

## SUMMARY

The outlook for May, and for the next three months, is for river flows to be normal to below normal, in most parts of the UK, the exception being the south-west of England where below normal river flows are likely to persist. Groundwater levels in May, and for the next three months, are likely to be normal to above normal across most of the UK. Again there is an exception, with groundwater levels in central southern England being normal to below normal in both May and the period to July.

### Rainfall:

Precipitation in April was below average across the UK, ranging from less than 10% of the long-term average in south-east England, to 80% in the north of Scotland. May has started with a spell of wet weather, with heavy rainfall in central parts of the UK.

The rainfall outlook for May (issued by the Met Office on 24.04.2021) shows a reduction in the likelihood of dry conditions compared to normal while wet conditions show near-normal likelihood. Over the three month period to July, a similar shift is seen, albeit with a greater likelihood of wet conditions.

### River flows:

River flows in April were normal to below normal across the UK, with many notably low flows especially in the south-west of England. Some small, groundwater-fed rivers associated with the Chalk aquifers in the south-east remain above normal.\*

River flows in May are likely to be similar to those observed in April, i.e. generally normal to below normal with the exceptions mentioned above. Over the three month period May-June-July similar conditions will prevail, albeit with a trend back to more normal conditions especially in the north of England and Scotland.

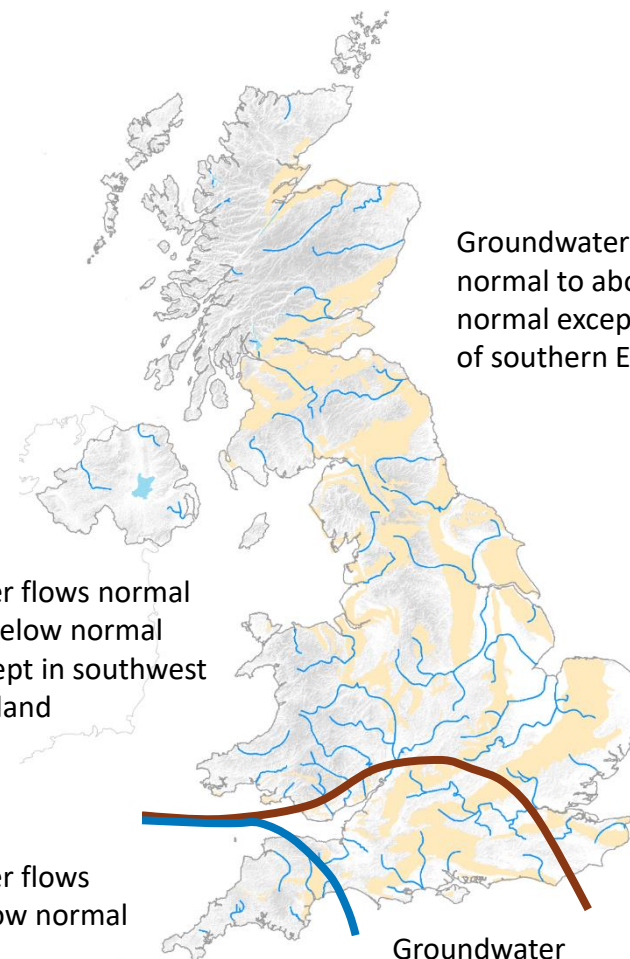
### Groundwater:

Groundwater levels in April were normal to notably high. Normal levels were seen in most of the boreholes of central southern England, whilst higher levels were recorded in the Magnesian limestone and Permo-Triassic sandstones of northern England, as well as in the Chalk aquifers in Norfolk.\*

The outlook is consistent across both the 1-month and 3-month forecast, with normal to below groundwater levels predicted across southern England and Wales. Below normal levels are forecast across the South Downs. However, there are exceptions, including above normal levels predicted several sites in the Chalk of East Anglia. In the north of England and Wales, normal to above normal levels are predicted. Exceptionally high levels are predicted in the Permo-Triassic sandstone.

\* Note: Due to unforeseen circumstances no data are available for Scotland

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)



Groundwater levels  
normal to above  
normal except in parts  
of southern England

River flows normal  
to below normal  
except in southwest  
England

River flows  
below normal

Groundwater  
levels normal  
to below normal

Shaded areas show principal aquifers

## 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:

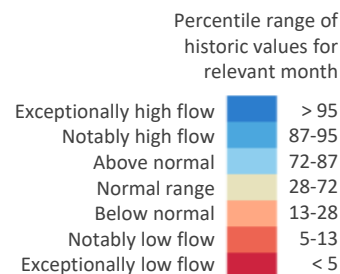
The Hydrological Outlook depends on the active cooperation of many data suppliers. This cooperation is gratefully acknowledged. Historic river flow and groundwater data are sourced from the UK National River Flow Archive and the National Groundwater Level Archive. Contemporary data are provided by the 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:

<http://www.hydoutuk.net/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.



## Disclaimer and liability:

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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, May, UK Centre for Ecology and Hydrology, Oxfordshire UK, Online, <http://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>

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

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

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

UK Met Office forecasts for the UK:

[www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast](http://www.metoffice.gov.uk/public/weather/forecast/#?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/>