

## The development of individual retention systems and their impact on the functioning of combined sewer systems

---

Maciej Mrowiec

The necessity of development of retention systems is, at the moment, one of the greatest infrastructural challenges for the majority of Polish urban areas. The Water Law introduced at the beginning of 2018 imposes a mandatory fee for water/rainwater drainage dependant on the volume of retention devices located in the catchment area. The development and modernisation of drainage systems should include changing the attitude towards rainwater management. This may include constructing large reservoirs working as a network as well as scattered retention in the form of a large number of devices of little volume. The presentation features research data on the influence of individual systems of reusing rainwater on the operation of combined sewer systems. The analysis involves the assessment of functioning of storm overflows (drop volume into the receiver) as well as the reliability of canals operation (the frequency and extent of flooding within the catchment area being drained). The presentation also looks at the question of the effectiveness of small scale retention regarding large retention basins.