

Urasi Thongyang 2006: Assessment of Organic Loading as BOD from Agriculture and Forest Landuse in Bang Pakong River Basin. Master of Science (Watershed and Environmental Management), Major Field: Watershed and Environmental Management, Department of Conservation. Thesis Advisor: Associate Professor Sittichai Tantanasarit, Ph.D. 89 pages.

Assessment of organic loading as BOD from agriculture and forest landuse in Bang Pakong river basin. Determination 14 of water sampling stations were selected 3 periods, as in dry period (April, 2005), wet period (August, 2005) and dry period (November, 2005). Main stream station was 8 stations. Representative watersheds as agriculture, and forest watershed were sampling on 3 stations each. The result showed that mostly organic loading (BOD) in main stream had over surface water quality standard value for class 3, especially stations along to the outlet in first dry period (April, 2005). For agriculture representative watershed had BOD concentration over surface water quality standard value for class 3 as same as main stream. In forest representative watershed found BOD concentration more than 1.5 mg/l, however mostly stations were acceptable water quality standard in class 2. Studied of F-test found difference significant at 0.05 level, agriculture watershed had BOD concentration more than forest watershed.

Assessment of organic loading as BOD in representative watershed found that agriculture watershed had peak in wet period was $0.5910 \text{ kg/day/km}^2$ and forest watershed was $0.4100 \text{ kg/day/km}^2$ as the same period. The organic loading as BOD from agriculture and forest landuse discharged in Bang Pakong river basin found that agriculture land was 3,467.74 kg/day in first dry period, wet period was 5,696.53 kg/day and second dry period was 564.05 kg/day, for forest land in first dry period was 1,248.27 kg/day, wet period was 3,212.76 kg/day and second dry period was 987.33 kg/day.

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