jalan Army Student, and they will function as storage units with controlled doors using an orifice.*

**Kata Kunci : Drainage, EPA SWMM 5.2, Long Storage**