

Hydrological Outlook UK

Period: From November 2018

Issued on 08.11.2018 using data to the end of October 2018

SUMMARY

The outlook for November is for normal to below normal river flows across the English Lowlands and normal to below normal groundwater levels in the Chalk of southern England, with some notably low levels especially in the south-western part of the aquifer. Elsewhere, river flows are generally likely to be within the normal range and groundwater levels are mostly likely to be normal to below normal. The three-month outlook for river flows and groundwater levels is predominantly similar to the one-month outlook, with river flows and groundwater levels likely to be normal to below normal in parts of the south-east and within the normal range elsewhere.

Rainfall:

October rainfall totals were below average across the majority of the UK. Northern Ireland, eastern Scotland, southern England and parts of northern and central England were particularly dry, and only the Highlands of north-west Scotland received notably above average rainfall.

For November, the chances of above- or below-average precipitation are approximately similar (based on the rainfall outlook issued on 25th October). For November-December-January as a whole, above-average precipitation is more likely than below-average precipitation. The probability that UK-average precipitation for November-December-January will fall into the driest of five equal categories is between 10% and 15% and the probability that it will fall into the wettest of the five categories is around 25% (the 1981-2010 probability for each of these categories is 20%).

River flows:

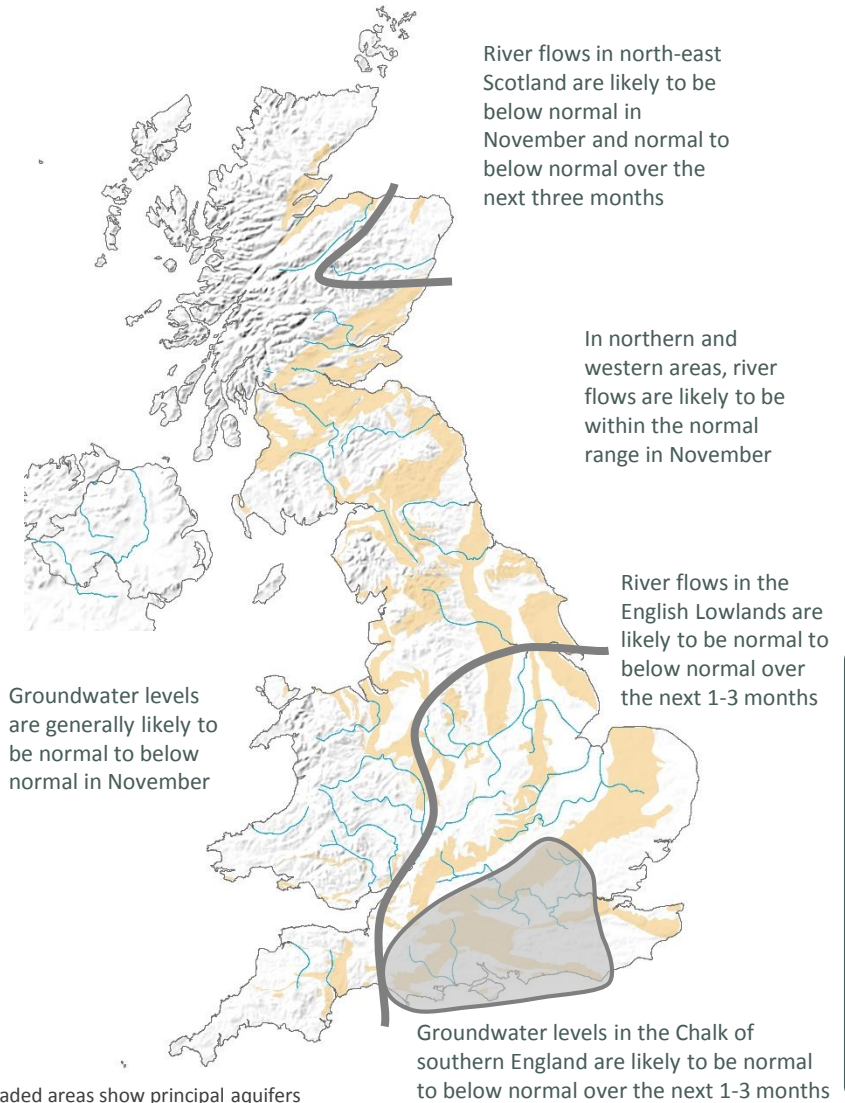
River flows in October were normal to below normal across most of the UK, though flows were above normal to exceptionally high across north-west Scotland. Notably low flows were registered in the Midlands, East Anglia, south-west England and eastern Scotland.

The outlook for river flows in November is for normal to below normal flows in rivers draining the English Lowlands and for flows generally within the normal range elsewhere. Below normal river flows are more likely in north-east Scotland and to a lesser extent around the eastern Scottish Borders. The outlook for November-January is similar to that for November, except that flows are likely to be normal to below normal in north-east Scotland.

Groundwater:

Groundwater levels in October were below normal or notably low across the majority of the Chalk of southern England, and generally normal to below normal elsewhere.

The outlook for groundwater levels in November is for some below normal and notably low levels in parts of the southern Chalk aquifer, with some exceptionally low levels possible in Dorset. Notably low levels are also likely in some localised parts of the sandstone and limestone aquifers of north Wales and the Peak District. Groundwater levels are generally likely to be normal to below normal away from these areas. There is more uncertainty in the outlook for the November-January period based on the onset and magnitude of recharge. Normal to below normal levels are most likely in the Chalk of southern England, and levels in some boreholes are likely to be below normal even under the highest rainfall scenarios.



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

Hydrological Outlook UK

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 Centre for Ecology and Hydrology (CEH), 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 CEH 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.

	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 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.

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Reference for the Hydrological Outlook:

Hydrological Outlook UK, 2018, November, 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.

Hydrological Summary for the UK: provides summary of current water resources status for the UK: <https://nrfa.ceh.ac.uk/monthly-hydrological-summary-uk>

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>

UK Met Office forecasts for the UK:
www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast