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QUANTIFICATION OF EFFECTS PRODUCED BY THE EXTRACTION OF MINERAL AGGREGATES TOWARDS WATER BODIES

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Abstract

This paper presents the research performed in view of emphasizing the effects of mineral aggregates extraction on the geomorphological and hydraulic features of Moldova body of water. The effect on the geomorphological features was assessed by overlapping the cross profiles (22 profiles) and long profiles (2 profiles) from the entire area studied. These profiles were obtained by topographical measurements on the starting date (July 2013) and on the research end date, respectively (March 2015). The cross section opening underwent modifications of the riverbank edges between +3.30 m in section 9 and +74.80 m in section 6 and the river bed also went through a process of sinking of 0.70 m (section 1) and elevation of maximum 0.28 m (section 9). The mineral aggregates regeneration volume was 114084 m³ and the scouring volume was 141657 m³. An annual mineral aggregates deficit of 228 m³/ha/year resulted. The lowest water level descent was recorded in section 1 namely by 0.18 m and the highest decrease of the flowing velocity was recorded in section 4, namely 0.33 m/s.

Key words: body of water, effect, extraction, mineral aggregates, quantifying

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