

SUMMARY The outlook for October is for normal to above normal river flows for most of the UK. In parts of East Anglia and Kent, river flows are likely to be normal to below normal. Elsewhere, in Scotland, flows are likely to be above normal, and exceptionally so in some cases. For groundwater, normal to above normal levels are expected across the country. For October–December, the outlook is for normal to above normal river flows and groundwater levels across the UK, although some below normal river flows may persist in East Anglia.

Rainfall:

September rainfall was above average across the UK with 131% of average registered. Some areas, including Northern Ireland, south-west England, north-west England and central Scotland received more than 1.5x the expected rainfall, and in isolated areas more than double. Elsewhere, notably on the Kent, Essex and Suffolk coast, rainfall was below average.

The forecast (issued by the Met Office on 25.09.2023) shows that for October there is a slight increase in the chance of drier than expected conditions, and for the October–December period there is a slightly higher than normal chance for wetter than average conditions. Over the one-month period, there is likely to be a decrease in storminess compared to normal. In the first weekend of October, Scotland saw some exceptionally wet conditions.

River flows:

River flows in September were normal or above normal across much of the country, exceptionally so in western areas where many catchments saw notably high flows (e.g. in Wales, north-west England, southern England). In northern Scotland, river flows were normal, and in East Anglia and Kent, river flows were normal to below normal.

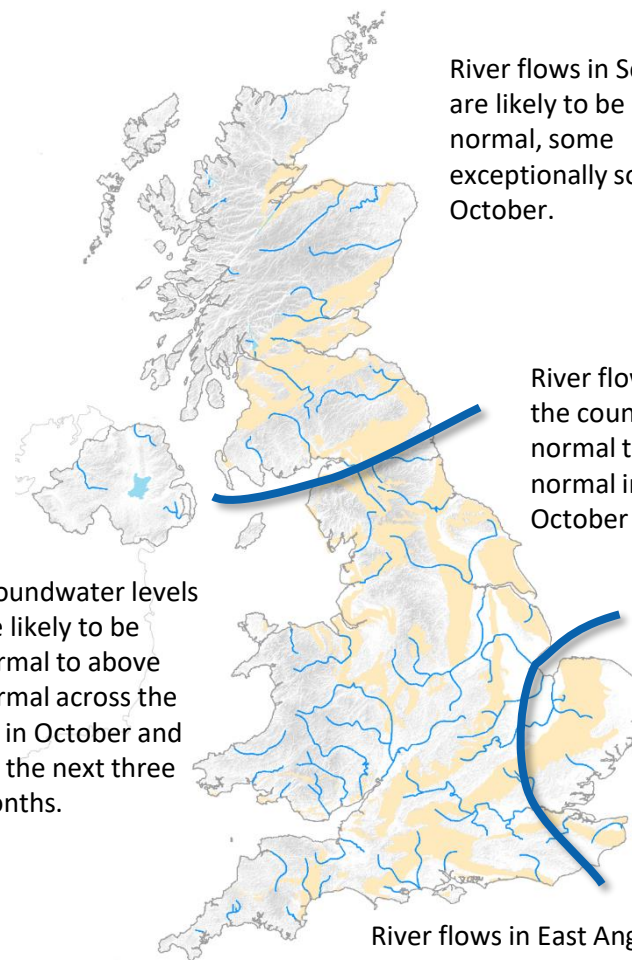
The outlook for October is generally for normal to above normal flows across the country, however in Scotland flows are likely to be above normal and, in some cases, exceptionally so. Below normal flows are expected to persist in East Anglia and Kent. The outlook for the October–December period is similar, although normal to above normal flows are expected across the country.

Groundwater:

Groundwater levels in September were mainly normal or above normal across the country, except for northern Scotland and East Anglia, where groundwater levels were below normal and, in some cases, notably so.

Although the signal is quite mixed over the one and three-month period, groundwater levels for October and October–December are likely to be in the normal to above normal range for the country as a whole.

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



Shaded areas show principal aquifers

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://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, 10 October 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/>