

# Hydrological Outlook UK

Period: From May 2016

Issued on 09.05.2016 using data to the end of April 2016

## SUMMARY

With river flows having mostly returned to normal following a very wet start to the year, the outlook for May is for normal flows in eastern parts of the UK, with normal to below normal flows over northern and western UK. This pattern is likely to persist over the next three months. Groundwater levels are likely to be within the normal range for the next three months, with the exception of the northern Permo-Triassic sandstone aquifer, which will remain notably high throughout May. Rainfall projections show a slight increase in the probability of above-average rainfall for May, though May has begun with very dry weather in eastern parts of the UK. For May-June-July there are equal chances of above- and below-average rainfall.

### Rainfall:

Rainfall for April was above average for the UK as a whole at approximately 120% of the 1971-2000 average. The wettest region was eastern Scotland, whilst localised areas of below average rainfall fell on southern Wales, and south-western and south-eastern England.

Predictions (released by the Met Office on 21<sup>st</sup> April 2016) for the UK show a slight increase in the probability of above-average rainfall for May. For May-June-July as a whole, the forecast for UK precipitation suggests that the chances of above- and below-average rainfall are fairly balanced. The probability that UK precipitation for May-June-July will fall into the driest of five equal categories is between 20 and 25% and the probability that it will fall into the wettest of the five categories is 25% (the 1981-2010 probability for each of these categories is 20%).

### River flows:

River flows in April were predominantly normal across the UK, with some catchments displaying above normal or notably high flows.

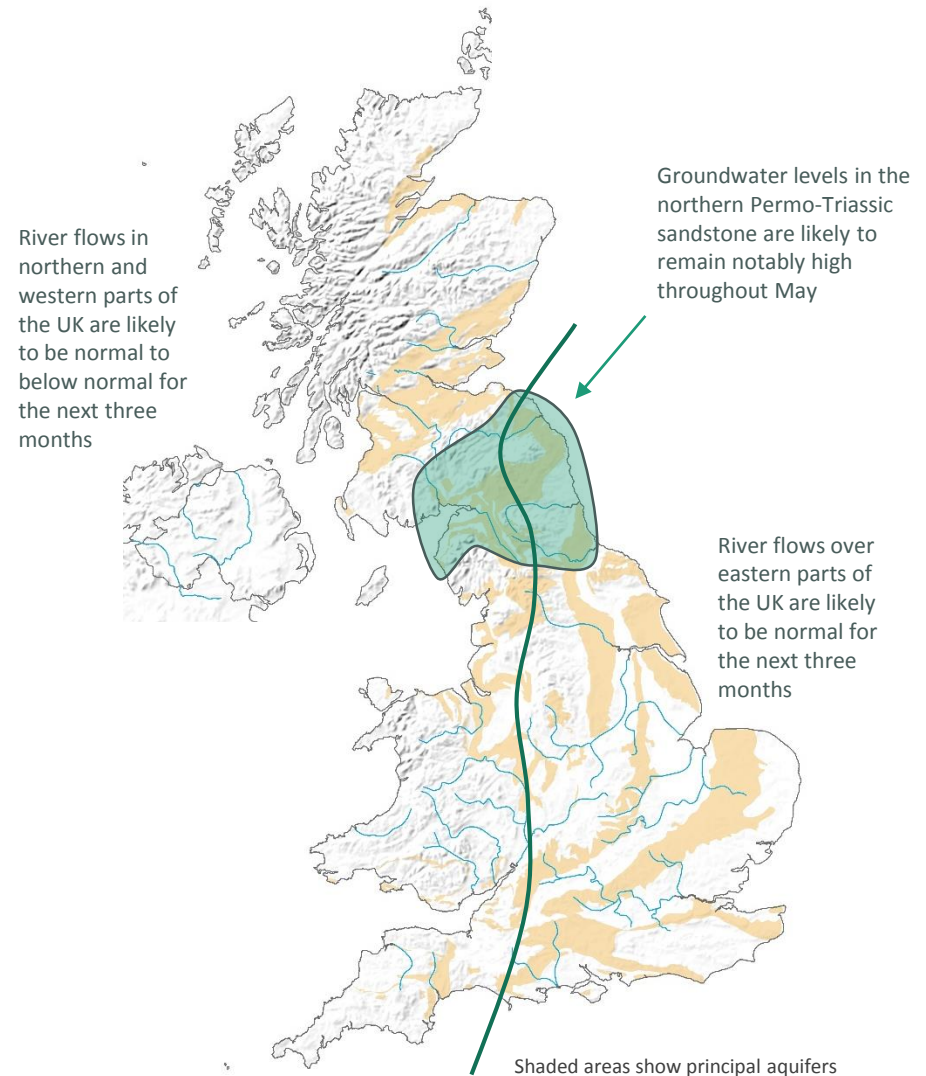
Simulations of river flows for May suggest normal to below normal flows in the north and west of the UK and normal to above normal flows in eastern parts of the UK. However, following a particularly dry start to May in eastern parts, and with a 10-day forecast for further fair weather with only scattered light showers, normal flows will be most likely in this area during May. For the next three months the outlook is similar with river flows expected to be within the normal range in eastern parts of the UK, and normal to below normal flows being likely in northern and western UK.

### Groundwater:

Groundwater levels for April were normal, with above normal levels in many parts of the southern Chalk aquifer. The northern Permo-Triassic sandstone showed a continuation of the notably and exceptionally high levels that have prevailed since the beginning of the year.

Groundwater levels throughout summer in the UK are dominated by natural recessions and are relatively unaffected by rainfall. Therefore, the outlook for May is for the groundwater levels of the slowly responding northern Permo-Triassic sandstone to remain notably high. Groundwater levels elsewhere are likely to be within the normal range for the next three months.

The Hydrological Outlook UK provides an outlook for the water situation for the UK over the next three months and beyond. For guidance on how to interpret the outlook, a wider range of information, and a full description of underpinning methods, please visit the website: [www.hydoutuk.net](http://www.hydoutuk.net)



## About the Hydrological Outlook UK

### About the Outlook:

This document presents an outlook for the UK water situation for the next 1 – 3 months and beyond, using observational datasets, meteorological forecasts and a suite of hydrological modelling tools. The outlook is produced in a collaboration between the Centre for Ecology and Hydrology (CEH), British Geological Survey (BGS), the Met Office, the Environment Agency (EA), Natural Resources Wales (NRW), the Scottish Environment Protection Agency (SEPA), and the Northern Ireland Rivers Agency (RA).

### Data and Models:

The Hydrological Outlook depends on the active cooperation of many data suppliers. This cooperation is gratefully acknowledged. Historic river flow and groundwater data are sourced from the UK National River Flow Archive and the National Groundwater Level Archive. Contemporary data are provided by the EA, SEPA, NRW and RA. These data are used to initialise hydrological models, and to provide outlook information based on statistical analysis of historical analogues.

Climate forecasts are produced by the Met Office. Hydrological modelling is undertaken by CEH using the Grid-to-Grid, PDM and CLASSIC hydrological models and by the EA using CATCHMOD. Hydrogeological modelling uses the R-groundwater model run by BGS and CATCHMOD run by the EA. More information is available from the Outlooks website: <http://www.hydoutuk.net/methods>

### Disclaimers:

This document aims to provide an indicative outlook for the water situation using the most comprehensive and up-to-date hydrological data, and modelling techniques. The Outlooks are intended to provide guidance on the likely water situation in the UK over the coming months, and should not be used in isolation, but alongside other sources of information such as flood warnings and meteorological forecasts (see links right).

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### Further information:

For more detailed information about the Hydrological Outlook, and the derivation of the maps, plots and interpretation provided in this outlook, please visit the Hydrological Outlook UK website.

The website features a host of other background information, including a wider range of sources of information which are used in the preparation of this Outlook.

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### Reference:

Hydrological Outlook UK, 2016, January, Centre for Ecology and Hydrology, Oxfordshire UK, Online, <http://www.hydoutuk.net/archive/april-2016/>

### Other Sources of Information:

The Hydrological Outlook should be used alongside other sources of up-to-date information on the current water resources status and flood risk.

Hydrological Summary for the UK: provides summary of current water resources status for the UK: [http://www.ceh.ac.uk/data/nrfa/nhmp/monthly\\_hs.html](http://www.ceh.ac.uk/data/nrfa/nhmp/monthly_hs.html)

Environment Agency Water Situation Reports: provides summary of water resources status on a monthly and weekly basis for England: <https://www.gov.uk/government/collections/water-situation-reports-for-england>

Flood warnings are continually updated, and should be consulted for an up-to-date and localised assessment of flood risk:

Environment Agency: <https://flood-warning-information.service.gov.uk/map>  
Scottish Environment Protection Agency: <http://www.sepa.org.uk/flooding.aspx>

UK Met Office forecasts for the UK: [www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast](http://www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast)