

FLUVIAL WATER QUALITY LINKED WITH CHANGES IN STREAM FLOW

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ABSTRACT

In natural environments the water quality is influenced by physical and biological factors, including stream flow variations. The objective with this paper is to enhance the importance of the relationships between changes in stream flow and water quality. This study was carried out at the Capivari watershed at Ribeira river basin, State of Paraná, Brazil. The regional climate is wet subtropical (Cfb in Köeppen Classification). The average annual rainfall is 1,404 mm. We worked with 696 daily water quality sampling data: alkalinity, turbidity, organic matter, pH, true color and also the corresponding daily stream flow. The results show that the water quality is strongly dependent on the variation of stream flows. So, it becomes clear that of water quality sampling in this stream should be done frequently, especially during and immediately after rainfall periods, because of the severe impairment between water quality and volumetric stream flow.

PALAVRA-CHAVE: water quality, sampling, stream flow