

## SUMMARY

The outlook for July and for the July–September period is for river flows to be below normal for most of the UK, except in north-west Scotland and Northern Ireland, where they are more likely to be normal. Groundwater levels in July are likely to be below normal across most of the UK, with a few localised exceptions, and normal to below normal for most of the UK for the next three months.

### Rainfall:

June received below average rainfall amount for most of the UK, with the exception of north-west England, western Scotland and Northern Ireland which saw slightly above average rainfall.

The temperature outlook for July and July-Sept (issued by the Met Office on 27.06.2022) shows an increased likelihood of warmer than normal conditions, with an increased likelihood of heatwaves. The precipitation outlook for the same periods suggests that the likelihood of both wet and dry outcomes is similar to normal.

### River flows:

River flows in June were below normal in most of the UK, with the exception of north-west Scotland and the western part of Northern Ireland which saw normal to above normal flows.

River flows in July are likely to remain low for most of the UK. Below normal flows are expected across much of south, central, and north-east England, Wales and north-east Scotland. Normal to below normal flows are expected in north-west England and western Scotland. Normal flows are expected in northern Ireland, with local variations. These patterns are likely to remain broadly the same for the July-September period.

### Groundwater:

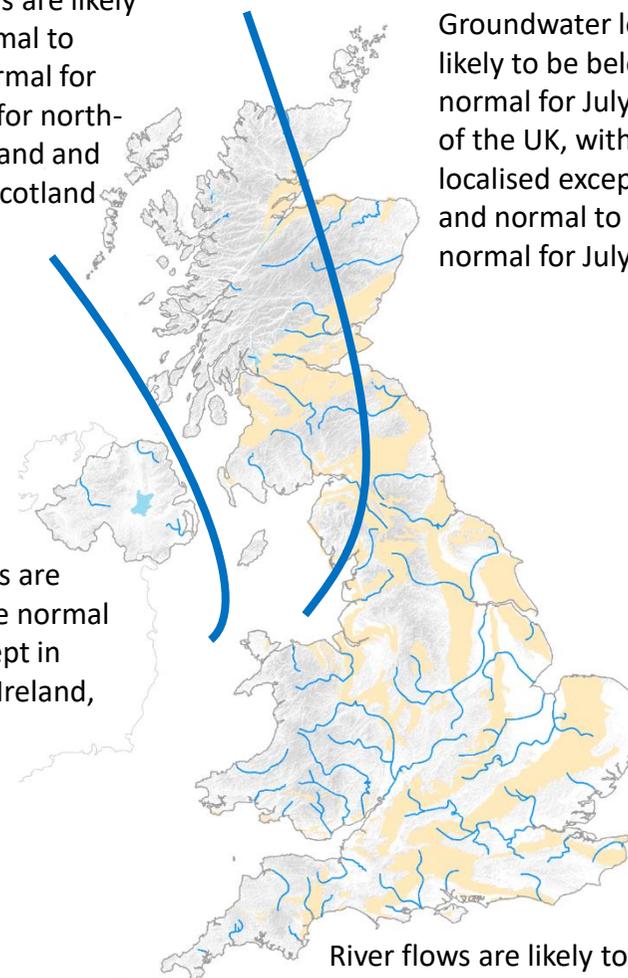
Groundwater levels in June were below normal in most of southern England and southern Wales, with a mixture of normal, below normal and localised above normal levels for the rest of the UK.

Over the next month, mostly below normal to notably low groundwater levels are expected across England and Wales, with a few exceptions locally. The three-month outlook is similar, but levels tend more towards normal across most of the UK.

River flows are likely to be normal to below normal for July-Sept for north-west England and western Scotland

Groundwater levels are likely to be below normal for July in most of the UK, with some localised exceptions, and normal to below normal for July-Sept

River flows are likely to be normal for July-Sept in Northern Ireland, with local variations



River flows are likely to be below normal for July-Sept for south, central and north-east Britain

Shaded areas show principal aquifers

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:

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 and 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 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, 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: <https://www.hydoutuk.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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The Hydrological Outlook partnership aims to ensure that all Content provided is accurate and consistent with its current scientific understanding. However, the science which underlies hydrological and hydrogeological forecasts and climate projections is constantly evolving. Therefore any element of the Content which involves a forecast or a prediction should not be relied upon as though it were a statement of fact. To the fullest extent permitted by applicable law, the Hydrological Outlook Partnership excludes all warranties or representations (express or implied) in respect of the Content.

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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.

## Contact:

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## Reference for the Hydrological Outlook:

Hydrological Outlook UK, 2021, July, UK Centre for Ecology and Hydrology, Oxfordshire UK, Online, <https://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.

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/>