

**SUMMARY** The outlook is for above normal to exceptionally high river flows and groundwater levels to persist in the south-east of England for May and for May-June-July as a whole. Over this three-month period, normal to above normal river flows are also likely across eastern parts of the UK, and groundwater levels are likely to remain above normal in the Permo-Triassic sandstones of northern England. Elsewhere river flows and groundwater levels are less certain.

**Rainfall:**

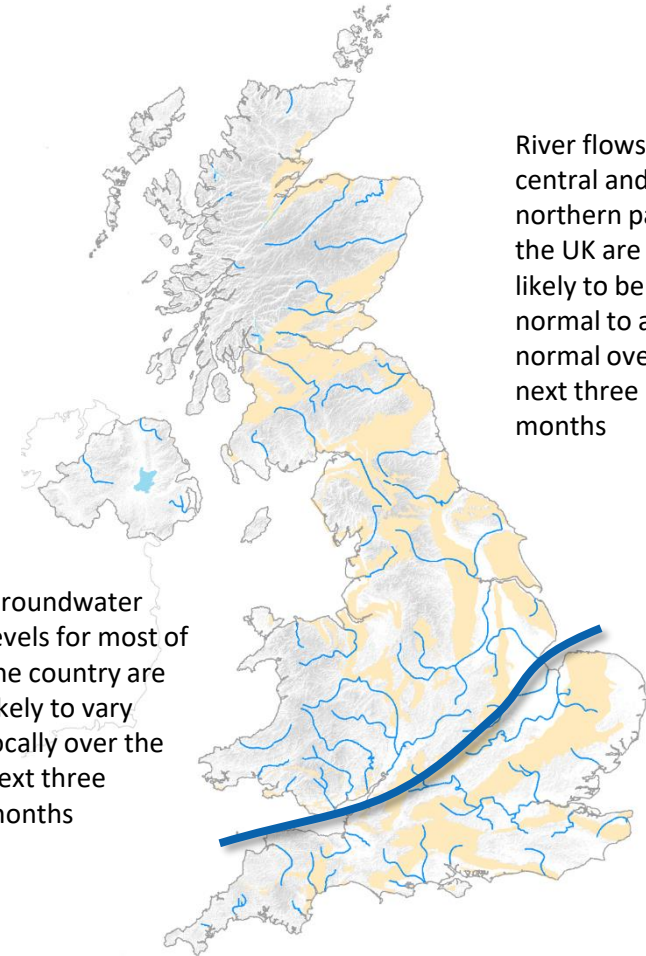
Rainfall for April was significantly above average for much of the UK. Large parts of northern England and Scotland saw greater than 170 percent of average April rainfall. The past 3, 6 and even 12 months have seen above average rainfall across the UK. The seasonal forecast (issued by the Met Office on 29.04.2024) shows an increase in the likelihood of a wet May (1.3 times the normal chance), and a greater increase in the likelihood of a wet 3-month period (1.5 times the normal chance), though predictability is typically low in the summer months.

**River flows:**

River flows in April were above normal to exceptionally high across the UK except for far northern Scotland where flows were within the normal range. Flows in many catchments in western parts of the UK broke previous peak records for April, and 12 month-averaged records were also broken. River flows in southern England are likely to remain above normal to exceptionally high for May and over the next three months. Elsewhere the outlook is less certain, but given the extremely wet initial conditions, river flows will respond quickly to May and May-July rainfall, and above normal to exceptionally high flows are more likely than below normal flows.

**Groundwater:**

Groundwater levels in April were above normal to exceptionally high, with record highs broken in several boreholes of the Permo-Triassic sandstones of northern England and the Chalk aquifers of southern England. A few localised normal levels were recorded. For May, and the May-June-July period, above normal to exceptionally high groundwater levels are likely to persist across the southern Chalk aquifers, and the Devonian and Permo-Triassic sandstone of the north. Groundwater levels in fast responding areas of the Chalk, and the Jurassic limestones and Carboniferous limestone in central and northern England are likely to be normal for April and normal to below normal for the May-July period.



River flows in central and northern parts of the UK are most likely to be normal to above normal over the next three months

Groundwater levels for most of the country are likely to vary locally over the next three months

River flows and groundwater levels in the south-east are likely to be above normal to exceptionally high over the next three months

Shaded areas show principal aquifers

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.hyoutok.net](http://www.hyoutok.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 GR6J hydrological models. Hydrogeological modelling uses the AquilMod model run by BGS.

Supporting documentation is available from the Outlooks website:

<https://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

## Disclaimer and liability:

The UK 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 UK 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 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. Dynamic access to many of the outputs of the UK Hydrological Portal are available on the [UK Hydrological Outlooks Portal](#).

## Contact:

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## Reference for the UK Hydrological Outlook:

UK Hydrological Outlook, 10 May 2024, UK Centre for Ecology & Hydrology, Oxfordshire UK, Online, <https://www.hydoutuk.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://nra.ceh.ac.uk/monthly-hydrological-summary-uk>

UK Met Office forecasts for the UK: <https://www.metoffice.gov.uk/>

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/>