

Assessment on pollutant removal of interconnected wet detention pond.

Abstract

Best Management Practices (BMPs) have been used worldwide to control urban stormwater runoff. The objective of this paper is to assess the urban wet detention ponds on quality control for commercial and residential development in Denai Alam, Selangor, Malaysia. Field monitoring was conducted in this study area. Eight water samples were collected at 8 different locations from upstream to downstream of catchment area. All parameters were tested on-site except for TSS which was conducted at laboratory. The value of turbidity increased due to the occurrence of erosion and the side slope of detention pond. Total suspended solid (TSS) removal efficiency of Pond B is between 13 - 24%. However, this pond did not perform well in removing total phosphorus (TP) and ammonia nitrogen (NH₃-N) due to low concentration of dissolved oxygen. It is indicated 3 that the water samples is classified under Class III of Department of Environment (DOE) Water Quality Classification which further treatment is required. Maintaining the detention pond could reduce pollutant loadings to meet targeted requirements of water quality improvement.

Keyword: E-learning; Urban development; Stormwater Management; Wet detention pond.