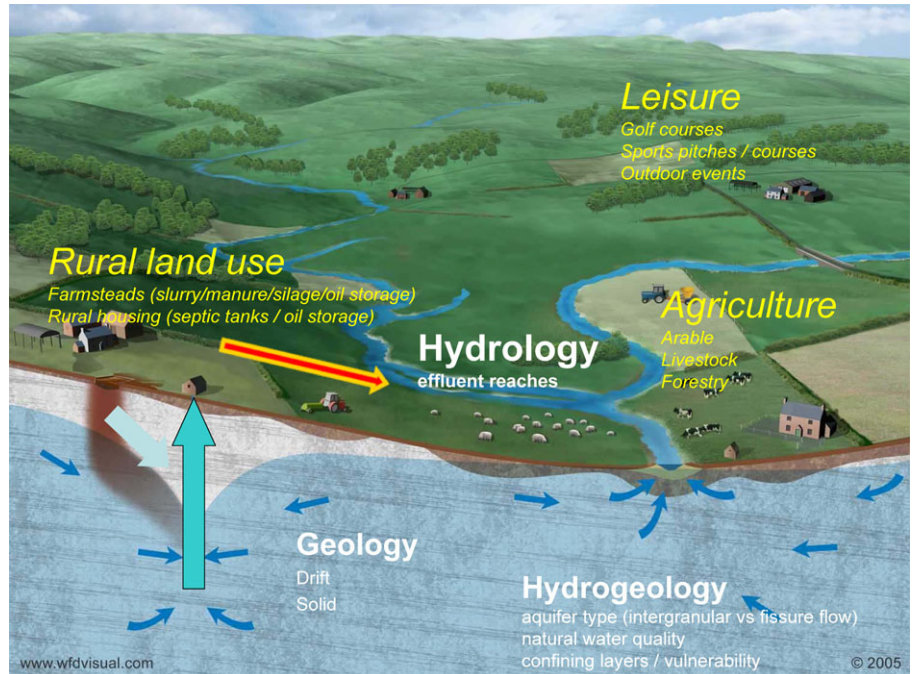


## DWSP Catchment Risk Assessments Surrey and East Surrey Water

*Assessing pollution risks within a given catchment using a risk based methodology and toolkit*



Following the Drinking Water Inspectorate's 2007 consultation on the amendment to the Water Supply (Water Quality) Regulations 2000, water companies are required to prepare 'drinking water safety plans' (DWSPs) for all water from source to tap. DWSPs are used to ensure that a water supply is safe for human consumption. They are based on risk assessment and risk management for all parts of the water supply chain from the catchment, through treatment and distribution to the consumer. A catchment risk assessment forms an essential part of the DWSP and is made up of a thorough understanding of the catchment; the identification of hazards within the catchment and the assessment of risks posed by those hazards.

Entec developed a risk based methodology and toolkit to assess pollution risks within the catchment to Sutton and East Surrey Water's infrastructure. 25 groundwater sources and one surface water source were assessed.

The catchment risk assessment is based on evaluating hazards by determining the likelihood of potentially contaminative activities impacting water quality at the point of abstraction. A scoring system is used to define whether the likelihood of impact is rare, unlikely, possible, likely or certain. Scoring is carried out using standard calculation spreadsheets taking account of point (e.g. petrol stations and septic tanks) and diffuse (e.g. agriculture) activities within the catchment and for groundwater sources, cryptosporidium and wellhead hazards close to the point of abstraction.

Separate methodologies have been developed for groundwater and surface water sources reflecting differences in transport pathways, contrasting mechanisms affecting water quality and the diversity and number of pollution sources between these types of source. Natural risks to water quality were identified for the two major aquifer units exploited, and the river catchment,

impoundment catchments and the reservoir supplying the surface water source.

Deliverables comprised spreadsheets listing hazards and the likelihood of water quality events by key parameters both before and after control measures, a methodology report and a user guide to enable Sutton and East Surrey Water to add new sources and/or to maintain their DWSP and aid to protect human health by highlighting groundwater sources at high risk of pollution.

