



Period: From December 2025 Issued on 05.12.2025 using data to the end of November 2025

SUMMARY The outlook for December is for normal to above normal flows and groundwater levels across the majority of the UK, with the potential for exceptional highs in some catchments and aquifers. These levels are likely to return to normal over the winter season. River flows and groundwater levels across the chalk aquifers of the south-east, and in northern Scotland, are likely to be normal to below normal for the next three months.

Rainfall:

Rainfall in November was exceptionally high across much of the UK, with peak values at 170 percent of average across central and northern England and Wales. Below average rainfall occurred in the southeast and parts of Scotland. The forecast (issued by the Met Office on 01.12.2025) indicates a slight lean towards a wet December (1.3 times the normal chance), with the chances of a dry or wet season for the UK as a whole being close to normal. The chances of a cold season are lower than normal, but cold weather impacts are still possible at times.

River flows:

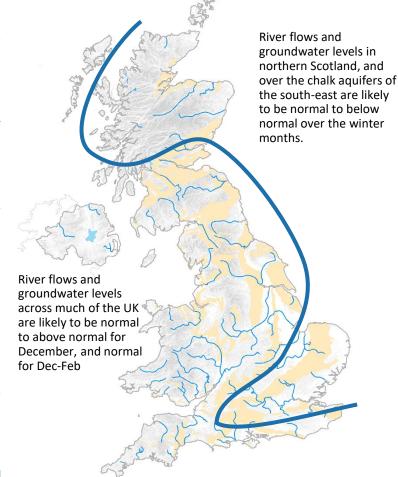
November river flows responded to the intense rainfall, resulting in recovery of flows across most of the UK to normal to above normal conditions. Below normal flows persist in some chalk fed catchments in the south-east, whilst flows across central and northern England and Wales rose to above normal to high, or even exceptionally high levels.

The outlook for December is for this pattern to broadly persist, with normal to below normal flows likely in parts of the south-east and Scotland, with normal to above normal flows being likely elsewhere. With continued wet conditions expected in December, flows in some catchments may be notably or exceptionally high in central and northern England and Wales. For December-January-February as a whole, normal river flows are expected across the majority of the UK, though localised below and above normal levels may persist through the winter.

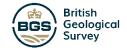
Groundwater:

Groundwater levels followed a similar spatial pattern in November, though were more extreme in places. Levels in south-eastern England and northern Scotland were normal to exceptionally low, whilst levels across central and northern England, Wales and southern Scotland were normal to exceptionally high, with a few localised exceptions. The outlook for groundwater levels is also closely aligned with the rainfall pattern, with normal to notably low levels expected in the south-east for December, and normal to below normal levels over winter as a whole. Across the rest of the UK groundwater levels are expected to be normal to exceptionally high in December, and normal to above normal over the next 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

















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://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.

historic values for relevant month > 95 Exceptionally high flow 87-95 Notably high flow Above normal 72-87 Normal range 28-72 13-28 Below normal 5-13 Notably low flow Exceptionally low flow < 5

Percentile range of

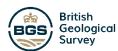
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The UK Hydrological Outlook is supported by the Natural Environment Research Council funded NC-UK (NE/Y006208/1) and Hydro-JULES (NE/S017380/1) Programmes.







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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. 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, 09 December 2025, 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-

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
- 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/









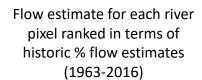


November's mean river flows simulated by the Grid-to-Grid hydrological model

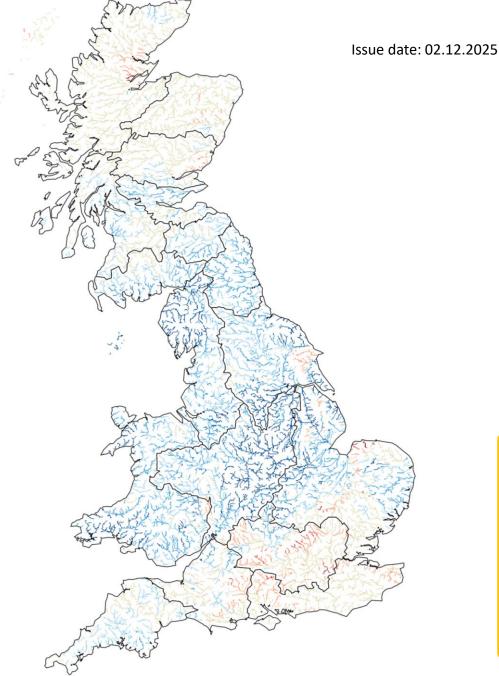
This map shows the simulated monthly mean flow across Great Britain for last month, ranked in terms of 54 years of historical flow estimates (1963 – 2016).

These flows are produced by the 1km resolution Grid-to-Grid (G2G) hydrological model, which is run up to the end of each calendar month using observed rainfall and MORECS potential evaporation as input.

Note that the G2G model provides estimates of natural flows.







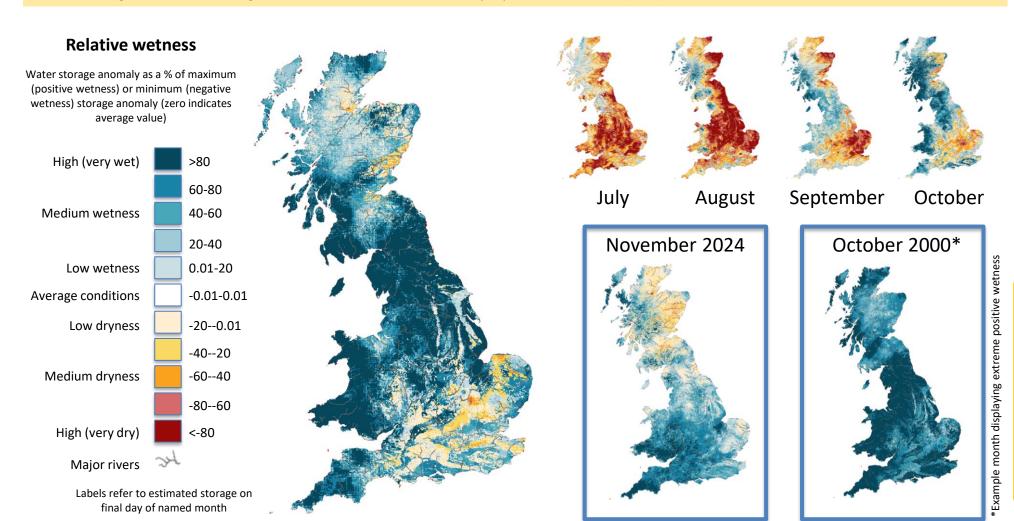


Current Daily Simulated Subsurface Water Storage Conditions

Based on subsurface water storage estimated for 30 November 2025

These maps are based on Grid-to-Grid (G2G) hydrological model simulated subsurface water storage (water in the soil and groundwater), expressed as an anomaly from the historical monthly mean. To highlight areas that are particularly wet or dry, the storage anomaly is presented relative to historical extremes. Rainfall in WET areas with high positive relative wetness could result in flooding in the coming days/weeks. Areas of negative relative wetness indicate locations which are particularly DRY, and little or no rain in these areas could potentially lead to (or prolong) a drought. Maps of soil moisture only are available on the next page.

SUMMARY: Subsurface water stores remain higher (wetter) than is usual for the time of year across western parts of Great Britain and now also include northern and central England. In southern England, some stores associated with deep aquifers remain lower (drier) than usual.



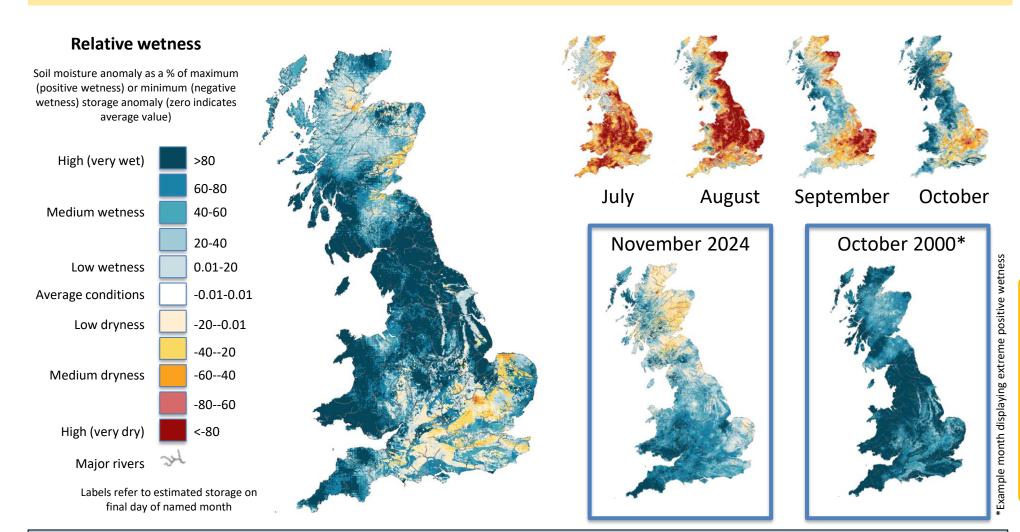


Current Daily Simulated Soil Moisture Conditions

Based on soil moisture estimated for 30 November 2025

These maps are based on Grid-to-Grid (G2G) hydrological model simulated soil moisture, expressed as an anomaly from the historical monthly mean. To highlight areas that are particularly wet or dry, the soil moisture anomaly is presented relative to historical extremes. These maps are not a forecast; rather an indication of current conditions. Soil moisture will often look similar to total storage (shown on the previous slide), since total storage comprises both soil moisture and storage in the saturated zone.

SUMMARY: Soil water stores remain higher (wetter) than is usual for the time of year across western parts of Great Britain and now also include northern and central England. In southern England, some stores associated with deep aquifers remain lower (drier) than usual.





Estimate of Additional Rainfall Required to Overcome Dry Conditions

Based on subsurface water storage estimated for 30 November 2025

These maps show the Grid-to-Grid (G2G) hydrological model simulated subsurface water storage, expressed as an anomaly from the historical monthly mean (1981-2010), presented on a 1km grid and as regional means. Subsurface storage deficits, i.e. where the subsurface water storage anomaly is less than zero, are highlighted in red/pink.

The subsurface storage deficit (mm) can be interpreted as an estimate of additional rainfall that would be required in future months to overcome dry conditions (i.e. rainfall in addition to what is expected on average). Regional mean values of additional rainfall required are provided in the table below.

Regional estimate of additional rainfall required (mm)

SCOTLAND

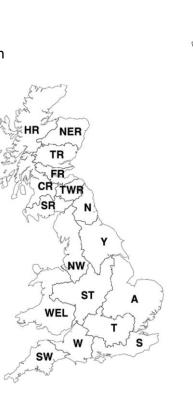
- 0 HR Highlands Region
- 0 NER North East Region
- 3 TR Tay Region
- 0 FR Forth Region
- 0 CR Clyde Region
- 0 TWR Tweed Region
- 0 SR Solway Region

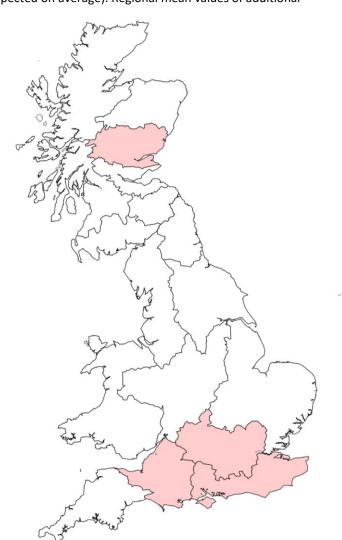
ENGLAND

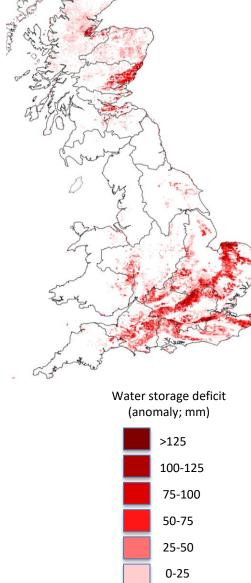
- 0 N Northumbria
- 0 NW North West
- 0 Y Yorkshire
- 0 ST Severn Trent
- 0 A Anglian
- 20 T Thames
- 3 W Wessex
- 8 S Southern
- 0 SW South West

WALES

0 WEL Welsh







<0

SCOTLAND

HR Highlands Region

NER North East Region

Tay Region

Forth Region

Clyde Region



Return Period of Rainfall Required to Overcome Dry Conditions

Period: December 2025 - May 2026

These maps show the return period of the rainfall required to overcome dry conditions simulated using the Grid-to-Grid (G2G) hydrological model. The maps are coloured according to the return period of accumulated rainfall required to overcome the estimated current subsurface water storage deficit over the next one to six months (areas with no storage deficit will always be white). These maps do not provide a drought forecast; instead they indicate whether particularly heavy rainfall would be required to return to normal conditions for the time of year.

SUMMARY: There are no regions of Great Britain with water storage deficits at the start of March

Rainfall amount (Probability)

Low (Likely) >20%

High (Less likely) < 2%

Extreme (Unlikely) < 0.5%

<20%

<10%

< 4%

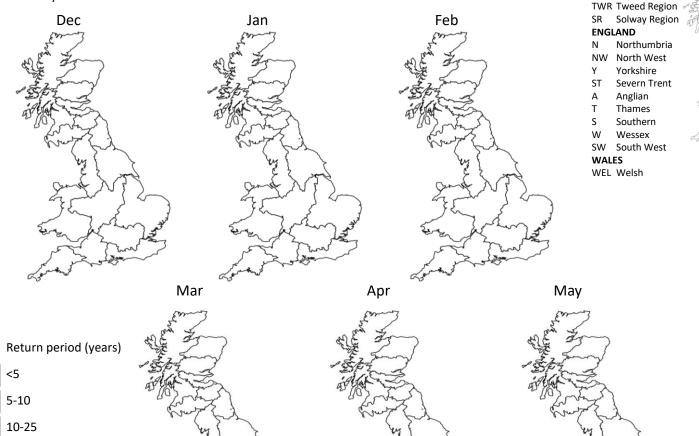
< 1%

25-50

50-100

100-200

>200

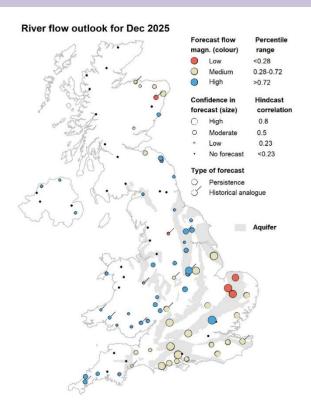


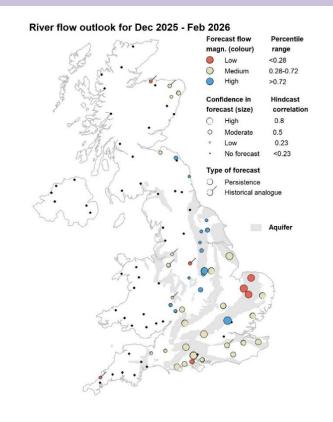
December 2025

Period: December 2025 – February 2026

Issued on 04.12.2025 using data to the end of November 2025

SUMMARY: The outlook for December and for the December-February period suggests that river flows in northern and western England and Wales are expected to be in the normal to above-normal range. In central and south-eastern England, river flows are likely to be in the normal range, with some isolated below normal flows in East Anglia. There are limited forecasts available for the western areas of the UK.





1-month flow outlook

Outlooks from hydrological analogues are based on a comparison of river flow during recent months with flows during the same months in previous years at a set of approximately 90 sites from across the UK. These sites are depicted on the two maps. Years with observed flows that most closely resemble current conditions are identified as the best analogues and the outlook is based on extrapolating from current conditions based on these analogues.

It is, however, often the case that a simpler forecast based on the persistence of river flow provides a better forecast than provided by analogy. This is particularly true for slowly responding catchments associated with aquifer outcrops.

Both methods are considered at each site and the forecast from the method with the higher confidence is presented. A simple classification of flows is used (high, medium and low) as indicated by the colours of the dots, with the confidence

3-month flow outlook

of the forecast being represented by the size of the dot. A tag on the dot indicates which method has been used in each instance.

Site-based: 1 month outlook

Dec

Oct

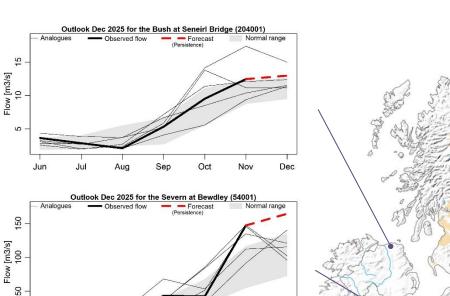
UKCEH

Outlook based on hydrological persistence and analogy

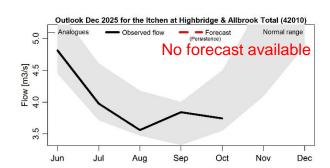
Period: December 2025 - February 2026 Issued on 04.12.2025 using data to the end of November 2025

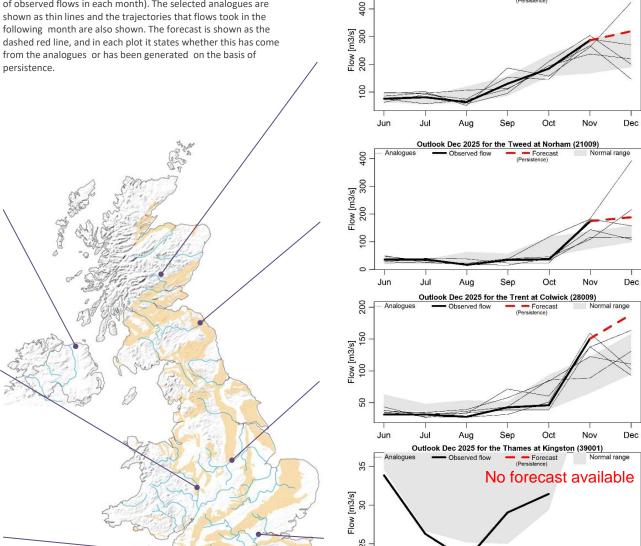
These figures provide insight into the hydrological analogue methodology for a set of sites from across the UK.

In each of the time series graphs the bold black line represents the observed flow during the past six months. The grey band indicates the normal flow range (the normal band includes 44% of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows took in the following month are also shown. The forecast is shown as the dashed red line, and in each plot it states whether this has come from the analogues or has been generated on the basis of



Dec







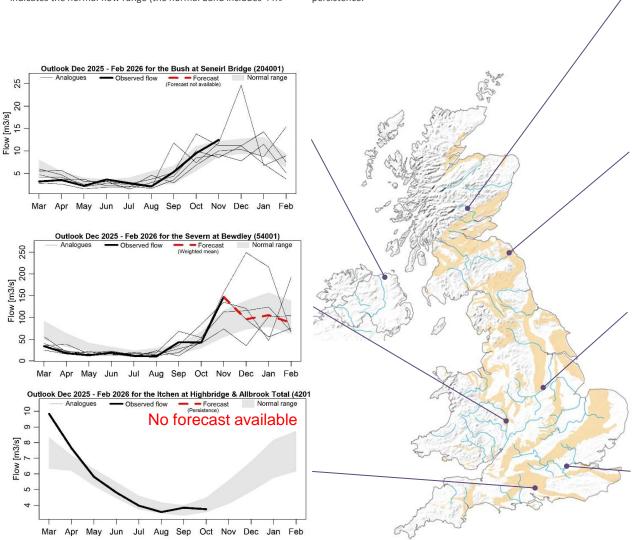
Outlook based on hydrological persistence and analogy

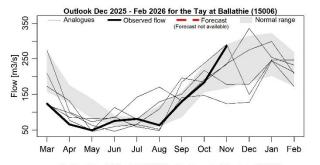
Period: December 2025 – February 2026

Issued on 04.12.2025 using data to the end of November 2025

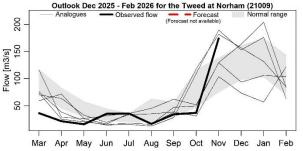
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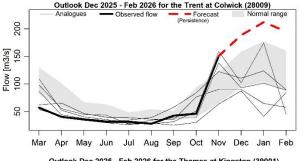
In each of the time series graphs the bold black line represents the observed flow during the past nine months. The grey band indicates the normal flow range (the normal band includes 44% of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows took in the following three months are also shown. The forecast is shown as the dashed red line, and in each plot it states whether this has come from the analogues or has been generated on the basis of participates.

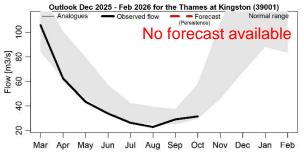




Site-based: 3 month outlook







Outlook based on modelled flow from historical climate

Overview

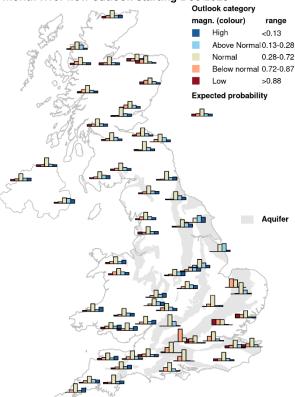
British Geological Survey

Period: December 2025 – May 2026

Issued on 03.12.2025 using data to the end of November 2025

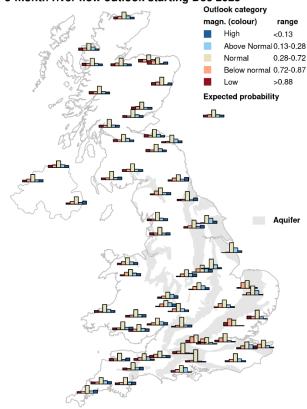
Environment Agency The outlook for December indicates that river flows are likely to be normal to above normal across western and northern areas. In central and eastern England, flows are more likely to be normal to below normal. The December to February 2026 outlook indicates that this pattern is likely to persist over the coming few months with a slight decrease in the likelihood of below normal to low flows in southeastern England.

1-month river flow outlook starting Dec 2025



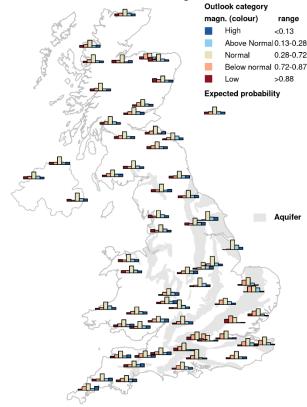
This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to a hydrological model. The outputs are probabilistic simulations of the average river flow over the forecast period (1 to 12 months ahead), at each location. The simulations are generated by the GR6J conceptual rainfall-runoff model from INRAE (France) calibrated on observed or naturalised flows.

3-month river flow outlook starting Dec 2025



The bar plot maps show the outlook distribution for 1, 3 and 6-month period for 64 catchments across England and Wales. Each bar plot represents the probabilistic distribution of the simulated river flow compared to the historical river flow, for the same n-month period. The probabilities fall within five categories, classified as: low, below normal, normal, above normal and high.

6-month river flow outlook starting Dec 2025



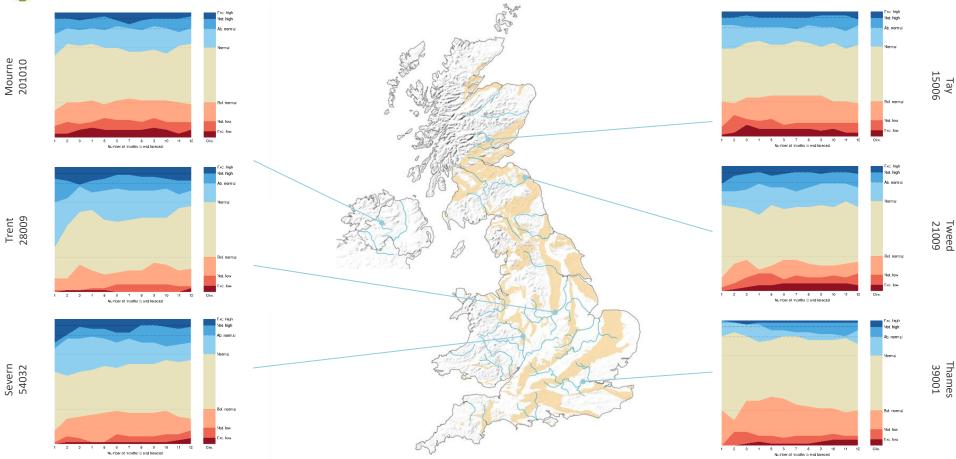
This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.

Please note that *Outlooks based on modelled flow from historical climate* from October 2023 onwards were generated using GR6J model, whereas until September 2023, they were produced using GR4J model. For more details, please see the section on River flow from historical climate at this link: https://hydoutuk.net/about/methods/river-flows









This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to a hydrological model. The outputs are probabilistic simulations of the average river flow over the forecast period (1 to 12 months ahead), at each location. The simulations are generated by the GR6J conceptual rainfall-runoff model from INRAE (France) calibrated on observed or naturalised flows.

The stack diagrams show the variation over time of the outlook distribution for a number of individual catchments. Each graph represents variation over time of the number of simulated river flows, in each month ensemble, that fall within each of seven categories: exceptionally low, notably low, below normal, normal, above normal, notably high and exceptionally high. The categories represent cumulative flow conditions, e.g. For 3-month, the simulated total 3-month flow compared to the historical 3-month flow distribution. The monthly variations can be compared to the long-term average distribution of river flows (shown as columns on

the right of each timeline graph).

This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.



Met Office

Outlook based on modelled flow using historical weather analogues

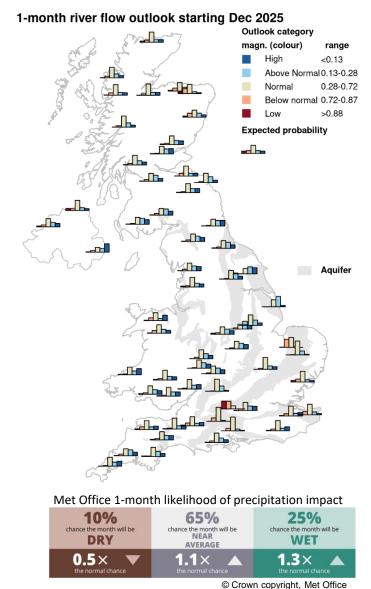
Period: December 2025 – February 2026

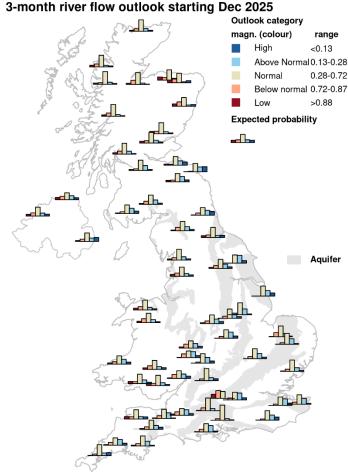
Issued on 03.12.2025 using data to the end of November 2025

The outlook for December indicates that flows across most of the UK are likely to be in the normal to above-normal range, with southeastern England more likely to be in the normal range. The December to February 2026 outlook suggests that flows across the UK are likely to remain predominantly within the normal range, with some catchments in southeastern England showing a shift toward normal to above-normal flows.

The historical weather analogues method uses Met Office predictions of average weather 1 and 3 months ahead to provide inputs to a hydrological model. Like the ESP method, observed rainfall and temperature data from past years are used to drive the predictions, however, the analogue method constrains the selection of past rainfall using the weather conditions in the meteorological forecasts (which are summarised for this forecast in the Met Office likelihood of impacts blocks underneath the maps). For each member of the Met Office forecast ensemble, the 10 analogues that best match the predicted average weather pattern (surface pressure map) over the forecast period are selected. Precipitation and temperature sequences constructed from the selected analogue scenarios are corrected to account for historic trends and used as inputs to hydrological models. Here, the GR6J model is run using these inputs, creating an ensemble of hydrological forecasts.

The outputs shown in the maps are the likelihoods of different outcomes for the average river flow over the one-month and three-month forecast periods at each location. The outlooks maps show the distribution for 64 catchments across the United Kingdom. Each bar plot represents the likelihood of the simulated river flow compared to the historical river flow, for the same n-month period. The probabilities fall within five categories, classified as: low, below normal, normal, above normal and high. The expected climatological probability of ensemble members in each of these categories is shown under the legend.







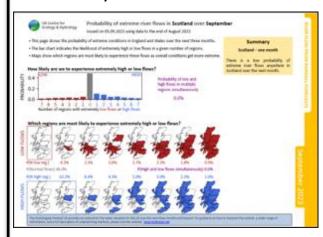
© Crown copyright, Met Office



Forecasts of river flows using Met Office rainfall forecasts

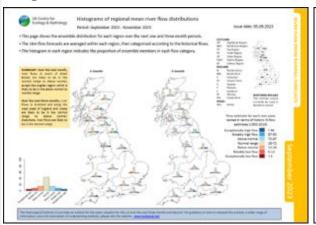
- These (yellow edged) pages summarise river flow forecasts produced by the UKCEH Water Balance Model.
- This model uses an ensemble of rainfall forecasts provided by the Met Office and a hydrological model to forecast river flows for the next one- and three-months ahead.
- A detailed description of these forecast products can be found on the final page, and a full technical description is given in the documentation available via the Hydrological Outlook website.
- Additional forecast products are available on the Hydrological Outlook Portal, via the website.

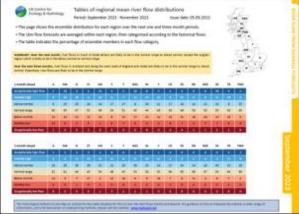
Probability of extreme river flows



- Use these pages if you are interested in extreme conditions across multiple regions.
- These pages summarise the risk of extremely high or low flows being observed across GB.
- The four pages show the risk for Scotland and for England & Wales over the next one and three months.
- The slides indicate the **probability of widespread extreme conditions** and which regions are most likely to experience extremely high or low flows.

Regional mean river flow distributions





- Use these pages if you are interested in the ensemble distribution in a single region.
- The first page shows the ensemble distribution as a histogram for each region.
- The second page shows the percentage of ensemble members in each band for each region.



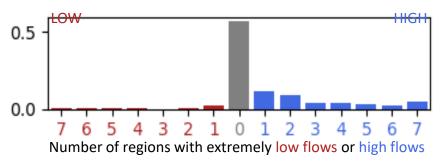
PROBABILITY

Probability of extreme river flows in **Scotland** over **December**

Issued on 02.12.25 using data to the end of November 2025

This page shows the **probability of extreme conditions in Scotland** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

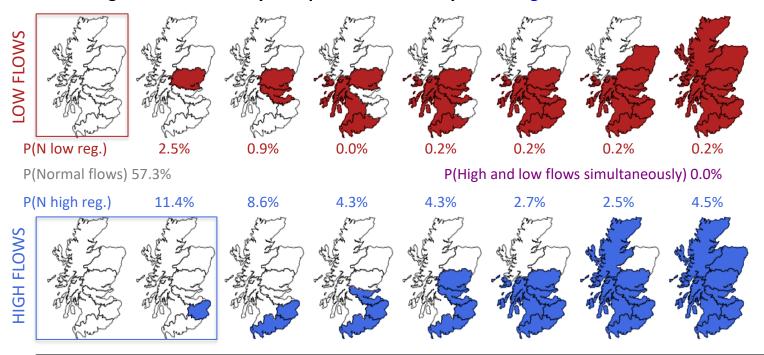
0.0%

Summary

Scotland - one month

Extreme river flows are unlikely to be observed in Scotland across December. There is a small chance that extreme high flows are observed in the southeast.

Which regions are most likely to experience extremely low or high flows?



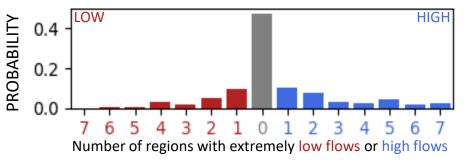


Probability of extreme river flows in Scotland over December to February

Issued on 02.12.25 using data to the end of November 2025

This page shows the **probability of extreme conditions in Scotland** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

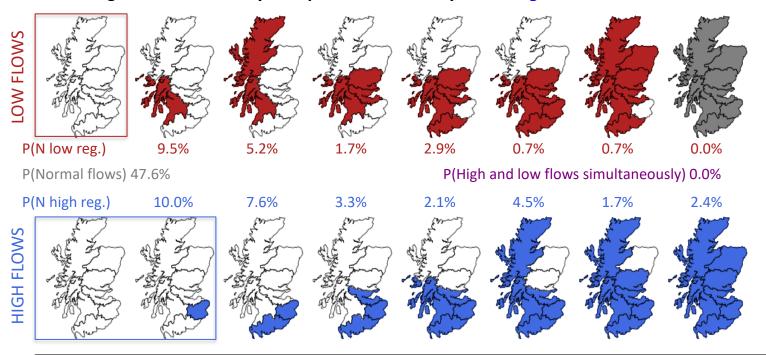
0.0%

Summary

Scotland - three months

Extreme seasonal-mean river flows are unlikely to be observed in Scotland across the period. There is a small chance that extreme high flows are observed in the southeast.

Which regions are most likely to experience extremely low or high flows?



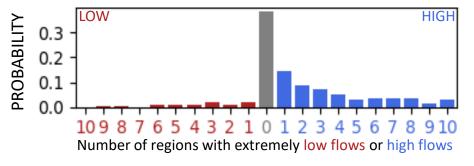


Probability of extreme river flows in England and Wales over December

Issued on 02.12.25 using data to the end of November 2025

This page shows the **probability of extreme conditions in England and Wales** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

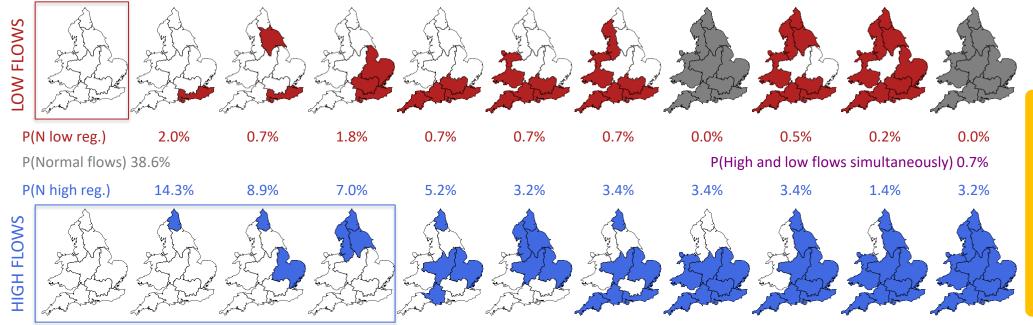
0.7%

Summary

England and Wales – one month

Extreme river flows are unlikely to be observed in England and Wales across December. There is a chance that extreme high flows are observed in the northeast.

Which regions are most likely to experience extremely low or high flows?



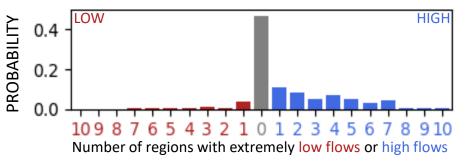


Probability of extreme river flows in England and Wales over December to February

Issued on 02.12.25 using data to the end of November 2025

This page shows the **probability of extreme conditions in England and Wales** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

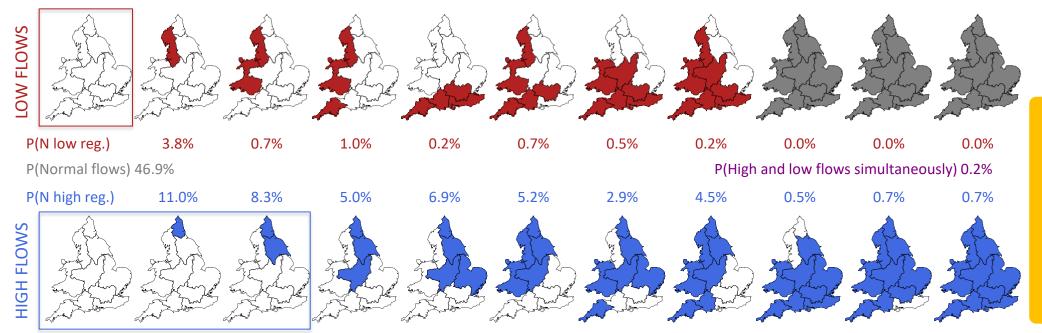
0.2%

Summary

England and Wales – three months

Extreme river flows are unlikely to be observed in England and Wales across December. There is a chance that extreme high flows are observed in the northeast.

Which regions are most likely to experience extremely low or high flows?



Highlands Region

North East Region

Tay Region

Forth Region

SCOTLAND HR His

NER

TR

FR



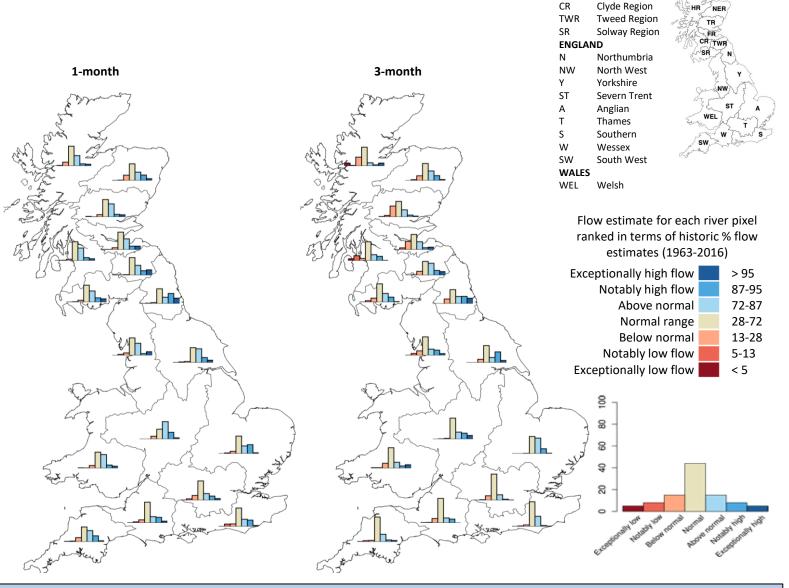
Histograms of GB regional mean river flow distributions

Period: December 2025 - February 2026

- This page shows the ensemble flow distribution for each region over the next 1- and 3-month periods.
- The 1km flow forecasts are averaged within each region, then categorised according to the historical flows.
- The histogram in each region indicates the proportion of ensemble members in each flow category.

summary: Over the next month, river flows across most of Great Britain are likely to be in the normal range to above normal. Flows in southern England are likely to be in the normal range..

Over the next three months, flows across most of Great Britain are likely to be in the normal range. Some eastern regions may be in the normal range to above normal range.





Tables of GB regional mean river flow distributions

Period: December 2025 - February 2026 Issue date: 02.12.2025

- This page shows the ensemble flow distribution for each region over the next 1- and 3-month periods.
- The 1km flow forecasts are averaged within each region, then categorised according to the historical flows.
- The table indicates the percentage of ensemble members in each flow category.

SUMMARY: Over the next month, river flows across most of Great Britain are likely to be in the *normal range* to *above normal.* Flows in southern England are likely to be in the *normal range*.

Over the next three months, flows across most of Great Britain are likely to be in the *normal range*. *Some* eastern regions may be in the *normal range* to *above normal*.



1-month ahead	Α	NW	N	ST	SW	S	T	WEL	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	2	9	14	3	2	2	4	5	4	6	5	9	4	5	9	6	14
Notably high	24	4	26	18	16	17	11	8	14	13	8	10	6	14	11	7	12
Above normal	20	31	17	46	29	19	17	36	16	36	33	28	27	22	29	34	26
Normal range	46	46	39	26	39	48	50	42	54	39	49	46	52	44	44	46	46
Below normal	6	6	2	8	11	7	12	7	8	3	4	5	10	14	5	6	1
Notably low	2	3	1	0	2	6	4	1	2	2	1	1	1	1	1	0	1
Exceptionally low flow	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	2	0

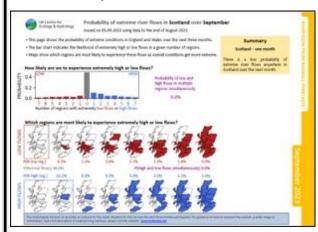
3-month ahead	Α	NW	N	ST	SW	S	T	WEL	W	Υ	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	1	4	14	9	3	1	0	9	0	6	0	7	7	3	1	2	10
Notably high	13	14	19	16	5	2	3	6	10	28	11	5	3	13	13	5	12
Above normal	41	16	19	18	20	26	14	16	13	13	16	21	8	25	23	19	31
Normal range	45	48	36	55	65	64	69	54	64	44	50	40	49	44	48	41	36
Below normal	1	12	12	2	4	4	12	13	11	9	6	22	23	13	10	28	10
Notably low	0	5	0	1	3	1	1	1	1	0	13	5	1	2	4	4	1
Exceptionally low flow	0	0	0	0	1	0	0	1	1	0	5	0	8	0	0	1	0



Forecasts of river flows using Met Office rainfall forecasts

- The data on these (yellow-bordered) pages are based on approximately 400 rainfall scenarios provided by the Met Office, which are used as inputs to a water balance hydrological model.
- River flow forecasts for every 1km grid cell are ranked according to the historical flow estimates and aggregated within each region.
- A full description of this method and these summary products is given in the technical documentation available via the Hydrological Outlook website.

Probability of extreme river flows



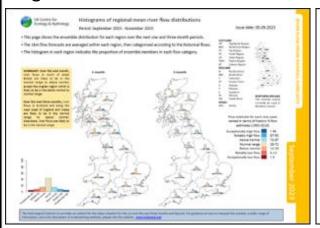
Extreme river flows are defined as those which rank in the lowest or highest 13% of historical flow estimates (1963 - 2016). This definition encompasses the 'Notably' and 'Exceptionally' high/low flow bands used elsewhere in the Outlook.

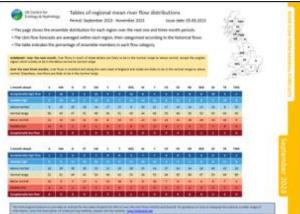
The bar chart shows the probability of a given number of regions experiencing extremely high/low flows, where scenarios showing both extremely high and extremely low flows in different regions simultaneously excluded. These probabilities are also shown beneath the maps.

Shaded regions on each map are those most likely to experience extreme flows from the set of scenarios with at least a given number of regions experiencing such flows. If shown, grey maps indicate scenarios not observed in the ensemble.

The box drawn around some maps spans the central 50% probability interval, excluding scenarios where extremely high/low flows are observed simultaneously. If these excluded cases constitute a significant probability, details are given in the yellow summary box.

Regional mean river flow distributions



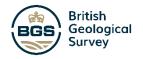


The maps illustrate the ensemble distribution of regional mean river flows. The historical distribution is shown at bottom-left, and allows deviations from the normal distribution to be determined by comparing the forecast distribution to the historical distribution. A summary is given in the yellow box.

The table gives access to the data shown in the histograms. The numbers in the tables are the percentage of ensemble forecasts falling in each of the flow categories. As before results are averaged by region then ranked in terms of 54 years of historical regional flow estimates (1963 - 2016).

3rd quartile

Highest rainfall forecast



Lowest rainfall forecast

3-month outlook

1st quartile

Period: December 2025 – February 2026

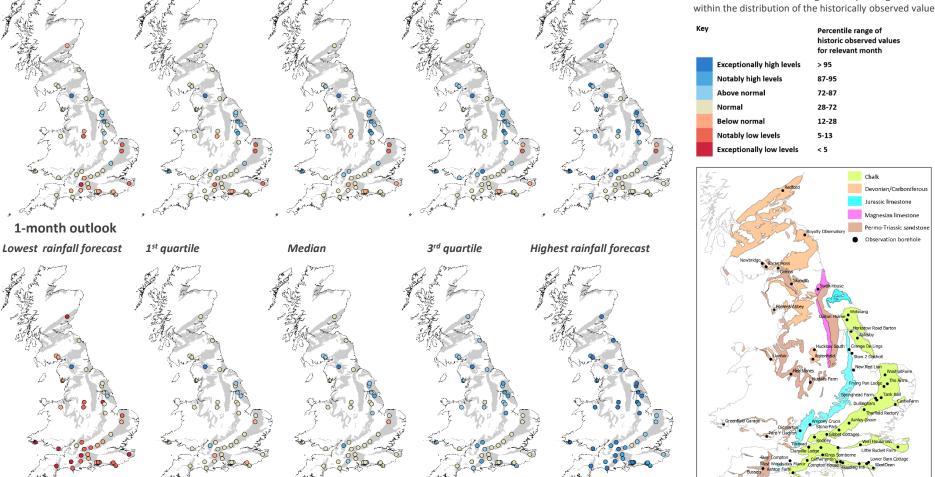
Issued on 07.12.2025 using data to the end of November

Under median rainfall conditions, groundwater levels in the south and east of England are forecast to remain normal to notably below normal over the next month. In the rest of the UK for most areas, groundwater is expected to exhibit normal to exceptionally above normal levels. Groundwater levels are expected to recover to normal to above normal in most areas of the UK over the next three months, aligning with the expected recharge season. Groundwater levels in the east of England are forecast to be normal to below normal during this period.

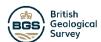
Median

These forecasts are produced by running five members of the Met Office ensemble climate forecast through groundwater models of observation borehole hydrographs at 42 sites across the country. The sites are distributed across the principal aquifers.

Based on the distribution of observed historical groundwater levels in a given month, seven categories have been derived for each site: very low, low, below normal, normal, above normal, high, and very high. The forecast groundwater level is assigned to one of these seven categories depending on where it falls within the distribution of the historically observed values.







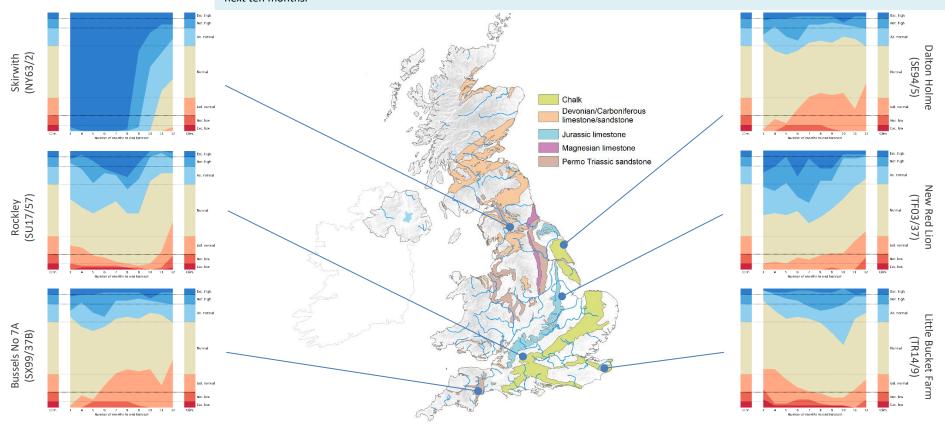


Outlook based on modelled groundwater from historical climate

Period: December 2025 -November 2026

Issued on 07.12.2025 using data to the end of October

Groundwater levels in the Permo-Triassic Sandstone at Skirwith are projected to be exceptionally above normal for the next eight months and are likely to remain above normal until the end of this forecast. Elsewhere in the Sandstone, at Bussels No 7A, and at Dalton Holme in the Chalk, levels are likely to remain normal for the majority of this forecasting period, with an increasing chance of below normal levels over the months. Furthermore, in the Chalk at Rockley, and in the Jurassic Limestone at New Red Lion, normal to above normal levels are expected, with an increased likelihood of below normal levels past the ten-month mark. In contrast, for Little Bucket Farm in the Chalk there is a reducing in likelihood of below normal levels over the next ten months.



This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evpotranspiration) that form input to hydrological models. The outputs are probabilistic simulations of the average groundwater level over the forecast horizon (3 to 12 months ahead), at each location.

The graphs show variation over time of the number of simulated groundwater levels in each monthly ensemble,

that fall within each the seven categories: exceptionally low, notably low, below normal, normal, above normal, notably high and exceptionally high. The monthly variations can be compared to the long-term average distribution of levels, which are shown as columns on the left and right of each graph.

This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of

the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.