



Experimental Research of Sand Wash Off From Urban Surfaces

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ABSTRACT

Surface runoff due to precipitation in urban areas washes off asphalt and concrete surfaces and drains into sewerage networks. Sediments entering the sewerage network decrease its flow rate capacity, increase its roughness and the risk of effusion and flood. The issue of sediments in the systems of precipitation drainage and combined sewerages has not been researched, nor legally regulated in Serbia.

In Vojvodina, most sediment washed off from urban surfaces is sand and dust. The wash off of sand, used during winter period to prevent the formation of ice on road surfaces, also creates a massive problem.

There are two directions to resolve this issue with the aim of a) finding a way to remove the precipitated sediments in the sewerage, and b) preventing that sediments enter the sewerage.

The objective of the present paper is to define the links between the characteristics of rain and the quantity of sand washed off from inclined concrete surfaces. To that purpose a lab installation was built, on which controlled precipitation intensities can be created and the quantity of washed off sand can be measured. The paper presents the obtained results on the dynamics of forming wash off in the function of precipitation intensities and the inclination of the concrete surface.

KEYWORDS

Catchment, sand, urban, wash off