

ABSTRACT

Drainage channel is the infrastructure needed by the community. Drainage channel function is to drain the surface water to avoid puddles. Puddle is still frequent encountered in urban areas especially Sleman district, which caused by drainage channels can not hold water. This study raised the condition of the situation in Kimpulan, Sadonoharjo, Ngaglik, Sleman Yogyakarta. Selection of this location is motivated by the circumstances drainage channels that experienced flooding during the rainy season. The purpose of this study is to find out the causes of flooding, and look for alternative soil inundation drainage channels work well.

This research uses primary data and secondary data. Primary data consists of field observations and field measurements. Secondary data consists of topographic maps, road maps, and 10-years daily rainfall data. This research uses rational method.

Drainage channels in research areas that can not able to accommodate water properly are channel 3 and channel 5. The cause of the inundation is channel capacity planning lack of proper drainage, the amount of garbage around the canal, and weeds cover drainage channels. To overcome this, should add depth and width of channel dimension so that channel able to accommodate flood discharge maximum. The additional use of absorption wells will also reduce runoff surface, but for Kimpulan is not recommended because there are too much infiltration wells are 239 wells causes of the value of soil permeability very small ie 3.541×10^{-5} .

Keywords : Drainage Channel, Infiltration wells, Rational method.