UK Hydrological Outlook

UKCEH

Period: From January 2026

Issued on 12.01.2026 using data to the end of December 2025

SUMMARY The outlook for January is for normal river flows and normal to above normal groundwater levels across most of the country, except parts of southeast England where normal to below normal flows and levels are most likely. In these areas, normal to below normal flows and levels may persist through the January-March period. Elsewhere, normal flows and levels will predominate over the next three months except in some northwestern areas where normal to above normal flows are favoured.

Rainfall:

The first half of December was very wet, but the latter half was much drier. The December rainfall was slightly above average for the UK, but some areas were much wetter (e.g. southwest England and south Wales) while parts of Scotland and East Anglia were drier than average. The forecast (issued by the Met Office on 22.12.2025) indicates a slightly greater chance of dry conditions in January, whereas the three-month (January-March) outlook indicates a higher-than-normal chance of being wet. The forecast favours westerly airflows so wetter conditions are most likely to occur in northern and western areas, while the south and east could remain drier.

River flows:

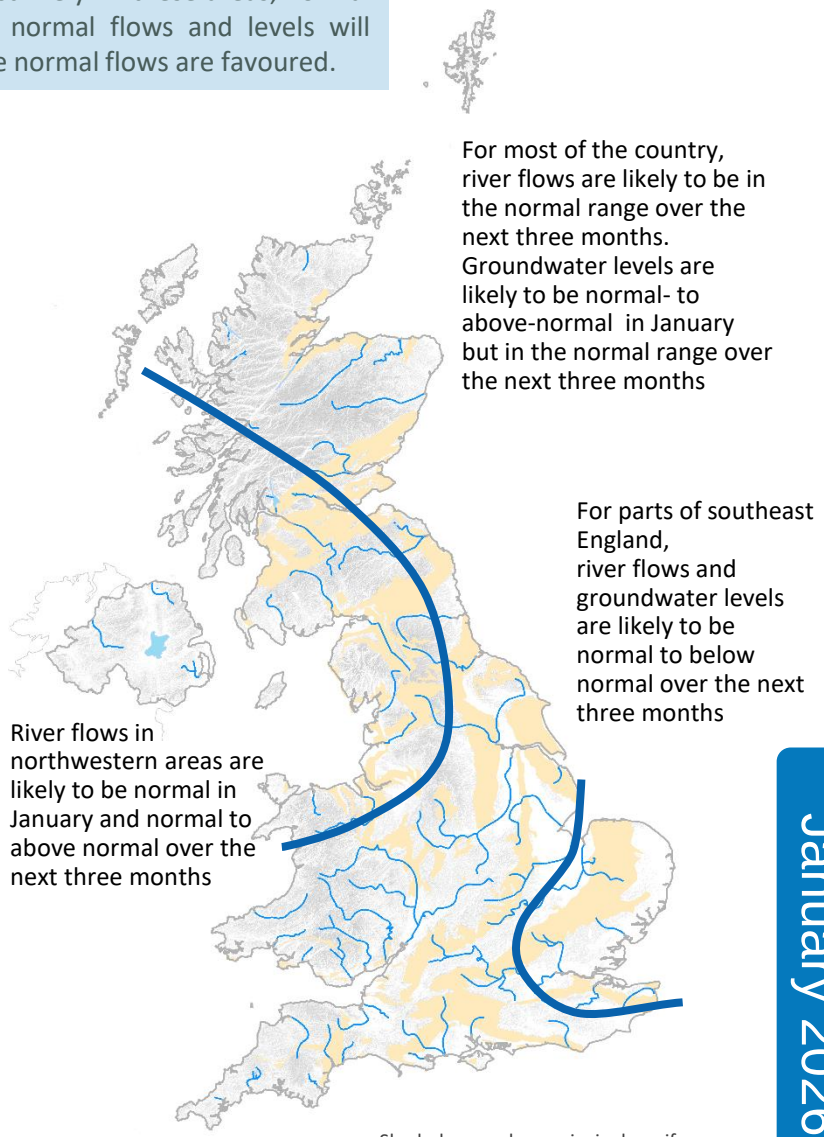
December river flows were above normal for the majority of the country, and exceptionally high in some western catchments, reflecting the wet start to the month and the sustained autumn rainfall. The exceptions were northern Scotland and parts of East Anglia and southern England where flows were in the normal range or below. While average flows for December were typically above normal, most rivers receded steeply with the drier late December weather (that extended into early 2026).

The outlook for January is for flows to be in the normal range across most of the country, and normal to below normal in parts of southeast and eastern England. The outlook for January-March is for normal flows to predominate, except in parts of northwest Britian where normal to above normal flows are likely, and parts of the southeast where normal to below normal flows are likely to persist.

Groundwater:

Groundwater levels in December were normal to above normal across most aquifer areas, with exceptionally high levels in some northern and central boreholes. Below normal levels were registered in Northern Ireland, parts of Scotland and parts of the Chalk of East Anglia and the North Downs.

The January Outlook is for a broadly similar situation, with normal to above normal levels predominant except in parts of the Chalk of southeast England where normal to below normal levels are likely. The January – March outlook indicates a continuation of normal to below normal levels in these areas, but favours normal levels for the rest of the country, although above normal levels may persist in some aquifer areas.



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

UK HYDROLOGICAL OUTLOOK

January 2026

UKCEH · British Geological Survey · Department for Infrastructure An Roinn Bonneagair www.infrastructure-ni.gov.uk · Environment Agency · Met Office · Cyfoeth Naturiol Cymru Natural Resources Wales · sepa

UK Hydrological Outlook

UKCEH

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.

	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 UK 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 UK Hydrological Outlook Partnership excludes all warranties or representations (express or implied) in respect of the Content.

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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, 12 January 2026, 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-england

Flood warnings are continually updated, and should be consulted for an up-to-date and localised assessment of flood risk:

i. 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/

UKCEH

British Geological Survey

Department for Infrastructure An Roinn Bonneagair www.infrastructure-ni.gov.uk

Environment Agency

Met Office

Cyfoeth Naturiol Cymru Natural Resources Wales

sepa

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

CURRENT CONDITIONS

Issue date: 05.01.2026

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.

Flow estimate for each river pixel ranked in terms of historic % flow estimates (1963-2016)

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

January 2026

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Current Daily Simulated Subsurface Water Storage Conditions

Based on subsurface water storage estimated for 31 December 2025

Issue date: 05.01.2026

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.

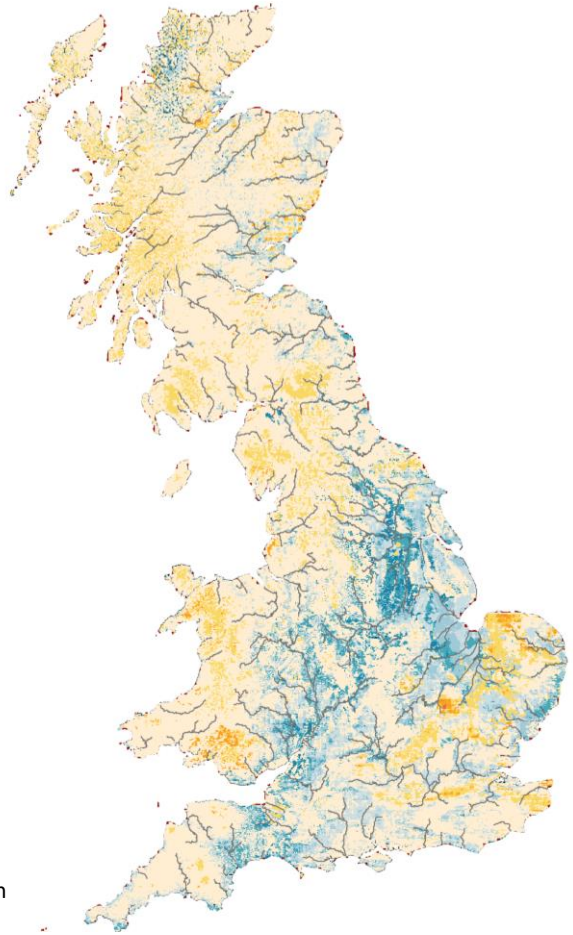
SUMMARY: Over most of Great Britain subsurface water stores are typical or slightly drier than usual for this time of year. Some areas of England show subsurface stores that are slightly wetter than usual.

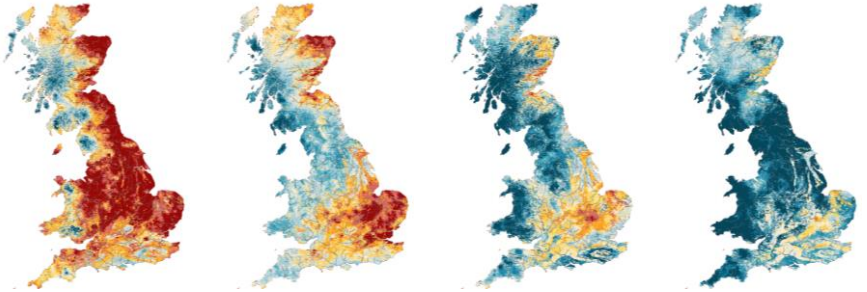
Relative wetness

Water storage anomaly as a % of maximum (positive wetness) or minimum (negative wetness) storage anomaly (zero indicates average value)

High (very wet)	>80
	60-80
Medium wetness	40-60
	20-40
Low wetness	0.01-20
Average conditions	-0.01-0.01
Low dryness	-20--0.01
	-40--20
Medium dryness	-60--40
	-80--60
High (very dry)	<-80
Major rivers	

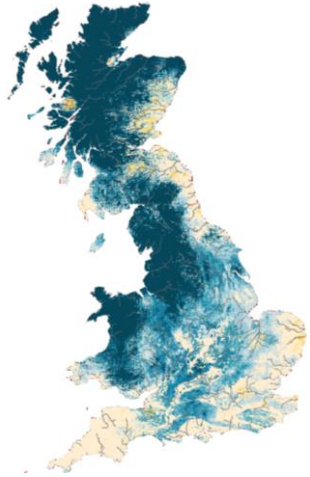
Labels refer to estimated storage on final day of named month



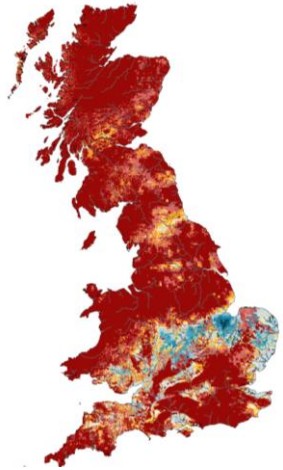


August September October November

December 2024



August 1976*



*Example month displaying extreme negative wetness

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Current Daily Simulated Soil Moisture Conditions

Based on soil moisture estimated for 31 December 2025

Issue date: 05.01.2026

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.

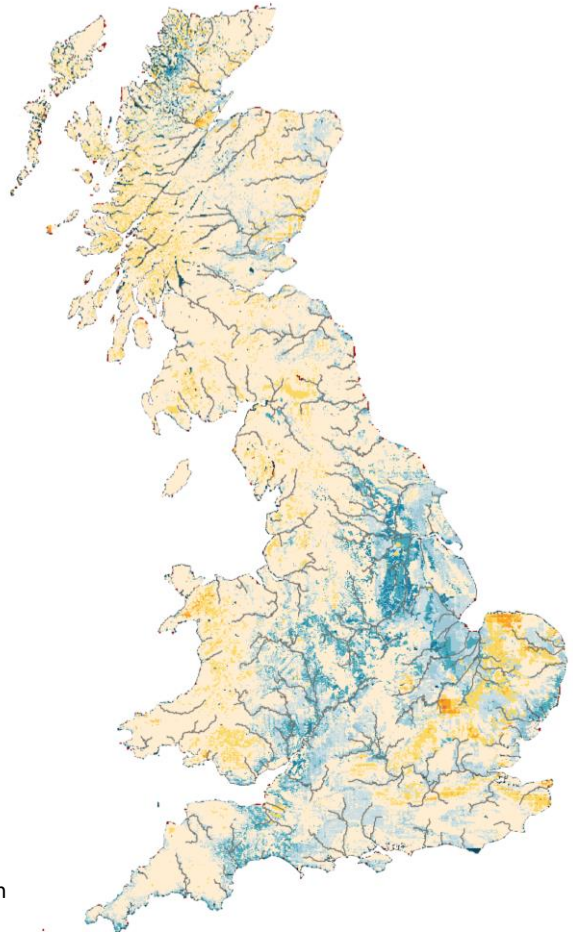
SUMMARY: Over most of Great Britain soil moisture water stores are typical or slightly drier than usual for this time of year. Some areas of England show soil moisture conditions that are slightly wetter than usual.

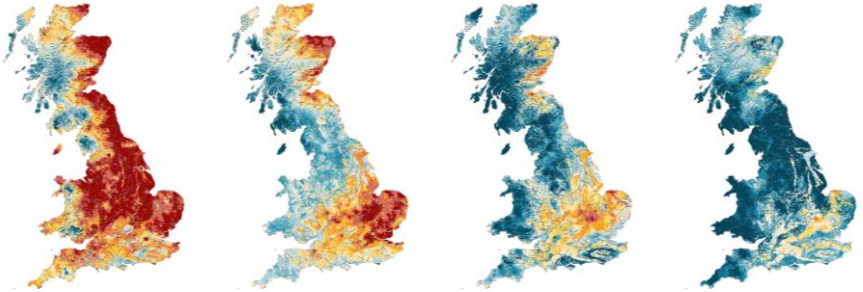
Relative wetness

Soil moisture anomaly as a % of maximum (positive wetness) or minimum (negative wetness) storage anomaly (zero indicates average value)

High (very wet)	>80
	60-80
Medium wetness	40-60
	20-40
Low wetness	0.01-20
Average conditions	-0.01-0.01
Low dryness	-20--0.01
	-40--20
Medium dryness	-60--40
	-80--60
High (very dry)	<-80
Major rivers	

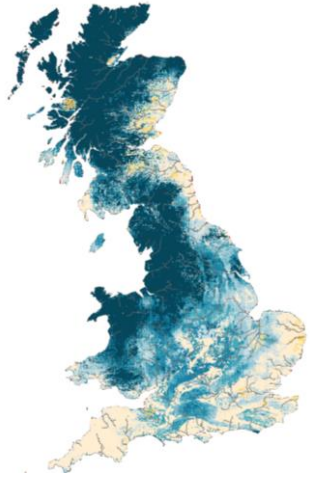
Labels refer to estimated storage on final day of named month





August September October November

December 2024



October 2000*

*Example month displaying extreme positive wetness

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Estimate of Additional Rainfall Required to Overcome Dry Conditions

Based on subsurface water storage estimated for 31 December 2025

Issue date: 05.01.2026

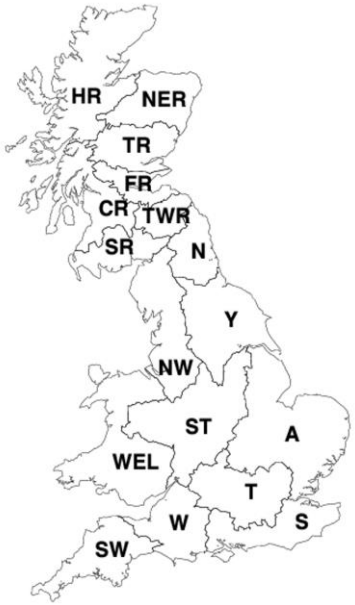
CURRENT CONDITIONS

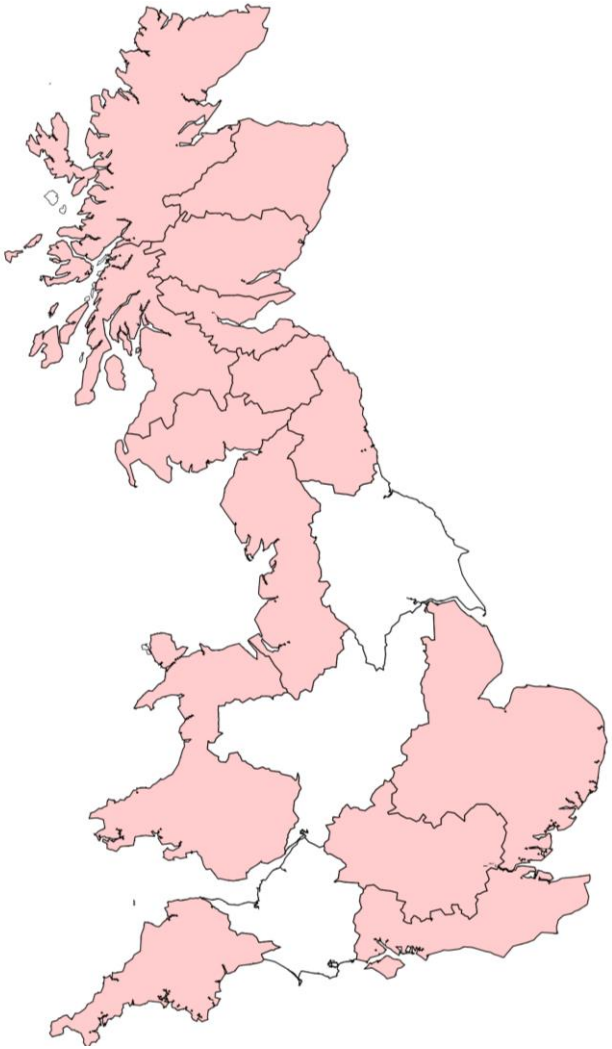
These maps show the Grid-to-Grid (G2G) hydrological model simulated subsurface water storage, expressed as an anomaly from the historical monthly mean (1981-2010), presented on a 1km grid and as regional means. Subsurface storage deficits, i.e. where the subsurface water storage anomaly is less than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

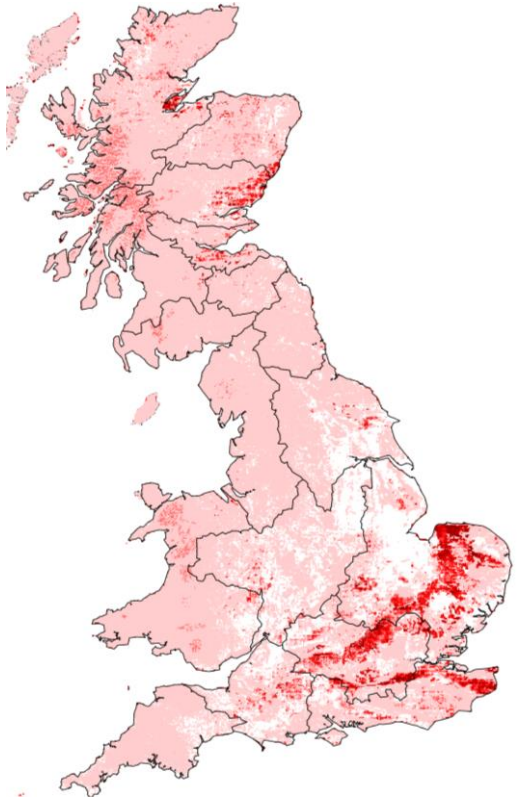
The subsurface storage deficit (mm) can be interpreted as an estimate of additional rainfall that would be required in future months to overcome dry conditions (i.e. rainfall in addition to what is expected on average). Regional mean values of additional rainfall required are provided in the table below.

Regional estimate of additional rainfall required (mm)

	SCOTLAND	
12	HR	Highlands Region
8	NER	North East Region
11	TR	Tay Region
12	FR	Forth Region
14	CR	Clyde Region
6	TWR	Tweed Region
12	SR	Solway Region
	ENGLAND	
3	N	Northumbria
7	NW	North West
0	Y	Yorkshire
0	ST	Severn Trent
9	A	Anglian
16	T	Thames
0	W	Wessex
9	S	Southern
5	SW	South West
	WALES	
9	WEL	Welsh







Water storage deficit (anomaly; mm)

- >125
- 100-125
- 75-100
- 50-75
- 25-50
- 0-25
- <0

January 2026

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Return Period of Rainfall Required to Overcome Dry Conditions

Period: January 2026 - June 2026

Issue date: 05.01.2026

CURRENT CONDITIONS

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: While many regions in the UK are at a slight subsurface storage deficit, no particularly heavy rainfall is required to overcome these drier conditions.

Jan

Feb

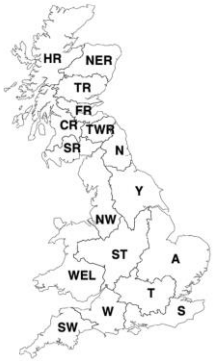
Mar

Apr

May

Jun

SCOTLAND
HR Highlands Region
NER North East Region
TR Tay Region
FR Forth Region
CR Clyde Region
TWR Tweed Region
SR Solway Region
ENGLAND
N Northumbria
NW North West
Y Yorkshire
ST Severn Trent
A Anglian
T Thames
S Southern
W Wessex
SW South West
WALES
WEL Welsh



Rainfall amount (Probability)		Return period (years)
Low (Likely)	>20%	<5
	<20%	5-10
	<10%	10-25
	< 4%	25-50
High (Less likely)	< 2%	50-100
	< 1%	100-200
Extreme (Unlikely)	<0.5%	>200

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January 2026

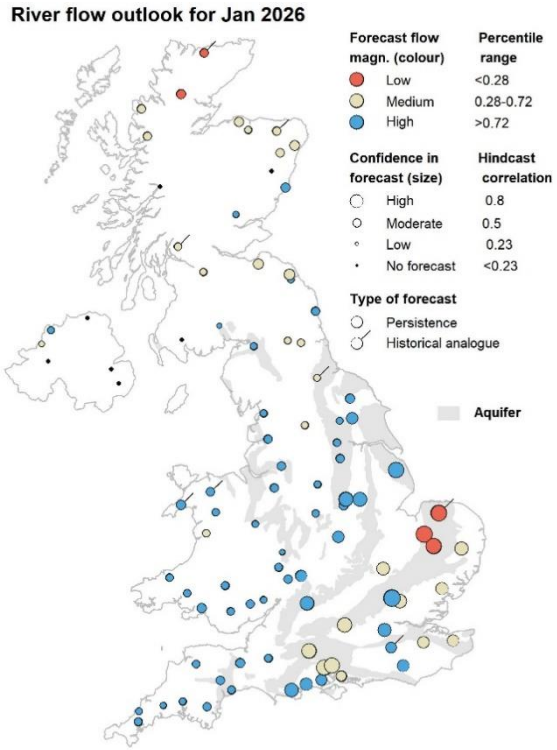
Outlook based on hydrological persistence and analogy

Overview

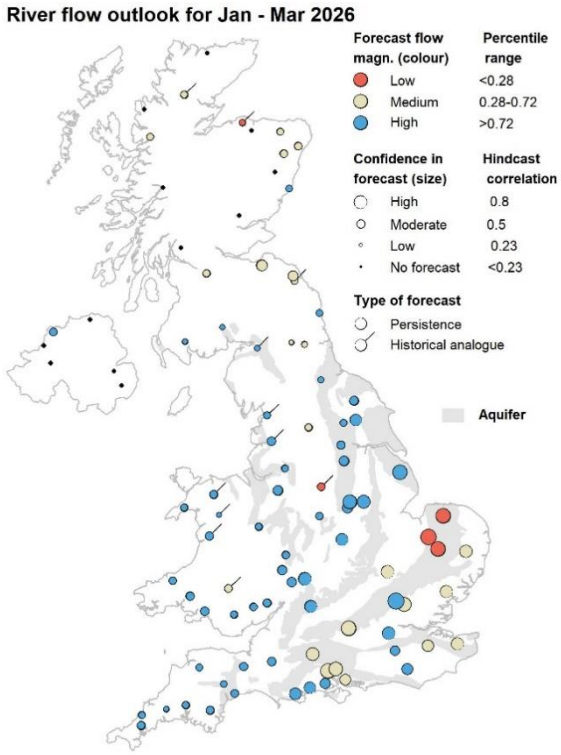
Period: January 2026 – March 2026

Issued on 07.01.2026 using data to the end of December 2025

SUMMARY: The outlook for January and for the January-March period suggests that river flows in northern and western England and Wales are expected to be in the normal to above-normal range. In south-east England, and north-east Scotland river flows are likely to be in the normal range, with some below normal flows.



1-month flow outlook



3-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 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.

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Outlook based on hydrological persistence and analogy

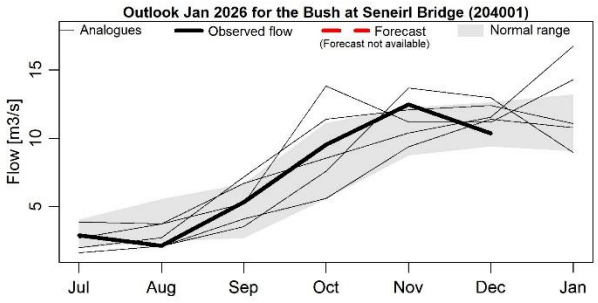
Site-based: 1 month outlook

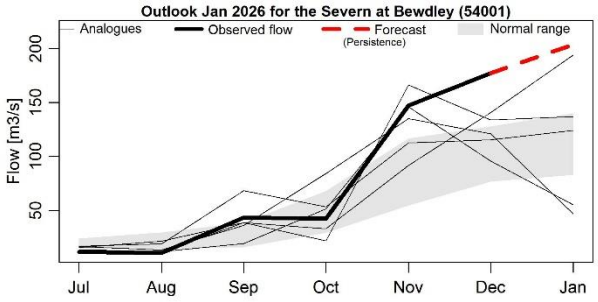
Period: January 2026 – March 2026

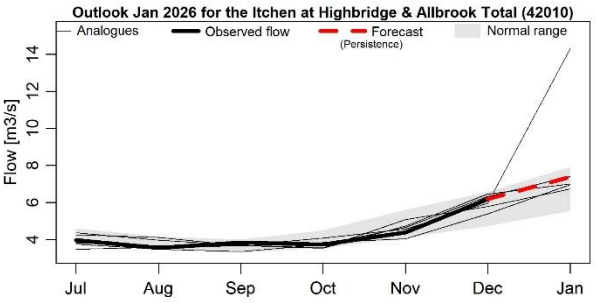
Issued on 07.01.2026 using data to the end of December 2025

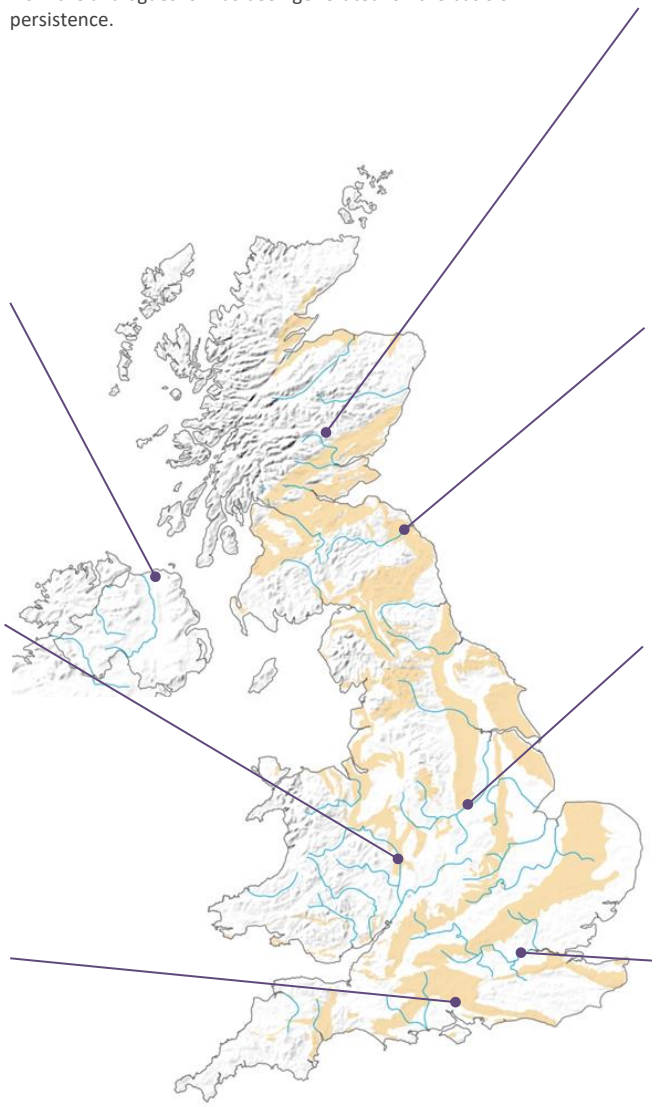
These figures provide insight into the hydrological analogue methodology for a set of sites from across the UK.

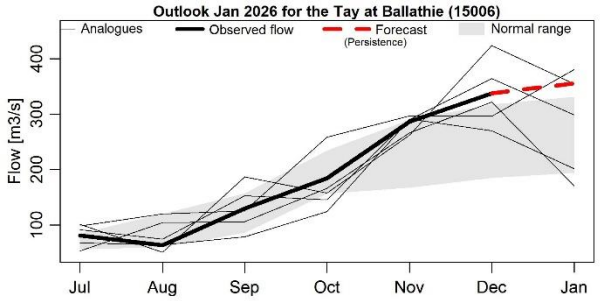
In each of the time series graphs the bold black line represents the observed flow during the past six months. The grey band indicates the normal flow range (the normal band includes 44% of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows took 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 persistence.

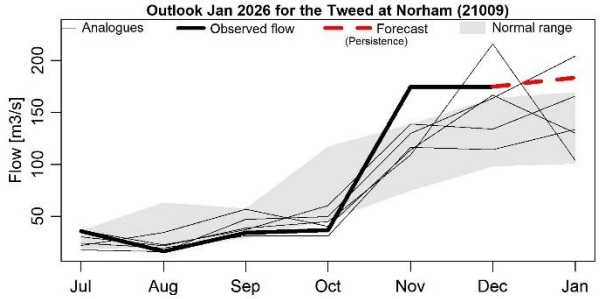


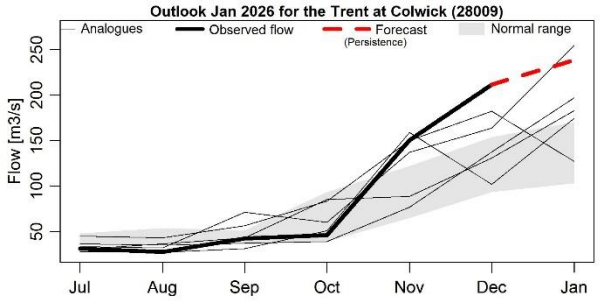


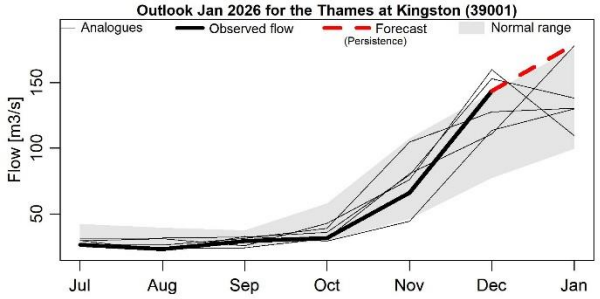












RIVER FLOW ANALOGY

January 2026

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Outlook based on hydrological persistence and analogy

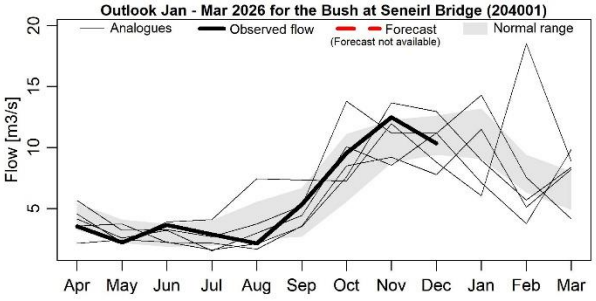
Site-based: 3 month outlook

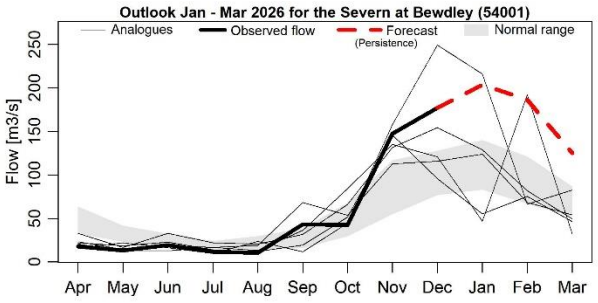
Period: January 2026 – March 2026

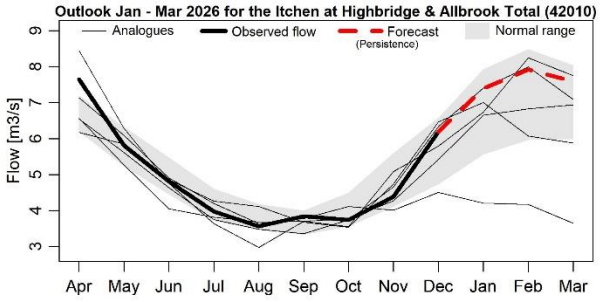
Issued on 07.01.2026 using data to the end of December 2025

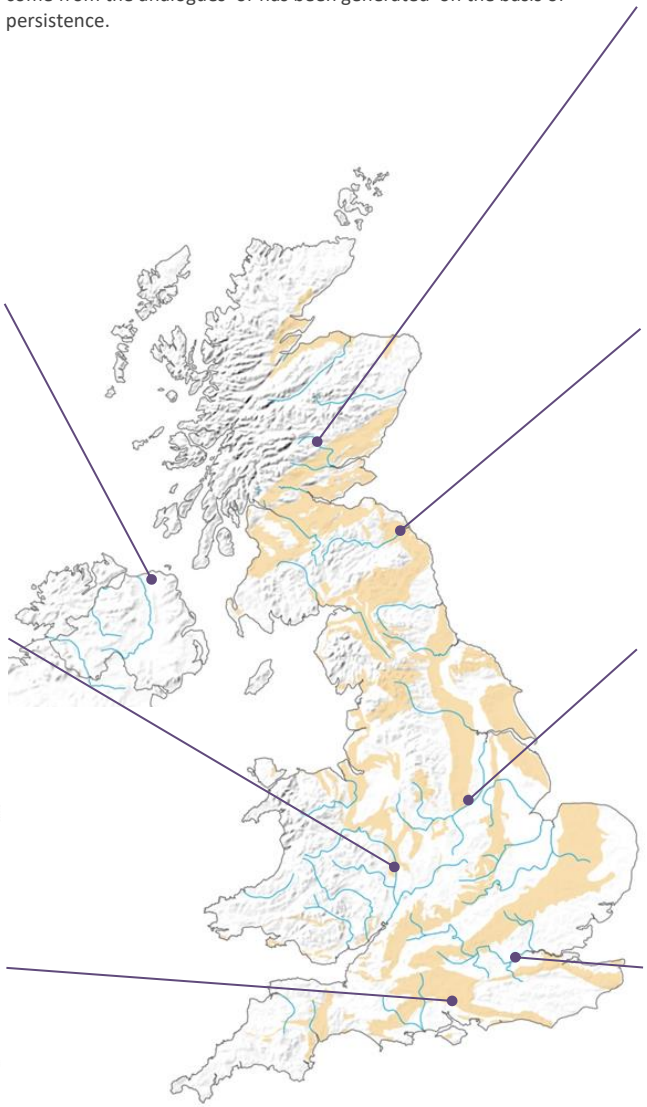
These figures provide insight into the hydrological analogue methodology for a set of sites from across the UK.

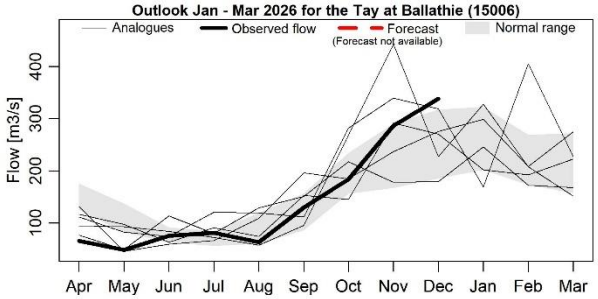
In each of the time series graphs the bold black line represents the observed flow during the past nine months. The grey band indicates the normal flow range (the normal band includes 44% of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows 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 persistence.

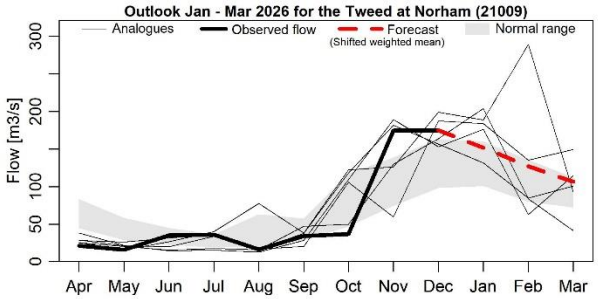


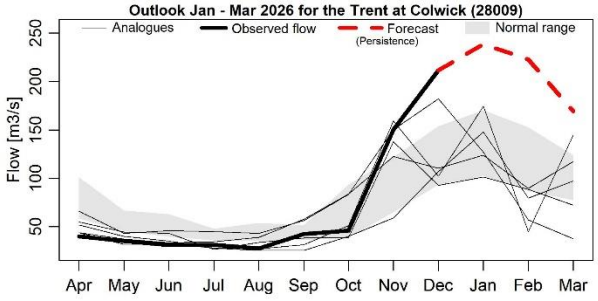


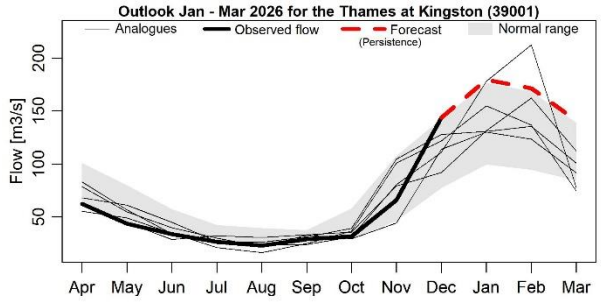












The Hydrological Outlook UK provides an outlook for the water situation for the UK over the next three months and beyond. For guidance on how to interpret the outlook, a wider range of information, and a full description of underpinning methods, please visit the website: www.hydoutuk.net

RIVER FLOW ANALOGY

January 2026

UK Centre for Ecology & Hydrology

British Geological Survey

Environment Agency

Outlook based on modelled flow from historical climate

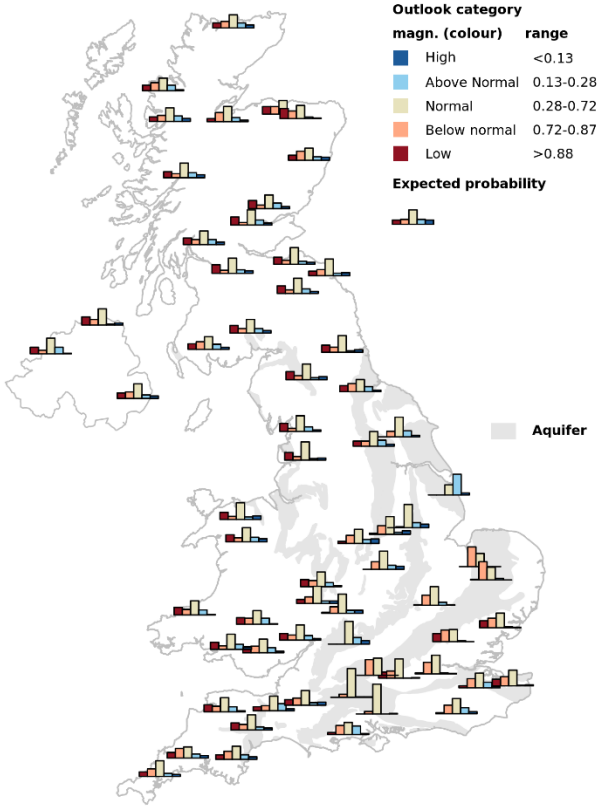
Overview

Period: January 2026 – June 2026

Issued on 05.01.2026 using data to the end of December 2025

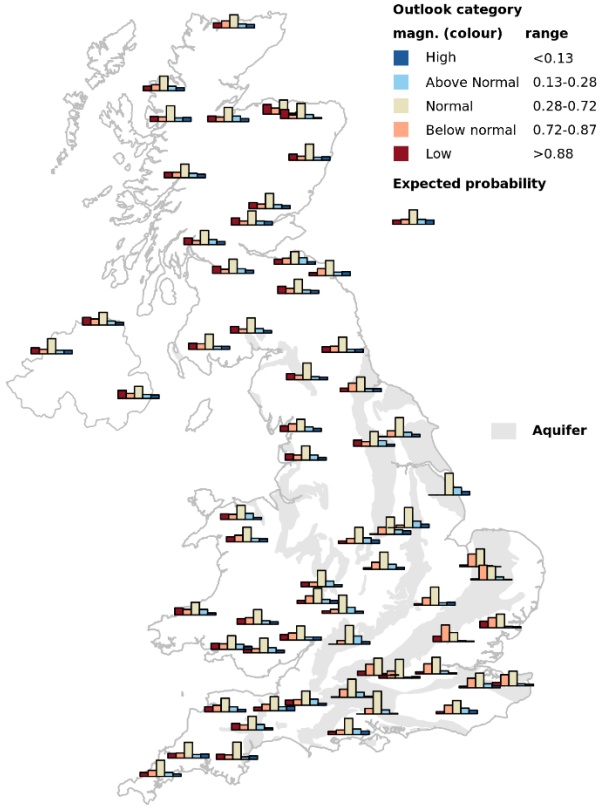
The outlook for January indicates that river flows are likely to be normal to below normal across much of the UK except for parts of central England and northwestern Scotland where flows are likely to be in the normal range. The January to March outlook indicates that this pattern is likely to persist over the coming few months though with a slight shift towards more normal conditions.

1-month river flow outlook starting Jan 2026



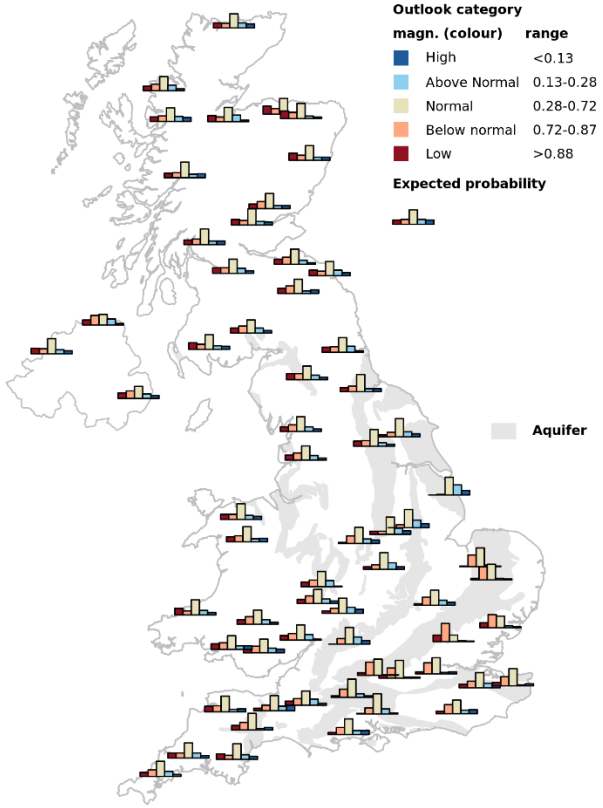
This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to a hydrological model. The outputs are probabilistic simulations of the average river flow over the forecast period (1 to 12 months ahead), at each location. 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 Jan 2026



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 Jan 2026



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

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UK Centre for Ecology & Hydrology

British Geological Survey

Environment Agency

Outlook based on modelled flow from historical climate

Overview

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.

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UK Centre for Ecology & Hydrology

Met Office

Outlook based on modelled flow using historical weather analogues

Period: January 2026 – March 2026

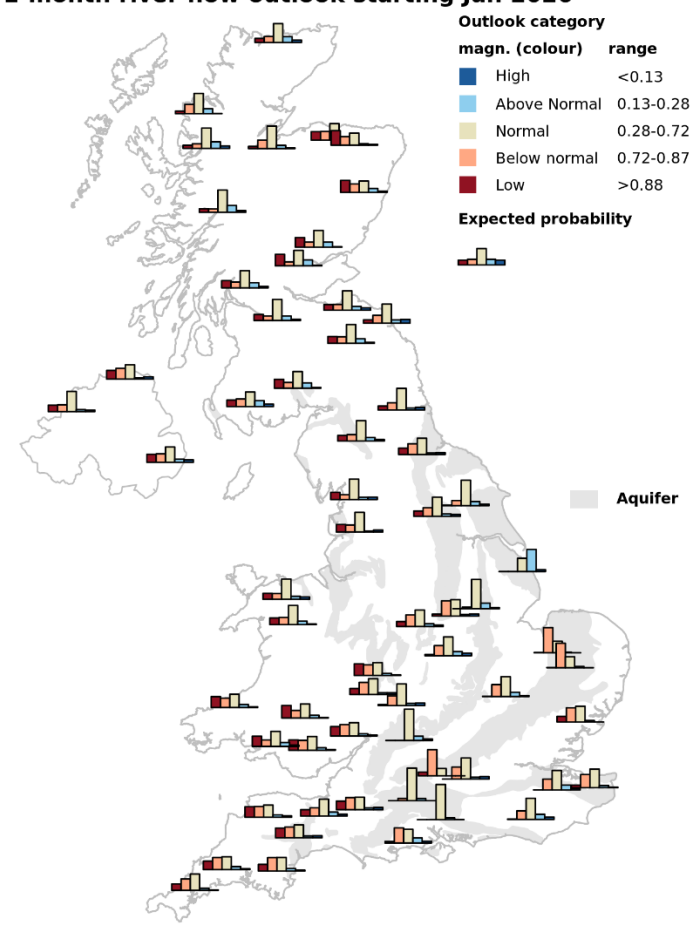
Issued on 05.01.2026 using data to the end of December 2025

The outlook for January indicates that flows across most of the UK are likely to be normal to below normal, except for northwestern Scotland and parts of central England which are likely to see flows in the normal range. The January to March outlook suggests a likely shift towards wetter conditions, with flows in the south of the UK likely to be in the normal range, and flows in the north of the UK largely expected to be normal to above normal except for eastern Scotland where flows are likely to be normal to below.

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.

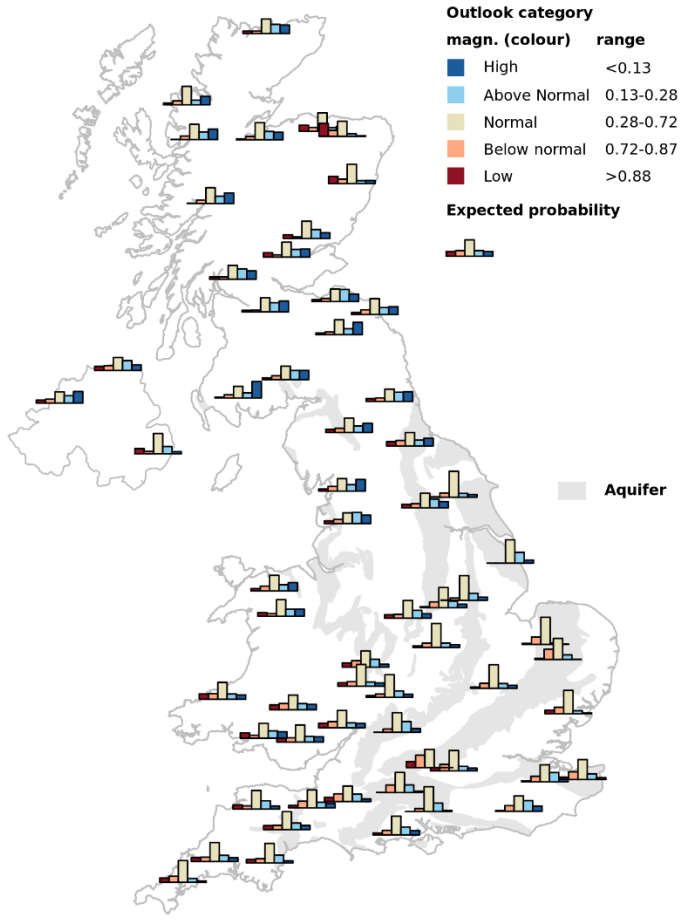
1-month river flow outlook starting Jan 2026



Met Office 1-month likelihood of precipitation impact

30% chance the month will be DRY	60% chance the month will be NEAR AVERAGE	10% chance the month will be WET
1.5× the normal chance ▲	1.0× the normal chance ▲▼	0.5× the normal chance ▼

3-month river flow outlook starting Jan 2026



Met Office 3-month likelihood of precipitation impact

10% chance the season will be DRY	50% chance the season will be NEAR AVERAGE	40% chance the season will be WET
0.5× the normal chance ▼	0.8× the normal chance ▼	2.0× the normal chance ▲

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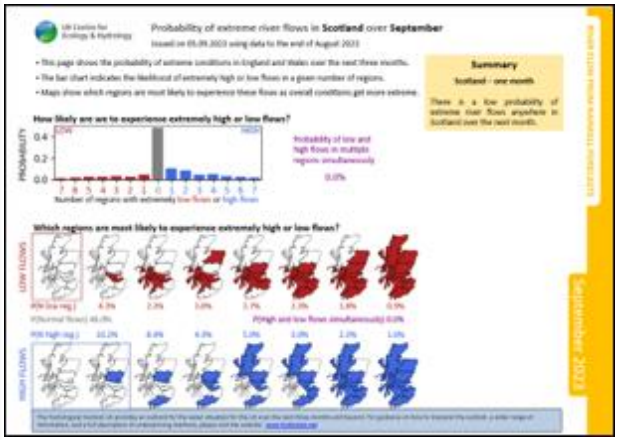
Forecasts of river flows using Met Office rainfall forecasts

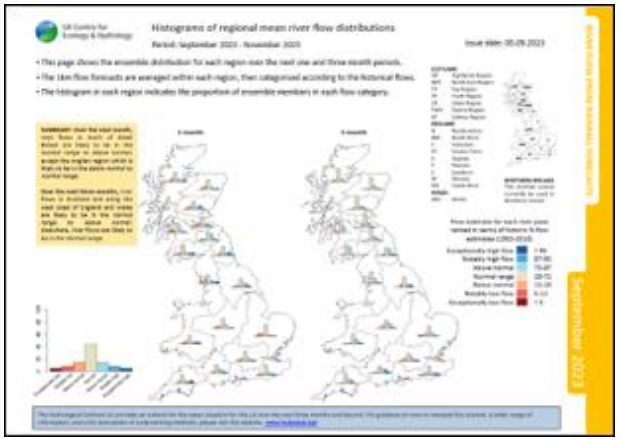
- These (yellow edged) pages summarise river flow forecasts produced by the UKCEH Water Balance Model.
- This model uses an ensemble of rainfall forecasts provided by the Met Office and a hydrological model to forecast river flows for the next one- and three-months ahead.
- A detailed description of 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.

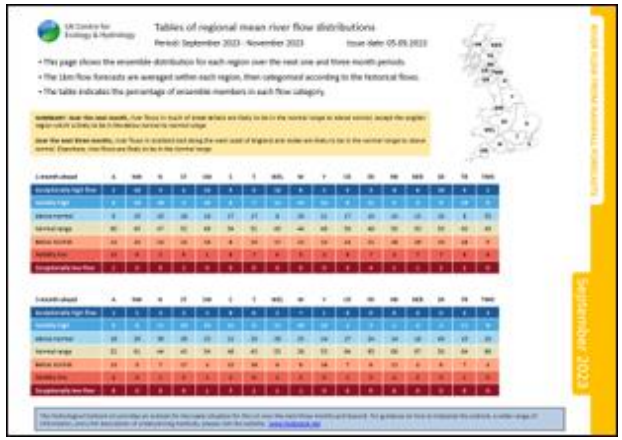
Probability of extreme river flows



- **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.

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RIVER FLOW FROM RAINFALL FORECASTS

January 2026

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

Issued on 05.01.26 using data to the end of December 2025

RIVER FLOW FROM RAINFALL FORECASTS

January 2026

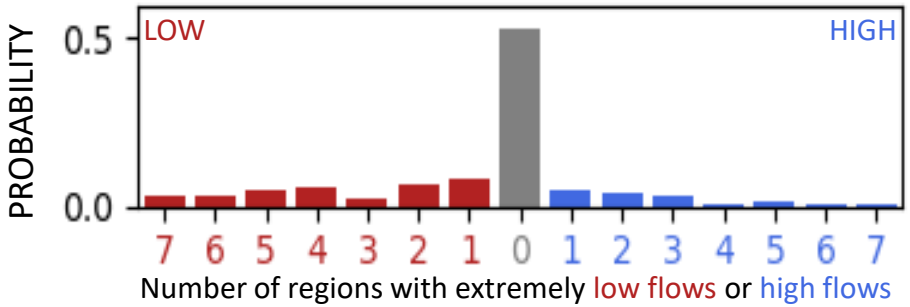
This page shows the **probability of extreme conditions in Scotland** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

Scotland – one month

River flows in Scotland are unlikely to be extremely high or low over the next month.

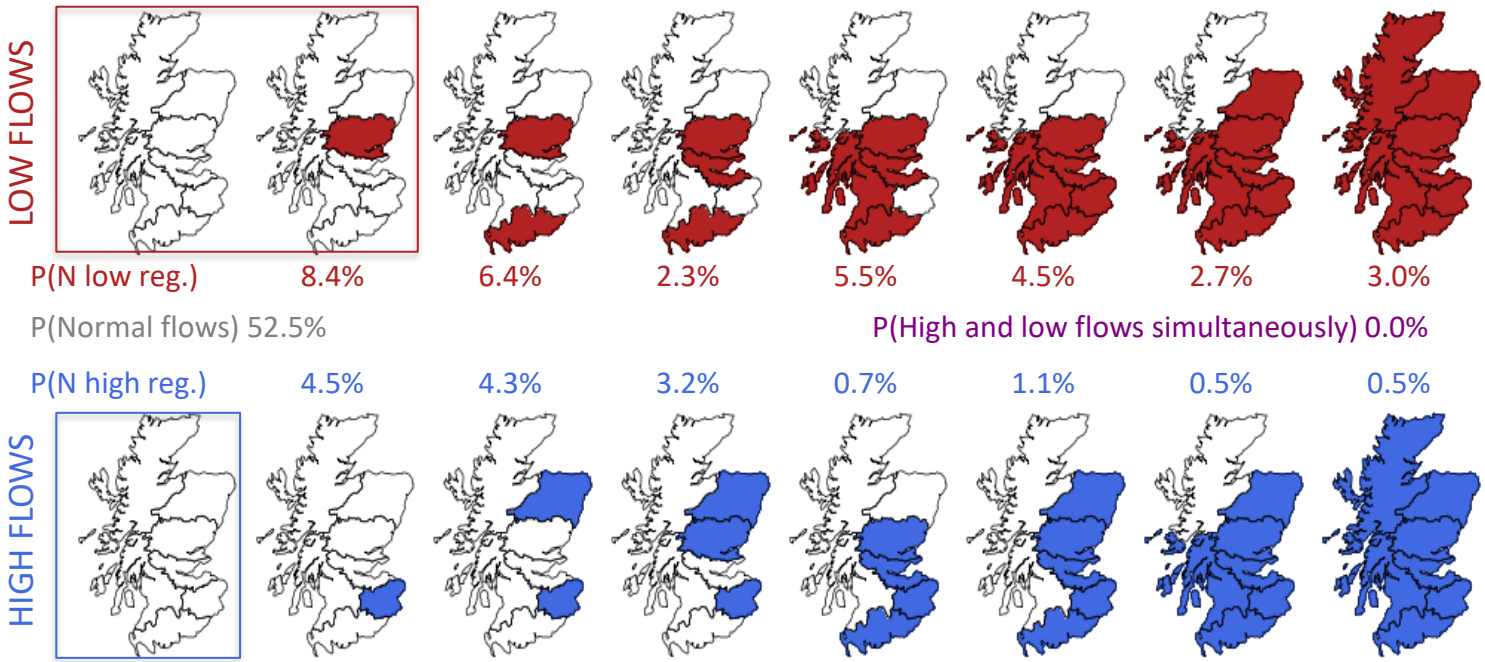
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

0.0%

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



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Probability of extreme river flows in **Scotland** over **January to March**

Issued on 05.01.26 using data to the end of December 2025

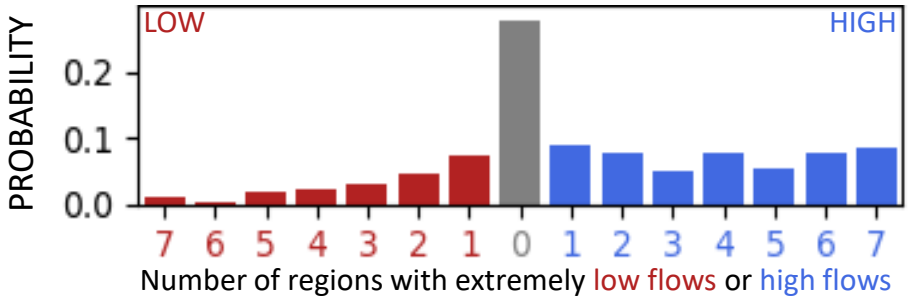
This page shows the **probability of extreme conditions in Scotland** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

Scotland – three months

River flows in Scotland are unlikely to be extremely low over the next three months. It is more likely than usual that extremely high flows will be observed in some areas of southern Scotland.

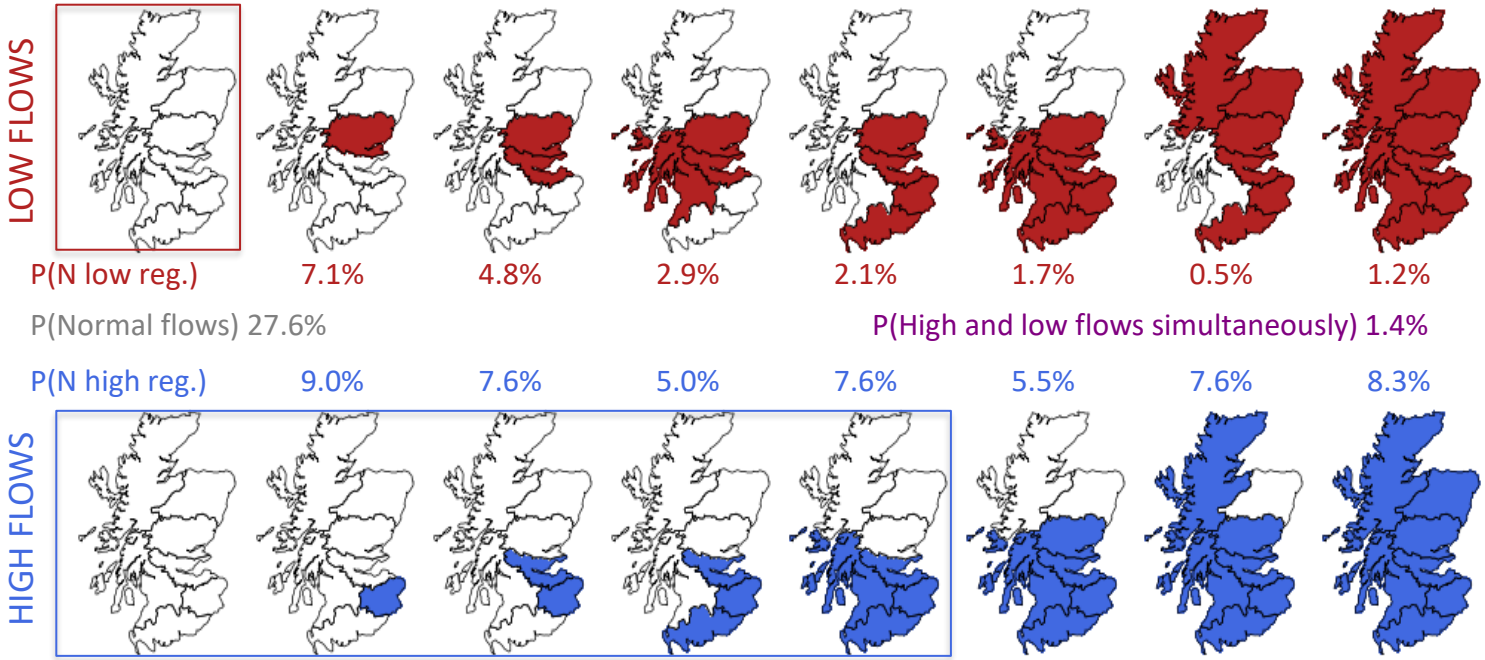
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

1.4%

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



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Probability of extreme river flows in **England and Wales** over **January**

Issued on 05.01.26 using data to the end of December 2025

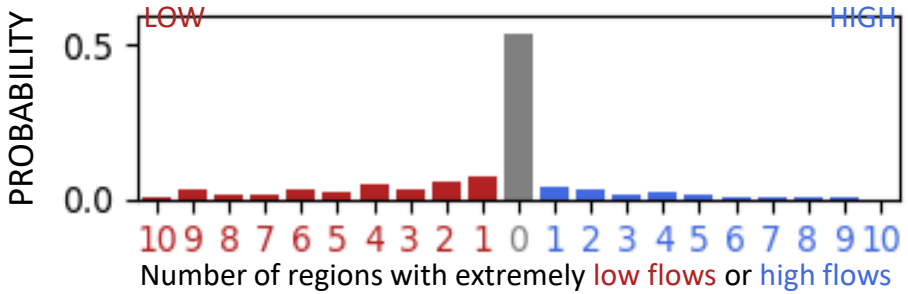
This page shows the **probability of extreme conditions in England and Wales** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

England and Wales – one month

River flows in England and Wales are unlikely to be extremely high or low over the next month.

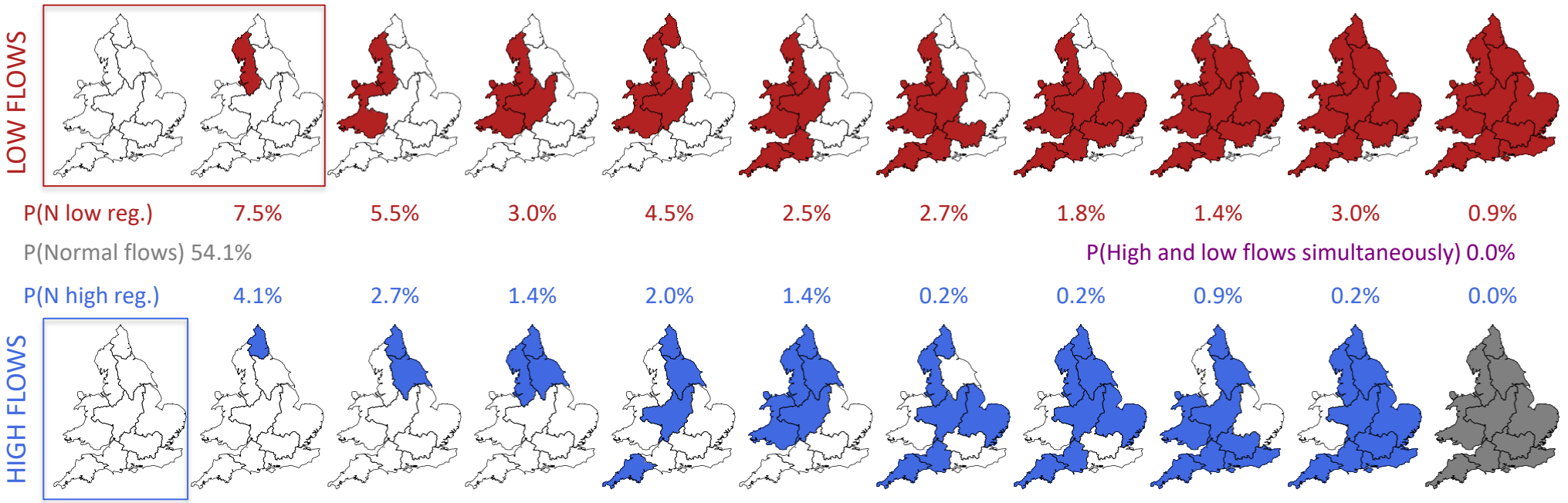
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

0.0%

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



P(N low reg.)	7.5%	5.5%	3.0%	4.5%	2.5%	2.7%	1.8%	1.4%	3.0%	0.9%
P(N high reg.)	4.1%	2.7%	1.4%	2.0%	1.4%	0.2%	0.2%	0.9%	0.2%	0.0%

P(Normal flows) 54.1%

P(High and low flows simultaneously) 0.0%

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RIVER FLOW FROM RAINFALL FORECASTS

January 2026

Probability of extreme river flows in **England and Wales** over **January to March**

Issued on 05.01.26 using data to the end of December 2025

RIVER FLOW FROM RAINFALL FORECASTS

January 2026

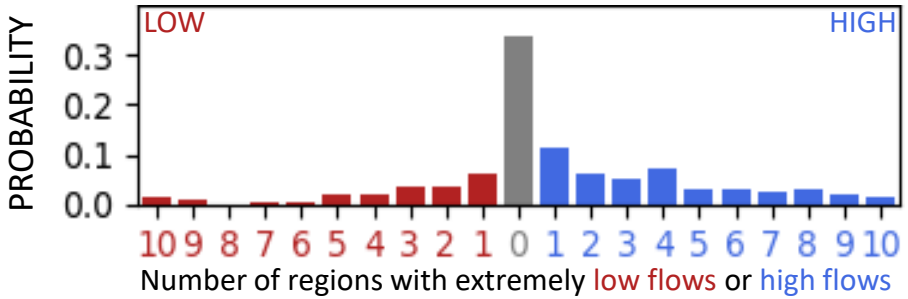
This page shows the **probability of extreme conditions in England and Wales** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more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

Summary

England and Wales – three months

River flows in England and Wales are unlikely to be extremely low over the next three months, but there is a higher than usual chance of extremely high flows, particularly in Wales and the north of England.

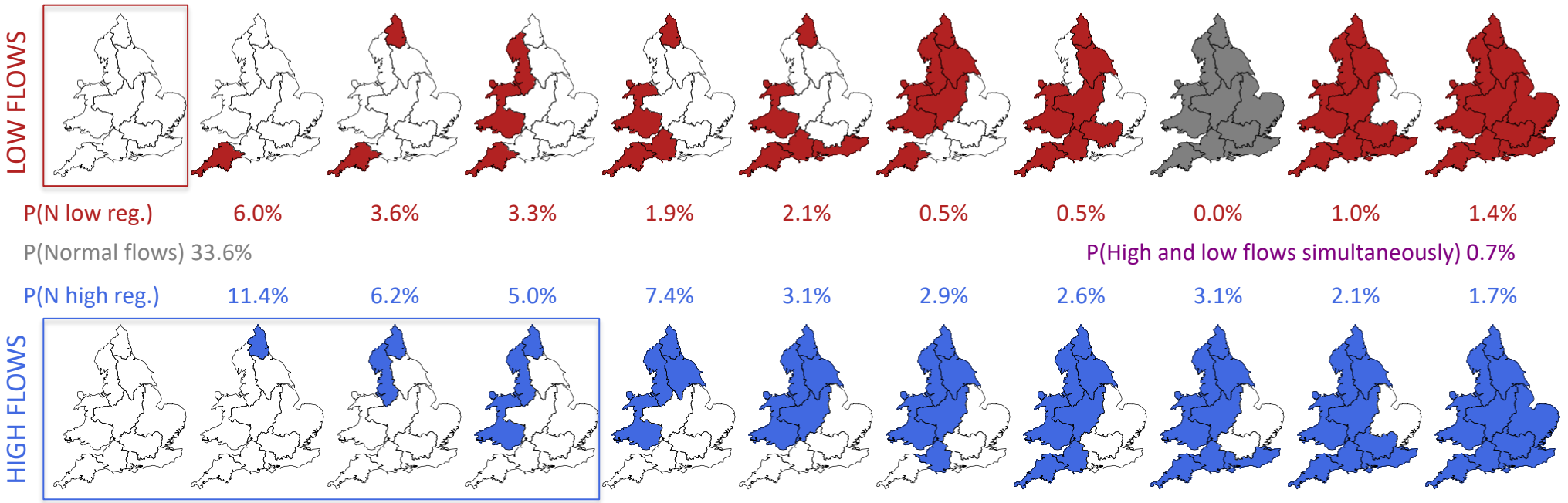
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

0.7%

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



P(N low reg.)	6.0%	3.6%	3.3%	1.9%	2.1%	0.5%	0.5%	0.0%	1.0%	1.4%
P(N high reg.)	11.4%	6.2%	5.0%	7.4%	3.1%	2.9%	2.6%	3.1%	2.1%	1.7%

P(Normal flows) 33.6%

P(High and low flows simultaneously) 0.7%

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Histograms of GB regional mean river flow distributions

Period: January 2026 - March 2026

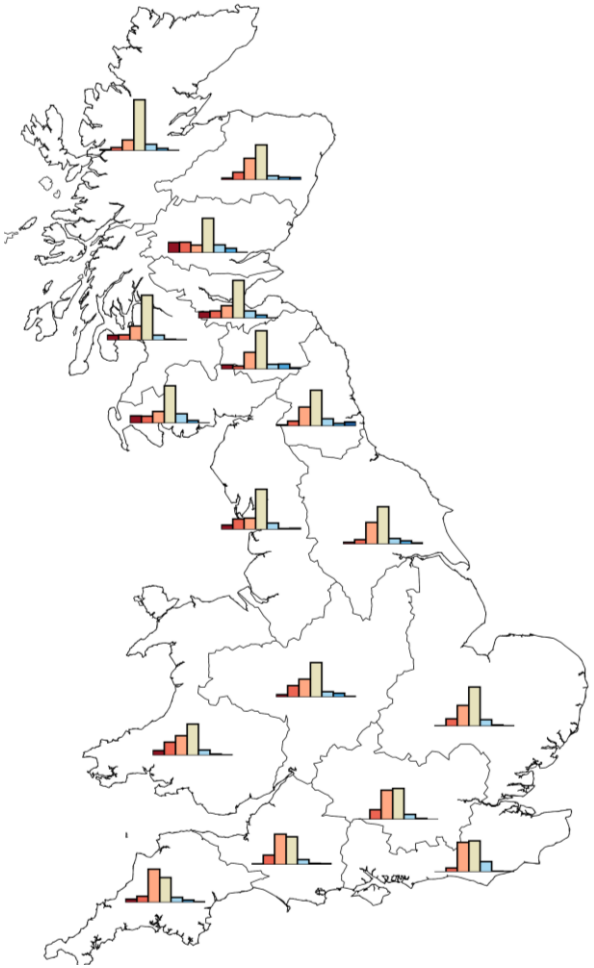
Issue date: 05.01.2026

- 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.

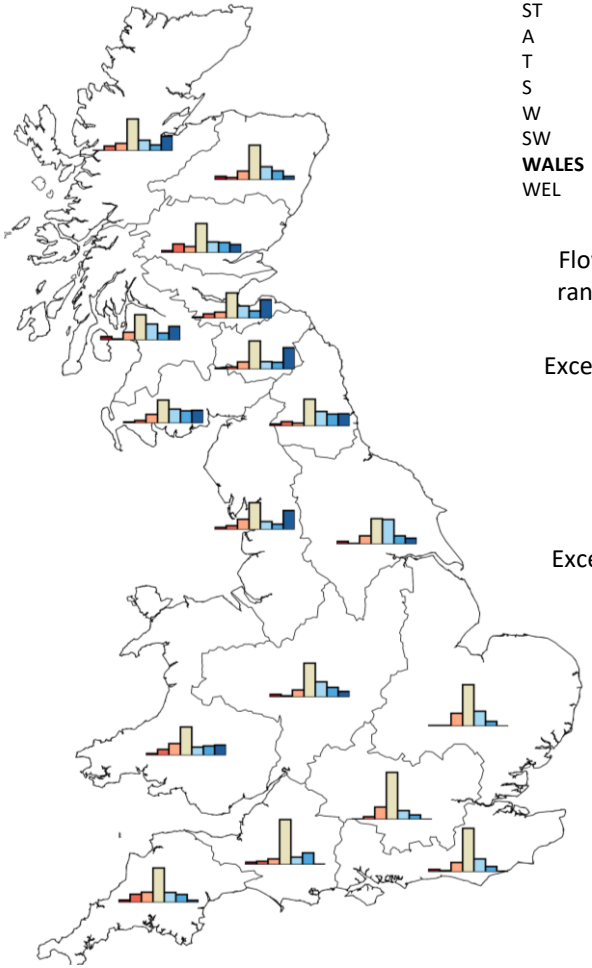
SUMMARY: Over the next month, river flows are likely to be in the *below normal to normal* range across the country, with lower flows more likely to be seen in the south of England.

Over the next three months, river flows in Scotland and the North of England are likely to be in the *normal to exceptionally high* range, while river flows in the rest of the country are likely to be in the *normal* range.

1-month



3-month



SCOTLAND

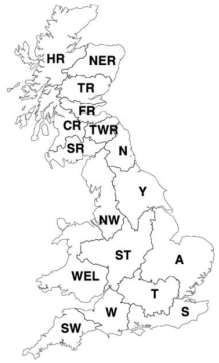
HR	Highlands Region
NER	North East Region
TR	Tay Region
FR	Forth Region
CR	Clyde Region
TWR	Tweed Region
SR	Solway Region

ENGLAND

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

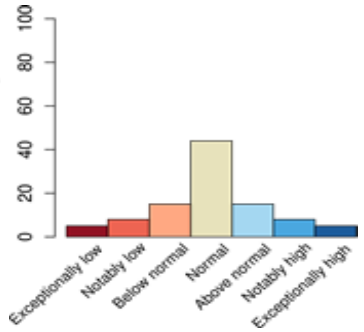
WALES

WEL	Welsh



Flow estimate for each river pixel ranked in terms of historic % flow estimates (1963-2016)

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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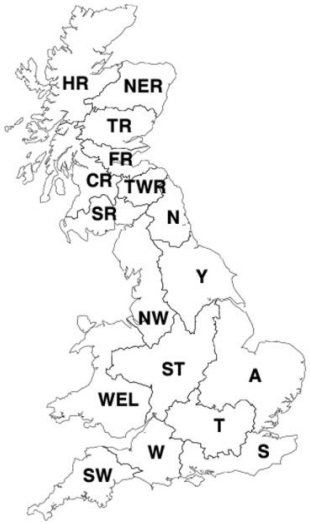
RIVER FLOW FROM RAINFALL FORECASTS

January 2026

Tables of GB regional mean river flow distributions

Period: January 2026 - March 2026 Issue date: 05.01.2026



- 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 table indicates the percentage of ensemble members in each flow category.

SUMMARY: Over the next month, river flows are likely to be in the *below normal to normal* range across the country, with lower flows more likely to be seen in the south of England.

Over the next three months, river flows in Scotland and the North of England are likely to be in the *normal to exceptionally high* range, while river flows in the rest of the country are likely to be in the *normal* range.

1-month ahead	A	NW	N	ST	SW	S	T	WEL	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	0	2	6	1	1	1	0	0	1	2	0	1	0	3	0	0	2
Notably high	2	2	4	5	3	1	2	2	2	4	1	4	3	4	4	6	7
Above normal	9	9	10	7	7	14	7	7	7	8	7	10	9	6	12	10	7
Normal range	51	53	47	45	33	41	41	41	36	49	59	50	67	46	49	45	51
Below normal	28	15	25	23	44	39	38	26	40	28	18	17	14	29	16	10	22
Notably low	10	14	7	15	8	5	13	18	12	6	7	10	4	10	10	14	4
Exceptionally low flow	0	6	2	3	4	0	0	6	1	2	7	9	2	3	10	14	6

3-month ahead	A	NW	N	ST	SW	S	T	WEL	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	0	25	16	8	3	1	0	14	0	8	18	24	20	5	17	11	28
Notably high	6	7	16	13	11	7	6	13	16	11	10	10	8	12	16	14	10
Above normal	20	11	19	20	13	17	12	11	10	32	21	16	14	18	19	14	10
Normal range	54	35	36	44	45	57	62	37	59	33	34	33	42	46	30	38	37
Below normal	17	14	4	10	14	12	16	16	7	11	10	8	10	12	12	8	10
Notably low	1	5	6	2	11	2	4	8	4	1	2	6	6	3	4	12	3
Exceptionally low flow	1	3	3	4	3	3	0	2	3	4	5	2	1	5	2	3	2

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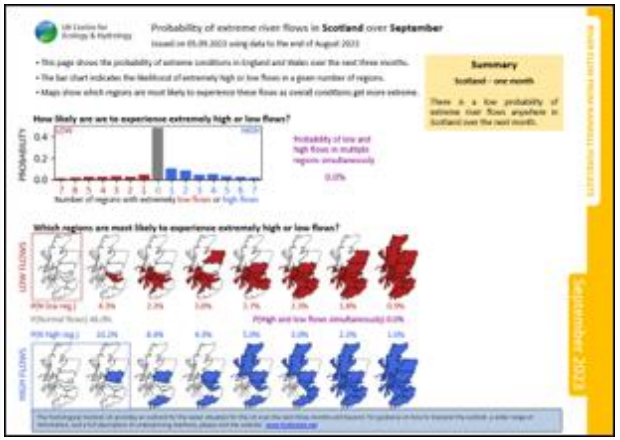
Forecasts of river flows using Met Office rainfall forecasts

- 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



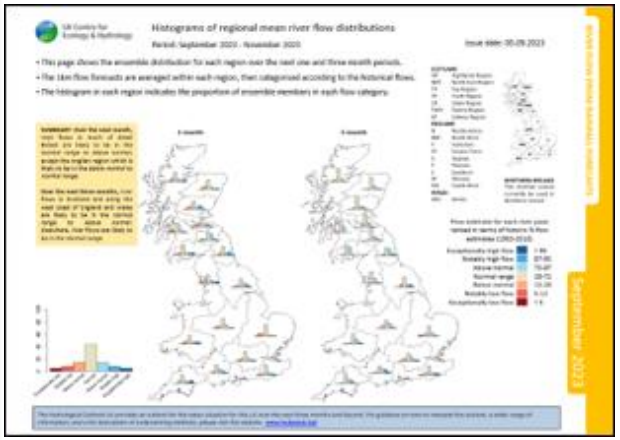
Extreme river flows are defined as those which rank in the lowest or highest 13% of historical flow estimates (1963 - 2016). This definition encompasses the 'Notably' and 'Exceptionally' high/low flow bands used elsewhere in the Outlook.

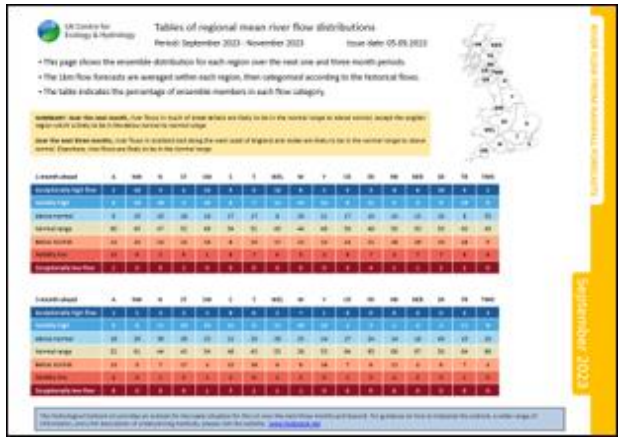
The bar chart shows the probability of a given number of regions experiencing extremely high/low flows, where scenarios showing both extremely high and extremely low flows in different regions simultaneously excluded. These probabilities are also shown beneath the maps.

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).

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British Geological Survey

Outlook based on modelled groundwater level & climate forecast

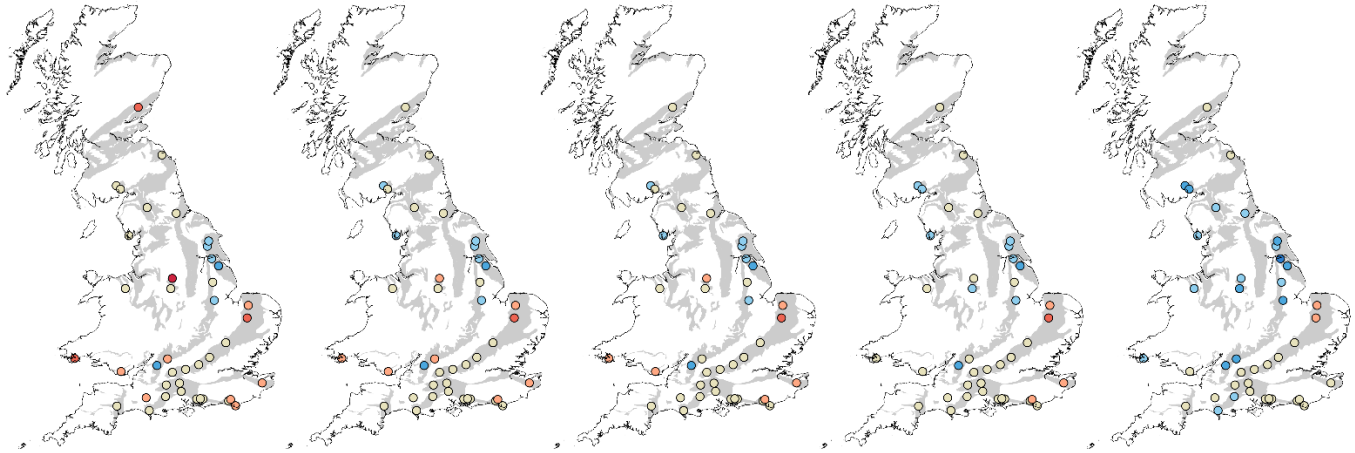
Overview

Period: January 2026 – March 2026

Issued on 07.1.2026 using data to the end of December

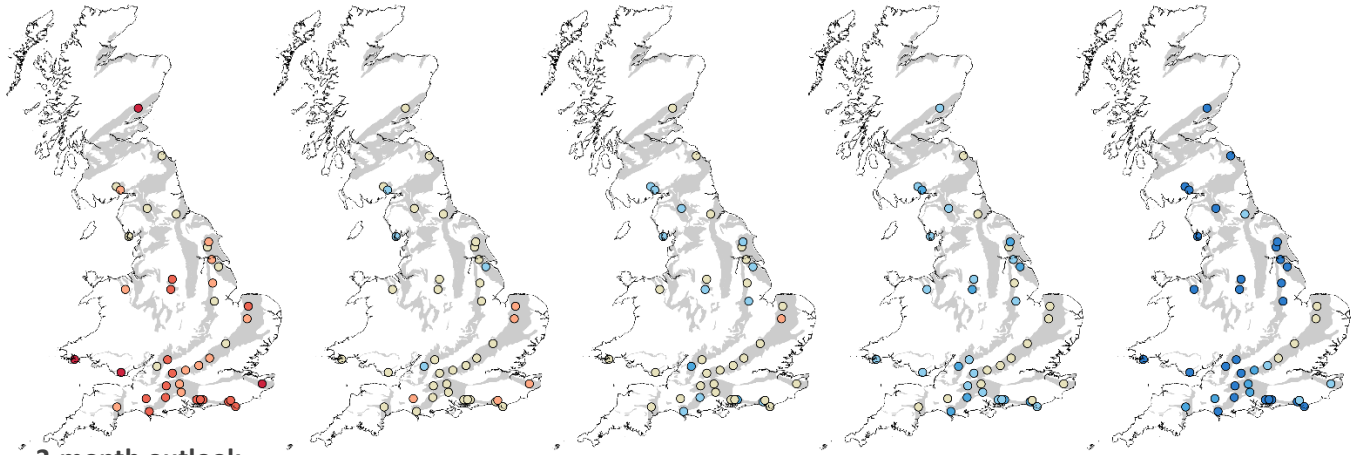
Under median rainfall conditions, groundwater levels in the south and east of England as well as in Wales are forecast to remain predominantly between normal and below normal over the next month. Across the rest of the UK, it is anticipated levels will decrease slightly but remain mostly in the normal to above normal range. Over the next three months, groundwater levels are expected to return towards more normal conditions in the south and east of England as well as in Wales. Levels across the rest of the UK are generally expected to remain in the normal to above normal range.

Lowest rainfall forecast | *1st quartile* | *Median* | *3rd quartile* | *Highest rainfall forecast*



1-month outlook

Lowest rainfall forecast | *1st quartile* | *Median* | *3rd quartile* | *Highest rainfall forecast*

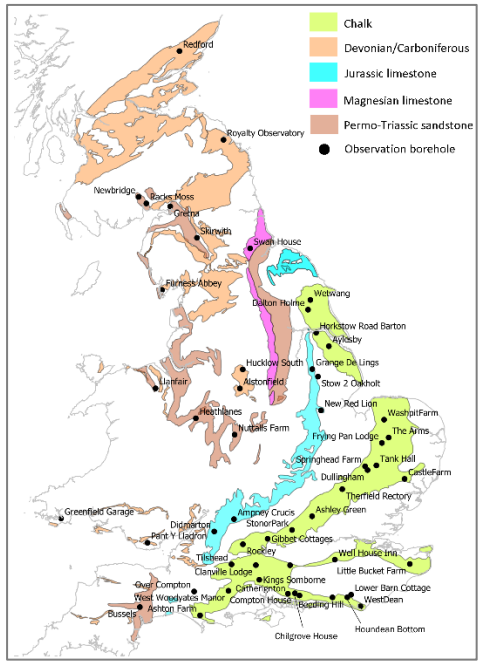


3-month outlook

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.

Key	Percentile range of historic observed values for relevant month
Exceptionally high levels	> 95
Notably high levels	87-95
Above normal	72-87
Normal	28-72
Below normal	12-28
Notably low levels	5-13
Exceptionally low levels	< 5



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UK Centre for Ecology & Hydrology

British Geological Survey

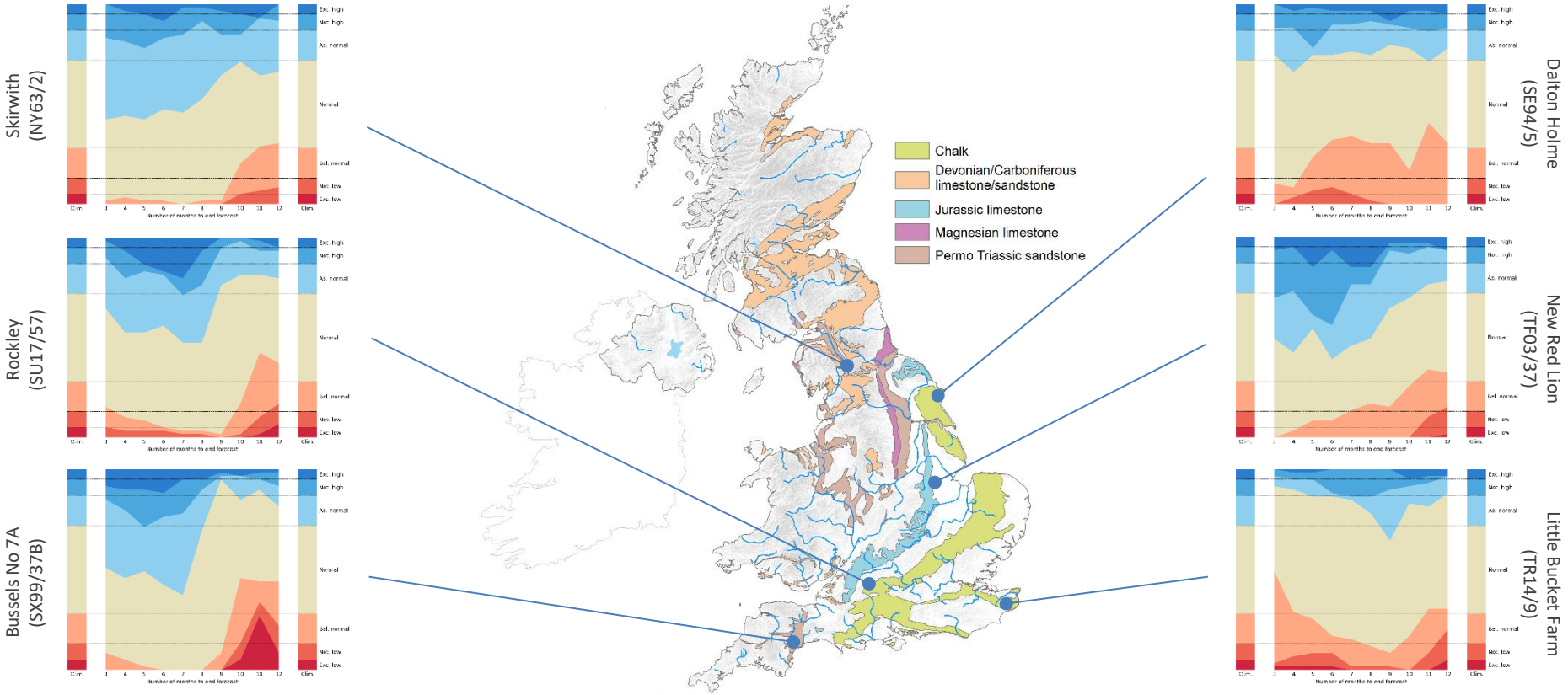
Environment Agency

Outlook based on modelled groundwater from historical climate

Period: January 2026 – December 2026

Issued on 07.01.2026 using data to the end of December

Groundwater levels in the Permo-Triassic Sandstone at Skirwith and Bussels No 7A are expected to transition towards more below normal conditions after around nine months. In the Jurassic Limestone at New Red Lion, levels are expected to steadily decline over the next twelve months towards more normal levels. In the Chalk at Little Bucket Farm, it is anticipated that levels will transition towards more normal conditions. At Rockley and Dalton Holme however, levels in the Chalk are expected to transition towards more above normal levels across the next four to 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.

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