

Future Trend: Increased Use of Online Monitoring and Control

Trend definition and relevance to DWMP

Monitoring and control technologies can improve the reliability, resilience, and adaptability of wastewater assets. By enabling a more flexible and responsive operation, they can help us make better use of existing infrastructure, extend asset life and potentially defer the need for expansion or replacement.

This trend will be considered in the Options Development stage of our DWMP28. Advanced monitoring and control technologies can improve the performance of existing storage assets, increase their operational efficiency, and potentially delay or reduce the need for significant capital investment.

Trend description, uncertainty and potential impact on our region

Sewer monitor



Source: Thames Water, 2026

- Real-time monitoring technologies, such as the sewer monitor shown in the photo, are becoming increasingly accessible and cost-effective, making them valuable tools for improving operational performance and asset management.
- By 2055, it is anticipated that most wastewater assets, both above and below ground, will be equipped with advanced monitoring and control. This could enable wastewater networks and treatment processes to optimise performance and create additional treatment capacity (headroom).
- Enhanced sewer depth monitoring and blockage detection technologies, together with proactive drainage network cleaning, will enable earlier identification and upstream management of blockages. Building on the approximately 20,000 sewer depth monitors already installed across the network, Thames Water plans to deploy a further 30,000 monitors during AMP8².
- Through the Water Industry National Environment Programme (WINEP)¹, we have committed to delivering an environmental improvement project to install certified monitoring to measure flows passing through the treatment works and reduce the risk of premature storm overflow discharges. Over time, these systems could support AI-driven maintenance, demand management, and regulatory reporting, improving how wastewater systems are operated and maintained.
- Regulators are considering Final Effluent Continuous Monitoring to improve visibility of discharge compliance. While it may become a requirement in AMP9, the scope, parameters, and approved technologies have yet to be confirmed.

Stage of DWMP used	
Risk assessment	✗
Plan development	✓
Impact/Importance	
Short term (2035)	Medium
Medium term (2045)	Medium
Long term (2055)	Medium
Example PIs affected by this trend	
	Storm overflow performance
	Treatment works compliance (numeric)
	Good ecological and/or chemical status: Public sewerage



References

- 1 Water industry national environment programme (WINEP) methodology: Section 1 – Planning to meet future water challenges. Environment Agency (2024). GOV.UK. Available at: [WINEP methodology – Planning to meet future water challenges](#) (Accessed: July 2026).
- 2 Smart Sewers Project, Thames Water (2025). Thames Water Newsroom. Available at: [Smart Sewers Project | Thames Water Newsroom](#) (Accessed July 2026).

