UK Hydrological Outlook

Delivered in partnership by: UK Centre for Ecology & Hydrology

Period: From August 2024

Issued on 08.08.2024 using data to the end of July 2024

SUMMARY The outlook for August, and the next three months, indicates that river flows are likely to be normal to below normal across the western parts of the UK, and normal to above normal in the south and east. River flows in groundwater dominated catchments of the south-east are likely to be above normal to high. Groundwater levels are expected to be normal to above normal across the majority of the UK, and normal to below normal in parts of central England and the south-west.

Rainfall:

Rainfall in July showed a strong northwest to southeast gradient with the northwest seeing below average rainfall, and above average in the south and east. South-west Scotland, Northern Ireland and Wales received the least rainfall (as little as 50 percent of average), whilst 170 percent of average fell in London, Dorset, east Yorkshire and Aberdeenshire.

The outlook for both August and the August-October season (issued by the Met Office on the 29th July) indicates that there is a moderately increased chance of a dry conditions for the UK overall compared to normal. Unsettled conditions may affect the north at times and thundery downpours may be a hazard further south in August.

River flows:

River flows for the month of July broadly reflected the rainfall pattern with flows in the normal range seen across the western parts of the UK, and above normal flows, with some notably to exceptionally high, seen in the south-east. Flows in central and north-eastern England and Scotland were normal to above normal for July.

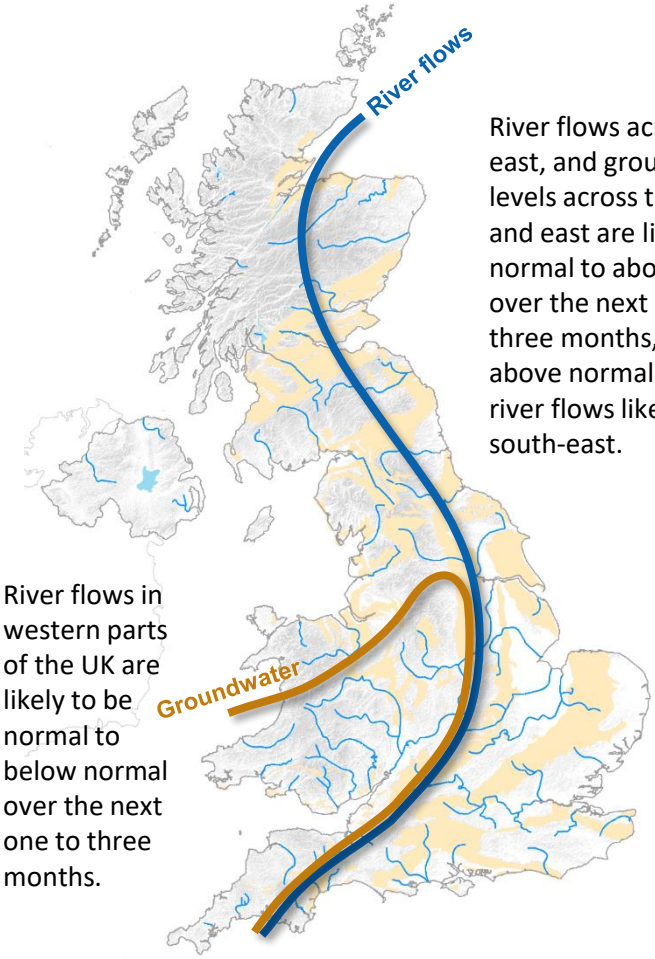
The outlook is for this pattern to continue over the next one to three months, with flows in the west likely to be normal to below normal, and flows in the east being normal to above normal. Flows in groundwater fed catchments of the southeast are likely to remain above normal to high over the next three months.

Groundwater:

Groundwater levels for July were mostly above normal to exceptionally high, with several record-breaking high levels recorded in northern England and the south-west. Notably low groundwater levels were recorded in south Wales and Northern Ireland.

The outlook is for groundwater levels to remain normal to above normal across the majority of the UK, with levels generally expected to fall over the three month period. Groundwater levels in central England and south Wales are likely to be normal to below normal over the next one to 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



River flows across the east, and groundwater levels across the north and east are likely to be normal to above normal over the next one to three months, with above normal to high river flows likely in the south-east.

River flows in western parts of the UK are likely to be normal to below normal over the next one to three months.

Groundwater levels in the southern parts of this region are also likely to be normal to below normal.

Shaded areas show principal aquifers

UK HYDROLOGICAL OUTLOOK

August 2024

UK Centre for Ecology & Hydrology | British Geological Survey | Department for Infrastructure An Roinn Bonneagair www.infrastructure-ni.gov.uk | Environment Agency | Met Office | Cyfoeth Naturiol Cymru Natural Resources Wales | SEPA Scottish Environment Protection Agency

UK Hydrological Outlook

Delivered in partnership by:

UK Centre for Ecology & Hydrology

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 AquiMod 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.

Your use of the Content is entirely at your own risk. We make no warranty, representation or guarantee that the Content is error free or fit for your intended use.

From April 2018 the UK Hydrological Outlook is supported by the Natural Environment Research Council funded UK-SCAPE and Hydro-JULES Programmes.

Copyright:

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:

UK Hydrological Outlooks, UK Centre for Ecology & Hydrology, Wallingford, Oxfordshire, OX10 8BB
t: 01491 838800 e: https://hydoutuk.net/contact

Reference for the UK Hydrological Outlook:

UK Hydrological Outlook, 08 August 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:
i. Environment Agency: https://flood-warning-information.service.gov.uk/map
ii. Natural Resources Wales: https://flood-warning.naturalresources.wales/
iii. 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://nrfa.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/

UK Centre for Ecology & Hydrology · British Geological Survey · Department for Infrastructure An Roinn Bonneagair www.infrastructure-ni.gov.uk · Environment Agency · Met Office · Cyfoeth Naturiol Cymru Natural Resources Wales · SEPA Scottish Environment Protection Agency