



## **| CASE STUDY**

# **Transforming Pollution Mitigation through Real-Time Data The WINEP Overflow Programme**



**Severn Trent Water**





### **Overview**

In response to increasing environmental and regulatory pressures, Severn Trent Water (STW), in partnership with Detectronic, launched the WINEP Overflow Programme—a pioneering initiative aimed at reducing pollution from Combined Sewer Overflows (CSOs) through real-time monitoring and predictive analytics.

## Challenge

STW faced the challenge of managing stormwater overflows more effectively to meet the stringent requirements of the Water Industry National Environment Programme (WINEP) and the Environment Act 2021. Traditional reactive approaches to CSO monitoring were no longer sufficient to ensure environmental protection and regulatory compliance.



### Solution

Detectronic and STW collaborated to deploy:

- **450 MSFM flow meters**
- **100 rain gauges** across **130 catchments**.  
These devices provided continuous, real-time data on flow and rainfall, enabling a proactive approach to wastewater network management.

Each catchment was treated as a tailored project, with dedicated modellers and analysts ensuring data quality and relevance. The use of QGIS/QField mapping tools, structured pre-installation surveys, and weekly data reporting streamlined operations and enhanced accuracy.



## Innovation

This initiative stands out by:



Embedding real-time monitoring and predictive modelling into daily operations.



Moving beyond periodic assessments to dynamic, data-led decision-making.



Integrating all data into STW's Data Driven Catchment (DDC) system for immediate analysis and response.

This approach not only meets but exceeds current industry standards, offering a scalable model for other utilities.



### Results



**Environmental Impact:** Significant reduction in CSO spills, protecting rivers and ecosystems.



**Operational Efficiency:** Fewer aborted site visits, improved training, and better infrastructure prioritisation.



**Regulatory Compliance:** Enhanced ability to meet WINEP and Environment Act targets.



**Customer and Community Benefit:** Improved public health outcomes and environmental stewardship.

A recent case study within the programme demonstrated how real-time data enabled early identification and mitigation of pollution risks in a high-priority catchment.



## Future Potential

The WINEP Overflow Programme is a blueprint for the future of wastewater management:



**Scalable across the UK** to help other water companies meet environmental goals.



**Adaptable internationally** for regions facing similar stormwater and urban drainage challenges.

Chris Keys, Senior Project Manager at STW, praised the collaboration:

*"The real-time data and improved visibility are helping us make better decisions and protect the environment more effectively."*



## **Conclusion**

The WINEP Overflow Programme is more than a compliance initiative—it's a transformative model for sustainable, data-driven pollution mitigation. By setting a new industry benchmark, it demonstrates how innovation and collaboration can drive meaningful environmental change.





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