

West Berkshire Groundwater Scheme

Use of the scheme in response to drought status in Thames area

October 2022

What is the West Berkshire Groundwater Scheme?

The West Berkshire Groundwater Scheme (WBGWS) is a groundwater pumping scheme owned and operated by the Environment Agency in response to drought conditions. It was commissioned in the 1970's as a drought augmentation scheme for Thames Water. Its primary use is to add groundwater into the River Thames via some of its tributaries during periods of drought. This water is then abstracted by Thames Water further downstream in the lower River Thames to become part of the public water supply for London.

The scheme consists of 32 pumping stations (licensed abstraction boreholes) connected to 10 outfalls through 87km of pipeline across West Berkshire. An outfall is an outlet in the system that delivers water to the river. The boreholes are grouped into seven wellfields (Lambourn, Shefford, Winterbourne, Upper Pang, Lower Pang, Enborne and Loddon) abstracting groundwater from the Chalk and Upper Greensand aquifers.

During drought, Thames Water can request us to operate the scheme as part of their Drought Plan.

Why was the WBGWS built?

Following severe droughts in 1943 and 1944, the Metropolitan Water Board investigated ways to meet London's demand for water. The board proposed taking water from the ground and using it to increase the amount of water in tributaries flowing into the River Thames. Following this proposal, the WBGWS was built in the 1970's.

Why are we operating the WBGWS now?

The Thames area is currently in drought. This follows a drier than average winter in 2021/22 and a very hot and dry summer this year. July was the driest month in Thames area since records began in 1891, which saw the River Thames at Windsor gauging station at the lowest on record since 1979. Some rainfall in September has helped a little but river flows continue to remain well below where we would expect for the time of year.

Thames Water has seen large increases in water demand from their customers through the summer and rapid storage loss in their West London supply reservoirs. They have activated their Drought Plan and have implemented a Temporary Use Ban (more commonly known as a hosepipe ban) from 24 August 2022. They are carrying out actions in their Drought Plan to support public water supplies, including the request to the Environment Agency to operate the WBGWS.

Thames Water has requested that we operate the scheme to support their abstraction for public water supply on the lower River Thames where some water supply reservoirs have fallen to very low levels. As part of operating the scheme we carry out enhanced monitoring of the environment including groundwater levels, river flows and groundwater and river water quality.

When and where are we planning to operate the WBGWS?

We are currently planning to start operation on 24 October 2022 (subject to ongoing review). This will include the initial phased switch on of the Pang, Enborne and Loddon wellfields. We plan to deliver up to 80 mega litres per day to the River Thames to support Thames Water abstractions for public water supply. Use of the remaining 3 wellfields (Lambourn, Shefford and Winterbourne) is not currently planned but will be kept under review as the drought develops.

What will you notice?

The scheme's operation will increase river flows above the current low levels in the River Pang, lower River Enborne, lower Foudry Brook, lower River Kennet and lower River Loddon. There will be a greater presence of Environment Agency staff than usual in these areas to complete the enhanced environmental monitoring that we undertake when the scheme is operating.

Incident reporting

You should report any incidents to our Incident Hotline on 0800 80 70 60.

More information

You can contact our Drought Team by emailing drought_THM@environment-agency.gov.uk or via Environment Agency general enquiries 03708 506 506 (Mon-Fri, 8am–6pm).