

Zawilski, M., Sakson, G. Assessment of Total Suspended Solid Emission Discharged via Storm Sewerage System from Urban Areas. *Ochrona Srodowiska* 2013, Vol. 35, No. 2, pp. 33–40.

Abstract: Total suspended solid (TSS) input into receiving waters is an important pollutant adversely influencing aquatic environment and condition of aquatic biota. The main sources of total suspended solids are processes of soil erosion and washing out of solid matter by storm runoff, particularly from urban catchments. Quality of stormwater runoff essentially depends on rainfall duration and intensity, pollutant accumulation on the catchment as well as duration of dry weather period prior to the rainfall event. The frequency and levels of total suspended solid concentration in stormwater discharged from a real urban catchment were determined using SWMM (Storm Water Management Model) software. The SWMM model has been calibrated based on the rainfall, receiving water flow rate and TSS concentration data obtained for that catchment. For more than one third of precipitation events TSS mean concentration was found to exceed 100 g/m^3 . Such level of pollution may be critical for ecosystems of small urban rivers. The results of presented analyses prove that quality monitoring as well as stormwater treatment should be introduced for stormwater discharges in urban catchments.

Keywords: Total suspended solids, wastewater receiver, urban areas, precipitation, SWMM model.