STORMHARVESTER

ENHANCED NETWORK MANAGER

Enhanced network management of wastewater networks reduces combined sewer overflows, regulates flows and reduces energy consumption.

The Enhanced Network Manager module uses machine learning to predict outages and enables the improved management of the assets in the network to reduce combined sewer overflows and pollution-flooding events.

30% REDUCTION ON CSO DISCHARGE

1/8TH COST OF CAPITAL UPGRADES

StormHarvester's Enhanced Network Manager combines rainwater forecasts and historic network performance with machine learning to predict future network behaviour.

Once a potential outage is identified the system runs thousands of scenarios in real-time to determine the optimum operational sequence to minimise or prevent outages. The system then enables the improved management of the infrastructure according to this sequence when similar circumstances are detected.

Using Enhanced Network Manager enables the utilisation of available storage within the sewer network to minimise network outages.

This means that the utilised storage volume within the network is greatly increased at a fraction of the cost, time and disturbance of installing additional storage via hard infrastructure (concrete tanks and pipes).

CASE STUDY

NORTHUMBRIAN WATER

Northumbrian Water provides water and sewerage services to 2.7 million people in the North East of England with 27,000 km of sewers and cleared 9500 blockages in 2019. StormHarvester and Northumbrian Water have worked together since early 2018 to analyse pumping chambers in Newcastle-Upon-Tyne in Northern England. This discrete network was chosen due to the location of Combined Sewer Overflows, escapes (pollution and flooding), pumping stations within the catchment, and past rainfall events in the area.

Three years of data from 12 pumping chambers and Combined Sewer Overflows or escapes (pollution and flooding) were analysed using the StormHarvester Intelligent Sewer Suite. The analysis allowed Northumbrian Water to easily visualise their network performance and quickly identify, quantify and rank assets to see how they were performing or if they had particular sensitivities to rainfall.

The results of the analysis determined that on average a 30% reduction in Combined Sewer Overflows or escapes (pollution and flooding) spillages was achievable across the catchment using StormHarvester's real-time controls.

> "The StormHarvester Intelligent Sewer Suite allowed us to easily visualise historic data from a section of our wastewater network. It allowed us to assess our network performance and quickly identify sites with particular sensitivities to rainfall. The StormHarvester team were easy to work with and have always been quick to respond and adopt to our particular requirements"

Linzie Pentleton, Asset Investment Programme Manager
Northumbrian Water

Water Utility

NORTHUMBRIAN WATER living water

Savings

96% accuracy on Combined Sewer Overflows or escapes (pollution and flooding) spill prediction

30% reduction on Combined Sewer Overflows or escapes (pollution and flooding) spills

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