

INTISARI

Seperti umumnya kawasan perkotaan, Kedungdowo memiliki permasalahan terkait kepadatan penduduk, permasalahan genangan air dan banjir. Oleh karena itu perlu dilakukan evaluasi dan perencanaan terhadap infrastruktur sanitasi dan drainase. Analisis pengelolaan air limbah bertujuan untuk mengevaluasi sarana sanitasi masyarakat. Analisis dan perencanaan ulang drainase bertujuan untuk memperbaiki sistem drainase menggunakan konsep *eco-drainage*. Analisis drainase menggunakan *software* EPA SWMM 5.1.

Evaluasi pengelolaan air limbah menunjukkan kondisi sanitasi memenuhi standar teknis, namun operasional dan pemeliharaan belum optimal. Analisis sistem drainase menunjukkan limpasan total yang dihasilkan wilayah permukiman dan masuk ke Sungai Serang sebesar 1,52 m³/s, puncak limpasan/*runoff* pada jam ke-1,75 setelah terjadi hujan, yaitu sebesar 0.37 m³/s. Penerapan konsep *eco-drainage* dengan pemasangan sumur resapan dan pemanen air hujan (PAH) yang tersebar di seluruh *subcatchment* mampu mengurangi limpasan/*runoff* dilakukan jam puncak pada Kombinasi 1 sebesar 24,32% dan Kombinasi 2 sebesar 45,94 %.RAB total untuk kombinasi pemasangan 1 sebesar Rp. 636.260.000,00 dan kombinasi pemasangan 2 sebesar Rp.1.180.160,00.

Kata Kunci : infrastruktur berbasis masyarakat, evaluasi, sanitasi, *eco-drainage*. EPA SWMM 5.1

ABSTRACT

Like most urban areas, Kedungdowo has problems related to population growth, slums, and flooding. Therefore, it is necessary to evaluate and plan for sanitation and drainage infrastructures. Wastewater management analysis aims to evaluate community sanitation infrastructure. Drainage analysis and re-planning aims to improve the drainage system using the eco-drainage concept.

Evaluation of wastewater management shows that sanitation conditions compatible with the technical standards, but it needs institutional upgrading for operations and maintenance. The drainage system analysis shows that the total runoff generated by the residential area and into the Serang River is 1.52 m³/s, the peak runoff at 1.75 hours after rain occurs, which is 0.37 m³/s. The application of the eco-drainage concept with the installation of infiltration wells and rainwater harvesting (PAH) that are scattered throughout the sub-catchments can reduce runoff during peak hours in Combination 1 of 24.32% and Combination 2 of 45.94%. Total RAB for the combination installation 1 is Rp. 636,260,000.00 and combination installation 2 is Rp. 1,180,160.00.

Keywords : community-based infrastructure, evaluation, sanitation, eco-drainage. EPA SWMM 5.1