

Hydrological Outlook UK

Period: From September 2016

Issued on 08.09.2016 using data to the end of August 2016

SUMMARY

The outlook for September is for river flows to be within the normal range for the majority of the UK, with normal to above normal flows in central southern England. Flows in north western England are likely to be normal to above normal over the next three months. In the northern Permo-Triassic sandstone aquifers, groundwater levels are likely to remain above normal to exceptionally high throughout September, whilst levels across the rest of the UK are likely to be normal to above normal for the next three months.

Rainfall:

Rainfall across the UK for August was varied. Below average precipitation fell on southern England, Northern Ireland, south-western Scotland and eastern Scotland. The majority of northern England had above average rainfall, particularly in the north-west. North-western Scotland also received above average rainfall.

For September, the forecast for UK precipitation suggests that the chances of above and below average rainfall are fairly balanced. For September-October-November as a whole, above average precipitation is considered slightly more probable than below average. The probability that UK precipitation for September-October-November will fall into the driest of five categories is between 15 and 20% and the probability that it will fall into the wettest of five categories is around 25% (the 1981-2010 probability for each of these categories is 20%).

River flows:

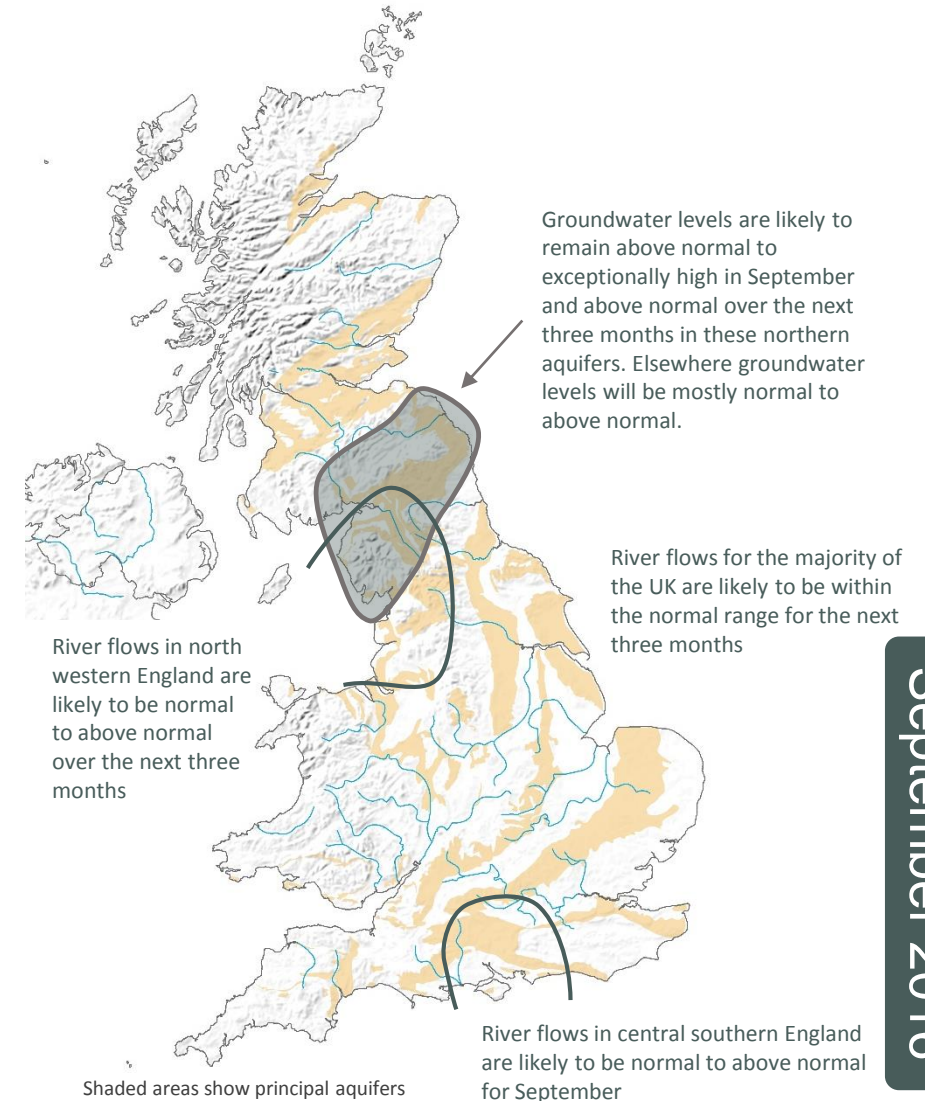
River flows for August mostly decreased from their July levels and were predominantly normal to above normal across the UK.

The outlook for September indicates that flows over most of the UK are likely to be within the normal range. Flows in central southern England are likely to be normal to above normal over the next month, and flows in north western England are likely to remain normal to above normal over the next three months.

Groundwater:

Groundwater levels in August remained normal to above normal across the UK, with above normal to exceptionally high levels persisting in parts of the northern Permo-Triassic Sandstone.

The outlook for September-October-November indicates that groundwater levels across the UK are likely to continue to be normal to above normal, with the exception of the northern Permo-Triassic sandstone aquifer, where above normal to exceptionally high levels are likely to persist throughout September.



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.hyoutuk.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 the Northern Ireland Rivers Agency (RA).

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 RA. 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

Disclaimer and liability:

The 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 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

Copyright:

Some of the features displayed on the maps contained in this report are based on the following data with permission of the controller of HMSO.

- (i) Ordnance Survey data. © Crown copyright and/or database right 2005. Licence no. 100017897.
- (ii) Land and Property Services data. © Crown copyright and database right, S&LA 145.
- (iii) Met Office rainfall data. © Crown copyright.

All rights reserved. Unauthorised reproduction infringes crown copyright and may lead to prosecution or civil proceedings.

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:

Hydrological Outlooks UK
Centre for Ecology & Hydrology
Wallingford
Oxfordshire
OX10 8BB

t: 01491 692371
e: enquiries@hydoutuk.net

Reference for the Hydrological Outlook:

Hydrological Outlook UK, 2016, July, 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: http://www.ceh.ac.uk/data/nrfa/nhmp/monthly_hs.html

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