The Aquifer Partnership

Water Quality in the Brighton Aquifer



The Problem:

Nitrate trend predictions of Brighton groundwater sources from industry leading hydrogeological models use data such as geology, groundwater levels, abstraction rates, land use information and water quality monitoring data. A conceptual graph of the rising nitrate trend in groundwater in the Brighton Chalk Block is shown below.

In the Brighton area 11 out of 13 groundwater sources show increasing levels of nitrate, which need to be reduced to meet acceptable concentrations for drinking water quality. It can take decades for water to seep down into aquifers and the current peaks we are seeing are from historic nitrate use across different sectors.















Drivers for catchment management

We can reduce nitrate concentrations in abstracted groundwater by adding additional treatment or diluting the concentration by mixing water with supplies from another source with lower concentrations. But catchment management is a more;

• long term, sustainable approach which is better value for money for our customers and has wider environmental benefits.

We are working in partnership with catchment stakeholders in rural and urban areas to reduce the amount of nitrate that is applied to land and manage other pollutant risks across chalk downland to protect the sources of the water that we supply our customers with.

Catchment management alongside treatment approach \rightarrow focus on future resilience













Southern Water is committed to working in partnership with the South Downs National Park, Brighton & Hove City Council, Environment Agency and other stakeholders through TAP. We believe that future challenges are best addressed through a joined up approach.













