

Herford utility

Herford reduces combined sewer overflows by around 15% using a CSO prevention system

Herford, a town with approximately 70,000 inhabitants in North Rhine-Westphalia, Germany, is located at the confluence of the Aa and Werre rivers. It has a sewer network of about 500 kilometers which is about 50% separated, with the rest operating as combined.

The challenge

Inconsistent behavior and utilization of control structures was observed for past rainfall events. The municipality decided that an optimized network control system should be implemented to better utilize existing retention volumes, coordinate them effectively and reduce water pollution.

The solution

In 2021, Herford utility joined forces with Xylem to conduct a pilot study in a drainage area containing six combined sewer structures. A model-based analysis by Xylem proved that a Real-Time Decision Support System (RT-DSS) could help the utility significantly reduce combined sewer overflows during rainfall events, without modifying the existing infrastructure.

"After initial skepticism, I am very pleased with both the results of this project and our collaboration with Xylem. The Xylem Vue platform is protecting our waterways from combined sewer overflows by optimizing the control and usage of available storage capacity."

Horst-Peter Sarnizei,
Head of Special Infrastructures Maintenance.

Following these promising results, the utility decided to implement the [Xylem Vue application](#) Unified Network Management in the sub-catchment area initially optimizing the operation of four sewers. The application continuously processes sensor data, monitors dynamic conditions in the individual basins in real time, and optimizes the management of the network's available storage capacity.



Challenge

Reducing water pollution from Combined Sewer Overflows (CSOs) and mitigating inconsistent spill behavior at control structures.

Customer

Immobilien- und Abwasser-Betrieb
Herford

Task

Sewer network optimization.

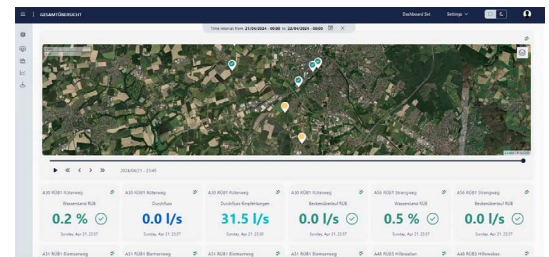
Project result

Reducing CSO volume by approximately 15%.

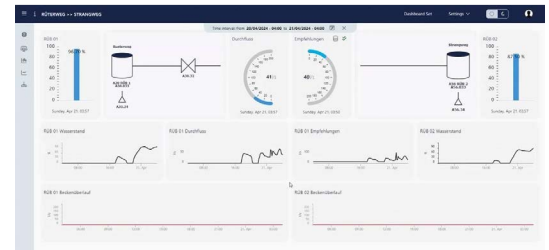
This solution provides and displays status and control recommendations for the entire system from a single location. These recommendations are automatically forwarded to the control system as target values, while still enabling operators to manually intervene and control individual systems at any time.

The results

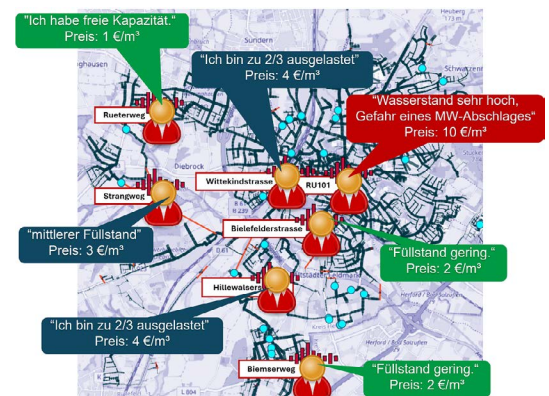
Since implementing Xylem Vue in January 2024, Herford has reduced combined sewer overflows in the target drainage area by approximately 15% without modifying their existing infrastructure. The municipality has already initiated the integration of three additional basins, encouraged by these positive results and the system's easy scalability.



Platform dashboard



System status & control recommendations in real time



Patented, market-based optimization approach

Did you know?

Xylem Vue can also integrate information about rain forecasts, forecast discharges and monitor inflows to the wastewater treatment plant.