

**SUMMARY** Following an exceptionally wet July, river flows across the UK are expected to be normal to above normal for August, and over the next three months. Groundwater levels are likely to be within the normal range across the majority of the UK, though above normal levels are expected in southern England in August, and normal to below normal groundwater levels are likely in Wales over the next three months.

**Rainfall:**

Rainfall in July was exceptionally high across the UK, with national rainfall being 180% of average. Parts of central and south-western England, and Northern Ireland saw over 200% of average rainfall for July.

The forecast (issued by the Met Office on 31.07.2023) shows that the chances of August, and the three month period August to October, being dry or wet are similar to normal. There is an increased chance of August and August to October being warmer than average, but near average temperatures remain the most likely outcome.

**River flows:**

River flows in July were normal to above normal, with above normal, notably high, and some exceptionally high flows seen across the western parts of the UK. Record breaking high flows were recorded in the Mourne catchment in Northern Ireland. A few localised below normal flows were recorded in East Anglia and north-eastern England.

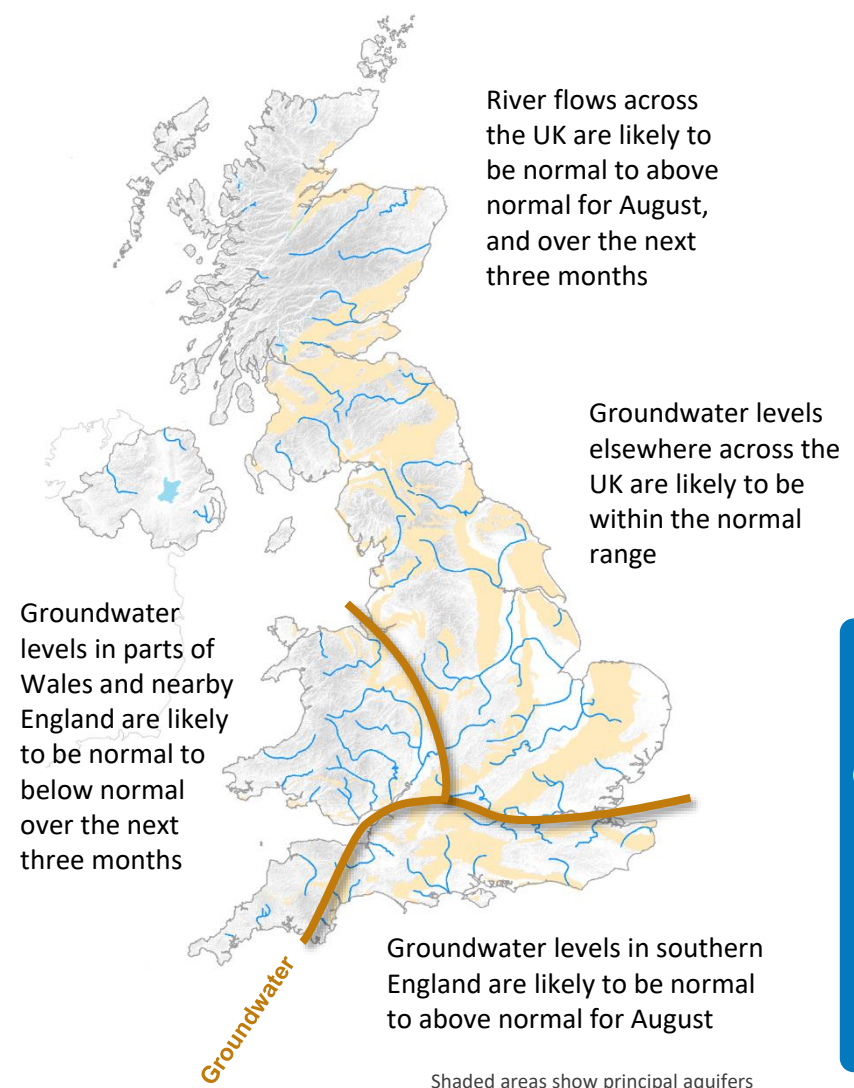
The outlook for August, and for the August to October period is for normal to above normal flows to persist across the UK. Normal flows are more likely along the eastern coastline, with a chance of some below normal flows in north-eastern Scotland.

**Groundwater:**

Groundwater levels in July were predominantly within the normal range or above. Above normal groundwater levels were recorded across large parts of southern England and record breaking high levels were seen in Northern Ireland. As with river flows, a few localised below normal levels were recorded in East Anglia, north-eastern England and northern Scotland.

Groundwater levels are expected to be within the normal range for the majority of the UK for August and the next three months. Levels in southern England are likely to remain above normal for August, whilst levels in Wales and the nearby English Jurassic limestone are likely to be normal to below normal over the next three months.

The UK Hydrological Outlook provides an outlook for the water situation for the United Kingdom 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 UK 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 UK Centre for Ecology & Hydrology (UKCEH), 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 UK 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 UKCEH using the Grid-to-Grid and GR4J hydrological models. Hydrogeological modelling uses the AquMod model run by BGS.

Supporting documentation is available from the Outlooks website:

<https://www.hydotuk.net/about/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 UK Hydrological Outlook, and the derivation of the maps, plots and interpretation provided in this outlook, please visit the UK Hydrological Outlook 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.

## Contact:

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t: 01491 692371 e: <https://hydotuk.net/contact>

## Reference for the UK Hydrological Outlook:

UK Hydrological Outlook, 08 August 2023, UK Centre for Ecology and Hydrology, Oxfordshire UK, Online, <https://www.hydotuk.net/latest-outlook/>

## Other Sources of Information:

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

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>

Natural Resources Wales: <https://flood-warning.naturalresources.wales/>

Scottish Environment Protection Agency: <https://www.sepa.org.uk/flooding.aspx>

Hydrological Summary for the UK: provides summary of current water resources status for the UK:

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

UK Met Office forecasts for the UK: <https://www.metoffice.gov.uk/#?tab=regionalForecast>

UK Water Resources Portal: monitor the UK hydrological situation in near real-time including rainfall, river flow, groundwater and soil moisture from COSMOS-UK:

<https://eip.ceh.ac.uk/hydrology/water-resources/>