

Hydrological Outlook UK

Period: From June 2018

Issued on 08.06.2018 using data to the end of May 2018

SUMMARY

The outlook for June is for normal to below normal flows in the northern parts of Great Britain, and eastern Northern Ireland. River flows in the southern parts of Great Britain, and western Northern Ireland are likely to be normal to above normal for both June, and June-July-August. Groundwater levels across the UK are likely to be normal to above normal for the next three months.

Rainfall:

May saw notably low rainfall across the UK, with some exceptions in central and southern England. Large parts of northern England and Scotland, as well as south-western England, East Anglia and Wales, experienced between 30 and 50% of the long term average for May. Due to convective weather patterns, some areas received over 170% of long term average rainfall, but these areas were very localised.

The Met Office 3-month Outlook issued on 24th May indicated that for both June and June-July-August, as a whole, below-average precipitation is more likely than above-average precipitation. The probability that UK-average precipitation for June-July-August will fall into the driest of five categories is 25% and the probability that it will fall into the wettest of our five categories is 10% (the 1981-2010 probability for each of these categories is 20%).

River flows:

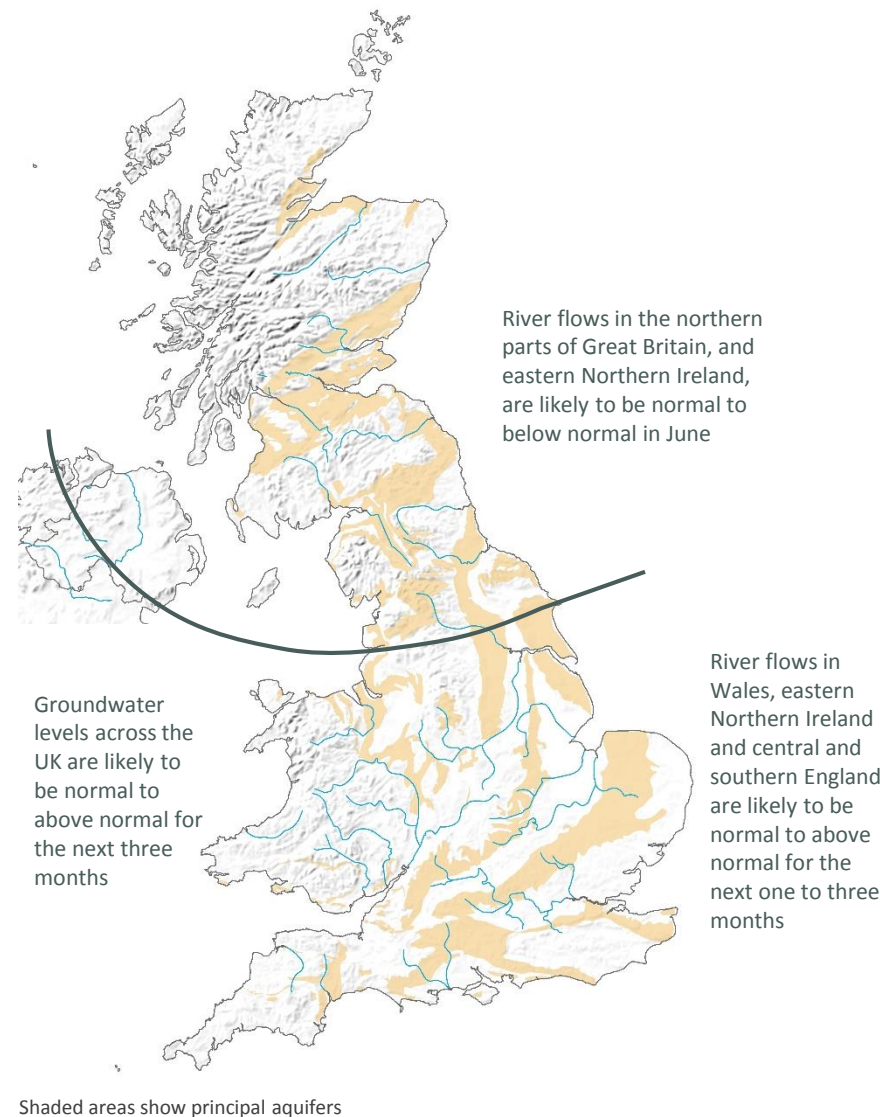
As a result of the dry weather in May, river flows receded from April's notably high levels. Flows in northern England, Northern Ireland and Scotland were mostly below normal, whilst flows in south-eastern England remained above normal. Flows in Wales and western Scotland were within the normal range for May.

River flows in the northern parts of Great Britain and eastern Northern Ireland are expected to be normal to below normal for June. Given the Met Office forecast, which indicates that above-average temperatures are significantly more likely than below average over the next three months and that precipitation is also likely to be below-average, these normal to below normal flows could persist in the north over the next three months. River flows in the southern parts of the UK, and western Northern Ireland are likely to be normal to above normal for the next one to three months.

Groundwater:

Groundwater levels in the UK were mostly within the normal range or above normal in May. Continuing a pattern that developed in the late spring, notably to exceptionally high levels persisted in southern Scotland, north-east England and parts of southern England.

Groundwater levels are very likely to exhibit a similar pattern over the next three months, with almost all areas normal or above normal, and high levels persisting in Dorset, Hampshire and Berkshire in southern England as well as the Scottish Borders and north-east England. With summer recessions established in almost all aquifers weather conditions are unlikely to disturb this pattern – although particularly dry conditions, if they persist in upland areas of northern Britain, could make shallow and low storage aquifers used for water supply vulnerable to local shortages.



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

Hydrological Outlook UK

About the Hydrological 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. Supporting documentation is available from the Outlooks website: <http://www.hydoutuk.net/methods>

Presentation:

The language used in the summary presented overleaf generally places flows and groundwater levels into just three classes, i.e. below normal, normal, and above normal. However, the underpinning methods use as many as seven classes as defined in the graphic to the right, i.e. the summary uses a simpler classification than some of the methods. On those occasions when it is appropriate to provide greater discrimination at the extremes the terminology and definitions of the seven class scheme will be adopted.

	Percentile range of historic values for relevant month
Exceptionally high flow	> 95
Notably high flow	87-95
Above normal	72-87
Normal range	28-72
Below normal	13-28
Notably low flow	5-13
Exceptionally low flow	< 5

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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 for the Hydrological Outlook:

Hydrological Outlook UK, 2017, December, Centre for Ecology and Hydrology, Oxfordshire UK, Online, <http://www.hydoutuk.net/latest-outlook/>

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: <https://nrfa.ceh.ac.uk/monthly-hydrological-summary-uk>

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