

Noppakate Maanan 2014: Rapid Bioassessment with Benthic Macroinvertebrates for Phachi Headwater Streams at Suanphung District, Ratchaburi Province. Master of Science (Biology), Major Field: Biology, Department of Zoology. Thesis Advisor: Assistant Professor Boonsatien Boonsoong, Ph.D. 92 pages.

The study was aimed to assessed rapid bioassessment with benthic macroinvertebrates at the Phachi Headwater Streams, Suanphung District, Ratchaburi Province. Benthic macroinvertebrates were collected by D-frame net from Rapid Bioassessment Protocol (RBPs) at 8 study sites during cold season (November 2013) and hot season (May 2014). Selected physical-chemical parameters for water quality and visual-base habitat assessment were assessed. Three classes, 13 orders, 60 families, 51 genus and 85 taxa of macroinvertebrates were found from all study sites. Aquatic insect was the most abundant taxa. Nine and 7 core biological metrics were used to calculate a biotic index score in genus level and family level, respectively. The results showed that narrative biological assessments were ranged from poor to fair in both genus and family levels. Multivariate analysis results corresponded to multimetric approach which depended on land use and seasonal variation of sampling site.

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Student's signature

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Thesis Advisor's signature