Abstrak

Banjir merupakan salah satu bencana alam yang terjadi karena berbagai faktor dan banyak sekali kerugian yang ditimbulkan akibat banjir. Di wilayah Kelurahan Jatake-Tangerang tercatat mengalami banjir selama bulan Februari 2020. Penelitian ini bertujuan untuk mengetahui faktor penyebab terjadinya banjir di daerah tersebut sehingga bisa dicari solusinya. Dalam penelitian ini ada beberapa hal yang perlu dianalisis yaitu curah hujan, kapasitas saluran dan kondisi saluran eksisting. Curah hujan dianalisis dengan metode Chi-Square dan Kolmogorov-Smirnov untuk menentukan jenis distribusi yang akan digunakan. Kapasitas rencana eksisting dianalisis dengan metode Manning untuk mengetahui debit eksistig yang akan dibandingkan dengan debit akibat curah hujan yang terjadi menggunakan metode rasional selama periode ulang yang diteliti. Berdasarkan hasil perhitungan 6 dari 73 saluran yang ditinjau tidak mampu menampung debit akibat curah hujan yang terjadi. Setelah analisis dilakukan dapat disimpulkan bahwa banjir di kawasan Jatake-Tangerang disebabkan oleh kurangnya kapasitas saluran eksisting, kontur wilayah, sampah dan sedimen di dasar saluran.

Kata kunci: banjir, drainase, Manning, Jatake

Abstract

Flood is a natural disaster that occurs due to various factors and a lot of losses are caused by flooding. In the area of Jatake-Tangerang District, floods were recorded during the month of February 2020. This study aims to determine the factors that cause flooding in the area so that solutions can be found. In this study, there are several things that need to be analyzed, namely rainfall, channel capacity and existing channel conditions. Rainfall was analyzed using the Chi-Square and Kolmogorov-Smirnov methods to determine the type of distribution to be used. The capacity of the existing plan is analyzed by the Manning method to determine the existing discharge which will be compared with the discharge due to rainfall that occurs using the rational method during the studied return period. Based on the calculation results, 6 of the 73 channels reviewed were unable to accommodate the discharge due to the rainfall that occurred. After the analysis was carried out, it was concluded that the flooding in the Jatake-Tangerang area was caused by a lack of capacity of the existing channel, area contours, garbage and sediment at the bottom of the channel.

Keywords: flood, drainage, Manning, Jatake.