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## Characterization of storm runoff quality from a highway in Selangor and conceptual design of constructed wetland (Article)

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### Abstract

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Quality of storm runoff from different urban landuses contains different types of pollutants at various concentrations. Not much data is available on the characteristics of highway runoff quality in Malaysia, where the highways play significant roles in the transportation industry. The storm runoff samples were taken from KL-Karak Highway at Gombak Toll Plaza located in Selangor. The samples were analyzed to determine event mean concentration (EMC), which is required to determine the quality of the storm runoff. The parameters analyzed were TDS, TSS, VSS, BOD, COD, DO, TN, TP, pH, turbidity, oil and grease, Pb, Zn and Cu. From the analysis, the EMC value of TSS and TDS exhibited the highest concentration Cu has been determined as the lowest concentration. Therefore, it can be concluded that the main pollutants contributing to the storm runoff at Gombak Toll Plaza are both TSS and TDS. Based on the result, constructed wetland was designed with the objectives to remove 80% TSS, 50% TP and 40% TN from the current pollutant loads. © 2014 AENSI Publisher All rights reserved.

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