

An Overview of Recent Hydrological Models for Estimating Phosphorus flux

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Phosphorus which derived from forest, agricultural area and urban is discharged to river stream via surface runoff and drainages. There is a time lag from "inflowing to river channel" to "outflowing to coastal area" because most of transported phosphorus is retained in river channel due to physical, chemical and biological processes. Previous studies about material balance in watersheds show that total amount of phosphorus emission is not correspond to total amount of discharged phosphorus. This is because of phosphorus retention in watersheds. So it is necessary to understand about phosphorus retention processes for estimation of phosphorus transportation. In recent years, distributed hydrological models are used to estimate phosphorus transportation. Most of these models are developed in western countries, and have been improved its accuracy of estimation of sediment and water quality. The objective of this study is to review phosphorus retention process in watersheds and model description for understanding model limitation for phosphorus transportation.

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