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A comparison of different approaches to automatic control for sewer systems

Alla Kolechkina and Ronald van Nooijen Delft University of Technology, Den Hoorn (ZH), Netherlands

In low lying areas like the Netherlands, sewer systems depend on pumps to manage the flow. Many of these systems are still combined systems, where storm water and foul water flow through the same pipes. These are usually designed to perform well under uniform precipitation. In practice, precipitation is not uniform, and the systems themselves have grown over the years and during that growth process the original design philosophy may not have been respected. During dry weather, this is usually not a problem as pump capacities are more than sufficient. During wet weather, sewer systems need to be carefully managed to make optimal use of in-system storage and compensate for in-homogeneous inflow due to precipitation. We will compare the effectiveness of different strategies for pump use.