

Hydrological Outlook UK

Period: From June 2019

Issued on 10.06.2019 using data to the end of May 2019

SUMMARY

The outlook is for below normal river flows in central, southern and eastern England both in June and for the summer overall (June-August). Elsewhere, river flows are most likely to be within the normal range. Groundwater levels in the eastern Chalk are likely to be notably low over the next one- and three-month timeframes. Elsewhere in England and Wales, groundwater levels are generally likely to be below normal in June and normal to below normal for June-August.

Rainfall:

May rainfall was above average across parts of eastern England and most of Scotland, exceptionally so around the Cairngorms in north-east Scotland. Elsewhere, rainfall was below average, notably so in parts of south-west England and south Wales which registered less than half the average.

The rainfall outlook for June and June-July-August as a whole (released by the Met Office on 24th May), is that the chances of above- and below-average precipitation are similar. On balance, wetter than average conditions are marginally more likely. The probability that UK-average precipitation for June-July-August will fall into the driest of five categories is between 15 and 20% and the probability that it will fall into the wettest of five categories around 20% (the 1981-2010 probability for each of these categories is 20%).

River flows:

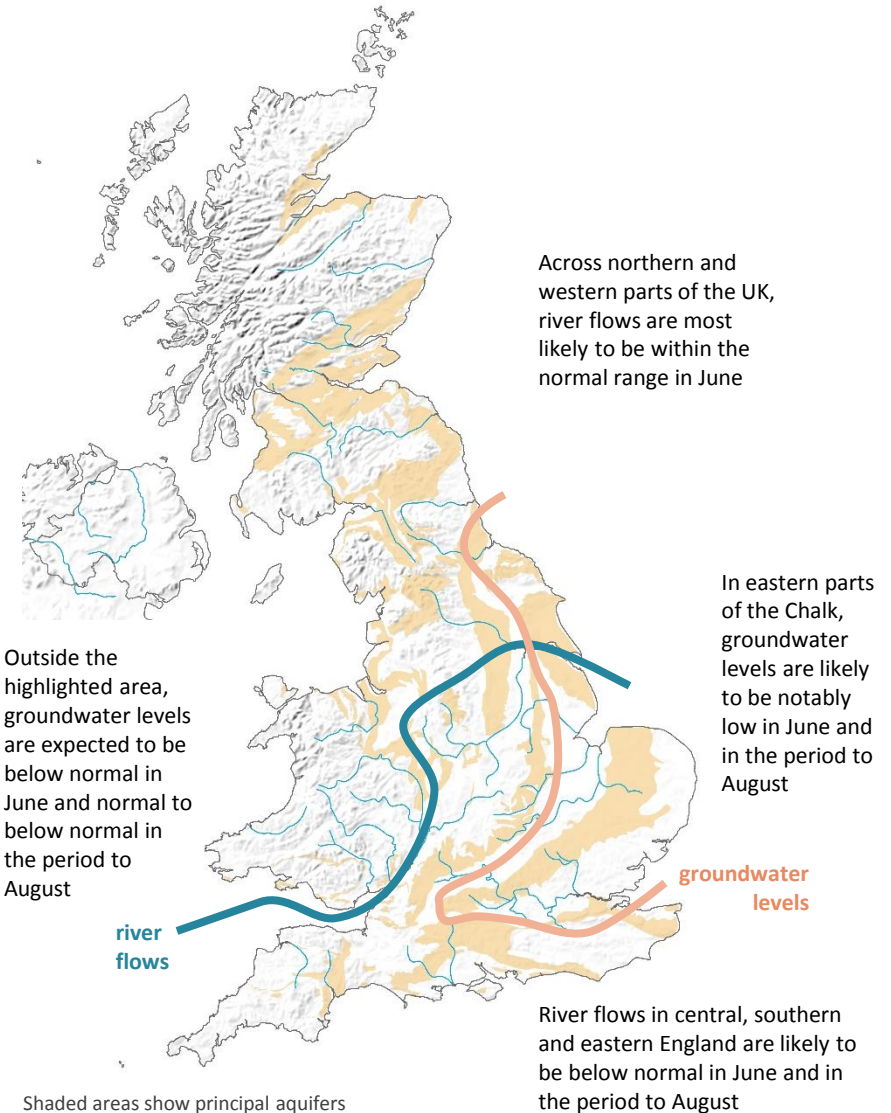
River flows in Northern Ireland, northern Scotland and north-west England were in the normal range in May, but were below normal throughout the majority of Britain, generally not exceeding around half their average flow. Notably low flows were recorded across most of eastern England.

In June, river flows are likely to be below normal across southern and eastern parts of England, and notably low in localised areas. Further north and west, there is less certainty; despite a moderately wet start to June in places, flows within the normal range are most likely. There is a similar pattern for the three-month outlook, though normal to below normal flows is the most likely outlook in south-west England.

Groundwater:

Groundwater levels in May were in the normal range around the Scottish Borders and along most of the south coast, but otherwise were below normal throughout England and Wales. Notably low levels were recorded across East Anglia.

In the Chalk of the Chilterns into East Anglia, notably low levels are likely both in June and over the June-August timeframe. Levels in the Chalk along most of the south coast are likely to be within the normal range over the next one and three months. Elsewhere in the Chalk and for the other aquifers of England and Wales, below normal levels are generally most likely over both timeframes and locally exceptionally low levels may be observed. There is a high level of confidence in these results.



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.hyoutuk.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 for Northern Ireland, the Department for Infrastructure – Rivers (DfIR).

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 DfIR. 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 and GR4J hydrological models. 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, 2019, June, 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