

Abstrak

Perubahan tataguna lahan permukaan di suatu daerah akan berpengaruh terhadap besarnya aliran. Pembangunan Kampus UII Terpadu dan bangunan di kawasan sekitar kampus UII membuktikan telah merubah penggunaan lahan. Pembangunan di kawasan ini tidak direkomendasikan karena letaknya di kawasan resapan primer hal ini dikhawatirkan akan menyebabkan degradasi sumber daya air. Perkembangan pembangunan di kawasan tersebut dikhawatirkan akan meningkatkan aliran limpasan permukaan. Penelitian ini dilakukan untuk mengetahui kondisi limpasan air hujan (*runoff*) dan pengaruhnya terhadap kampus terpadu UII, khususnya kondisi hidrologi. Serta besarnya limpasan aliran permukaan (*surface runoff*) selama 10 tahun terakhir terhitung dari 2008 – 2017 dengan menggunakan rumus koefisien aliran puncak (C_p) dan koefisien aliran volumetric (C_v). Penelitian ini menggunakan data primer dan sekunder dengan metode analisis, yaitu perhitungan matematis dan diskriptif. Hasil penelitian menunjukkan bahwa koefisien aliran puncak (C_p) sebesar 0,33 dan koefisien aliran volumetric (C_v) 0,32. Nilai tersebut menunjukkan aliran limpasan tidak mengalami peningkatan signifikan karena koefisien aliran puncak (C_p) dan koefisien aliran volumetric (C_v) sebelum adanya Kampus UII Terpadu masih berupa lahan padat vegetasi yang memiliki nilai masing-masing sebesar 0,3. Artinya, pembangunan Kampus Terpadu Universitas Islam Indonesia tidak menimbulkan dampak yang sangat berbahaya terhadap lingkungan, khususnya kondisi hidrologi. Hal ini dikarenakan kawasan Kampus Terpadu UII masih memiliki lahan perkebunan dan persawah yang cukup besar, serta sudah dilengkapi dengan saluran drainase yang cukup baik. Di Kampus Terpadu UII sendiri juga terdapat sumur-sumur resapan, taman kampus dan hutan kampus yang mampu mengendalikan limpasan aliran permukaan (*surface runoff*).

Kata kunci : koefisien aliran puncak, koefisien aliran volumetrik, limpasan aliran permukaan, limpasan air hujan,

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Changes in land use surface will vary on the size of the flow. Development in UII Integrated Campus and buildings in the area around the campus UII prove changed land use. Development in this area is not recommended because it is in the primary catchment area, it is feared that it will cause degradation of water resources. The development of the region is feared to increase the flow of surface runoff. This research was conducted to determine the condition of runoff and its effect on the integrated campus of UII, especially hydrological conditions. As well as the amount of surface runoff over the last 10 years from 2008 - 2017 using the formula of the peak flow coefficient (C_p) and volumetric flow coefficient (C_v). This study uses primary and secondary data with analytical methods, namely mathematical and descriptive calculations. The results showed that the peak flow coefficient (C_p) was 0.33 and the volumetric flow coefficient (C_v) was 0.32. This value shows that the surface runoff did not experience a significant increase due to the peak flow coefficient (C_p) and volumetric flow coefficient (C_v) before the Integrated UII Campus was still in the form of vegetation dense land which had a value of 0.3. That is, the construction of the Integrated Islamic University of Indonesia Campus does not cause very dangerous impacts on the environment, especially hydrological conditions. This is because the UII Integrated Campus area still has large plantations and fields, and is equipped with a fairly good drainage channel. In the UII Integrated Campus itself there are also infiltration wells, campus parks and campus forests that are able to control surface runoff.

Keyword : peak flow coefficient, runoff, surface runoff, volumetric flow coefficient