

STORMWATER MANAGEMENT IN A HISTORICAL PERSPECTIVE

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ABSTRACT

Different elements of the hydrological cycle has been studied for hundreds of years but stormwater started to be an important part in the middle of the last century when our cities begun to increase in size and the imperviousness of urban areas grow fast. At this time it was common to lead the drain- and stormwater in a combined sewage pipe system to the municipal wastewater treatment plant before discharge. When more and more impervious surfaces was added to the sewage net we got problems with flooding in cellars and combined sewer overflows had to be constructed. The action was to lead the stormwater in a separate pipe direct to the receiving water without any treatment. This was a natural measure because we didn't have so many polluting cars and industries so the stormwater was rather clean. Furthemore, the stormwater should be lead out as fast as possible from the cities in order to avoid flooding problems. This action affected the water balance for the cities and gave ground water depletion and settling on the buildings. The water budget for the cities should then be repaired by infiltration and percolation storages was constructed and surfaces which allowed infiltration of the rainwater were created and also pervious parking lots and roads were established. The stormwater should be seen as a resource rather than an obstacle in the urban planning. However, during decades the stormwater development was almost standing still but during the new millennium the stormwater issues have been highlighted again and are considered very important to solve. The stormwater management philosophy since the middle of last century will be presented during the talk.

KEYWORDS

Hydrological cycle, urbanization, stormwater, CSO, percolation storages, receiving waters, urban planning.