



## Comparison of Two Regression-Based Approaches for Determining Nutrient and Sediment Fluxes and Trends in the Chesapeake Bay Watershed: USGS Scientific Investigations Report 2012-5244

By Douglas L Moyer

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Nutrient and sediment fluxes and changes in fluxes over time are key indicators that water resource managers can use to assess the progress being made in improving the structure and function of the Chesapeake Bay ecosystem. The U.S. Geological Survey collects annual nutrient (nitrogen and phosphorus) and sediment flux data and computes trends that describe the extent to which water-quality conditions are changing within the major Chesapeake Bay tributaries. Two regression-based approaches were compared for estimating annual nutrient and sediment fluxes and for characterizing how these annual fluxes are changing over time. The two regression models compared are the traditionally used ESTIMATOR and the newly developed Weighted Regression on Time, Discharge, and Season (WRTDS). The model comparison focused on answering three questions: (1) What are the differences between the functional form and construction of each model? (2) Which model produces estimates of flux with the greatest accuracy and least amount of bias? (3) How different would the historical estimates of annual flux be if WRTDS had been used instead of ESTIMATOR? One additional point of comparison between the...



### Reviews

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