A Low Cost Calibration Method for Urban Drainage Models

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A low cost calibration method for urban drainage models

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The calibration of the hydrological reduction coefficient is examined for a small catchment. The objective is to determine the hydrological reduction coefficient, which is used for describing how much of the precipitation which falls on impervious areas, that actually ends up in the sewer. The reduction coefficient is found on basis of a combination of a urban drainage model (MOUSE) and a set of simple switches located in a combined sewer overflow (CSO) structure. By calibrating the model with only the duration of the CSO, it was possible to calculate a hydrological reduction coefficient close to what can be found with intensive in-sewer measurement of rain and runoff. The results also clearly indicate that there is a large variation in hydrological reduction coefficient between different rain events.