ABSTRACT

Indonesian Islamic University is one of the universities in Yogyakarta. As the time goes, housing was built to meet the residential needs of students. The excessive development leads to the reduction of the infiltration land so the rainwater seeped into the soil will be a little . That matter causes an imbalance between the extraction and replenishment of groundwater in the Kaliurang area, which results in a decrease in the groundwater surface. To solve this problem, it is necessary to design infiltration wells in Kaliurang Street of Km 12-13, Sleman, Yogyakarta Special Province, which aims to maintain groundwater reserves.

Primary data is the rate of infiltration obtained using an infiltrometer ring. Secondary data was the rainfall from the closest stations (plataran station) for the last 20 years which were processed to get rainfall at the periods of 5 years. Infiltration wells were then analyzed using Sunjoto Method and SNI Method. Then from those two methodare chosen which more efficient, to design infiltration well.

The infiltration wells design chosen was circular in shape with a diameter of 1 meter and a depth of 2.5 meters. The infiltration wells which was planned only absorbs water from the roof. The analysis results show that the number of Sunjoto Method infiltration wells was smaller, compared to the more SNI methods. The greater the value of the roof area, and the return period, the greater will be the number of infiltration wells.

Keywords: infiltration wells, infiltration rate, rainfall station