# Hydrological Summary *for the United Kingdom*

July 2026

## General

For much of the country, July was unprecedented in terms of aridity. It was the driest July and the fifth driest of any month in the England & Wales rainfall series extending from 1766. It was also the second hottest July on record for England and the hottest (in records from 1884) in the Thames, Southern and Wessex regions, with two major heatwaves affecting southern England during which maximum temperatures exceeded 35°C. The exceptionally dry soils led to agricultural impacts (with reports of early harvests and substantially diminished yields) and widespread wildfires, some of which were designated major incidents (e.g. a persistent moorland fire in the Cairngorms). With widespread notably or exceptionally low river flows, there were pervasive abstraction restrictions, impacts on the canal network and extensive reports of ecological stress. Reservoir stocks fell steeply compared to the end of June (e.g. Clywedog dropped 26% relative to average) and at the end of July were 7% below average for England & Wales, but significantly lower in some impoundments (Clywedog, Ardingly, Wimbleball and Clatworthy were 20% below average or lower). Temporary use bans affecting 20 million people were in place by mid-month, and in the closing week drought status was declared across Wales and half of England, while much of eastern Scotland was classified as 'moderate scarcity' with some catchments in the highest 'significant scarcity' designation. For the third year in the last five, drought impacts have escalated remarkably quickly in the face of exceptional spring-summer aridity. Following a wet winter, water resources were healthy in early spring, but the situation deteriorated rapidly under intense 'flash drought' episodes, where high temperatures accelerate evaporation, compounding the sustained rainfall deficits. Nevertheless, the wet winter has moderated the public water supply position somewhat (compared to last year and other major droughts like 1976) as declines in groundwater levels and reservoir stocks began from an elevated baseline. However, further deterioration is likely. August began with further hot weather and no sign of rainfall in the most affected areas, while the latest Hydrological Outlook indicates widespread below normal to exceptionally low flows are likely to persist well into autumn.

## Rainfall

July was dominated by persistent anticyclonic conditions, with a significantly weakened jet stream displaced to the north of the UK. While there were some frontal incursions, mainly in the first and last week these brought very modest rainfall, largely confined to upland areas of the north and west. Across most of England and Wales, the exceptionally hot and dry weather established in late June persisted through July, and eastern Scotland also saw continued notably dry weather. Large areas of southern England received little or no rainfall through the month. For example, the University of Reading meteorological observatory received zero monthly rainfall for the first time in a record from 1858. Total UK July rainfall was around a third of average, whilst Wales registered 9% and England 10%, although most lowland areas recorded less than 5% of average and the Thames and Southern regions registered only 1%. It was the driest July on record for both England and Wales and for England was the third driest of any month (in records from since 1890). July extends remarkable anomalies established since the start of spring: England registered its fourth driest March-July period on record, Anglian its driest (both in series from 1890).

## River Flows

The unsettled first week of July in northwest Britain triggered some brief increases in flow in responsive upland catchments, but steep recessions quickly became established. Across most of southern Britain, recessions established in mid-June or earlier continued and by the month-end, low flows in many catchments approached or eclipsed those from the equivalent time in 2022 and 2025 and, in some catchments, fell below those of 1976. Correspondingly, July monthly mean flows were generally below normal to exceptionally low across most of the UK except for north-west Scotland where a few catchments registered notably high flows, while some permeable catchments in the southeast also saw flows in the normal range. Exceptionally low flows were widespread and, provisionally, new July monthly minima were registered in some responsive catchments, including the Yorkshire Derwent, Erch and Colne (all in records exceeding 52 years). The Erch registered the second lowest flow of any month behind August 1976. A longer-term perspective is provided by the Wye, which saw its lowest July flow on record and fourth lowest of any month, in a record from 1937. The wide spatial footprint of the drought is clear from the July mean outflows from England & Wales, which were the third lowest (after 1976 and 1984) in a record from 1961. Notably low flow accumulations were also apparent across much of the country from April-May onwards, although outflows over these periods are less exceptional than in 2022 or 2025, in part due to the legacy of the wet winter.

## Soil Moisture and Groundwater

Soil moisture continued to decline across the COSMOS-UK Network, with record low soil moisture levels recorded at 13 sites across England. Soil moisture deficits (SMDs) remained exceptional for the third month in a row, with end of July SMDs in southeast England comparable with exceptional drought years (e.g. 1976, 1990, 1995). While groundwater levels continued along typical seasonal recessions, the residual effect of the preceding wet winter has generally kept levels higher than may be expected given the exceptional aridity. Across the Chalk aquifer several boreholes reached notably low levels (including Chilgrove House, Ashton Farm, Wetwang and Killyglen) with Chalk boreholes elsewhere staying in the below normal to normal range. Groundwater levels in the Jurassic Oolites and Magnesian Limestone also receded, with Aycliffe and Brick House Farm both in the normal range, while levels in the Carboniferous limestone fell to notably low. Groundwater levels in the Permo-Triassic Sandstone were generally in the normal range to above, except at Skirwirth, which remained below normal. The Fell Sandstone at Royalty Observatory saw levels remaining above normal, while in the Devonian sandstone levels at Feddan Junction and Easter Lathrisk remained below normal and notably low, respectively.

National Hydrological Monitoring Programme | UKCEH | BGS British Geological Survey

# Rainfall

## Rainfall accumulations and return period estimates

Percentages are from the 1991-2020 average.

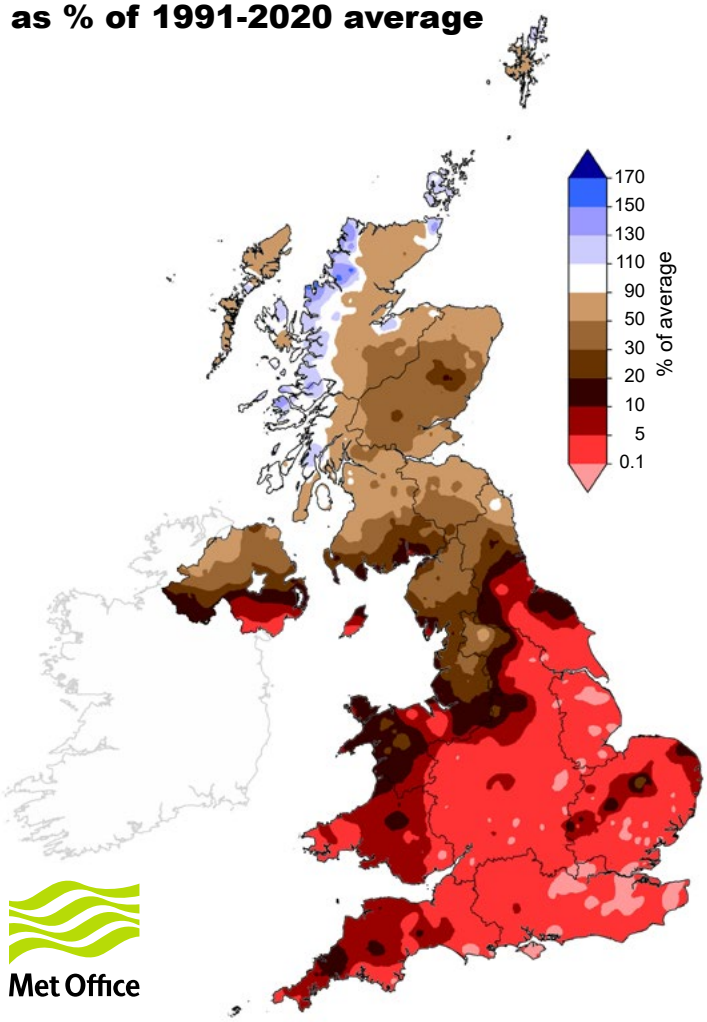
| Region | Rainfall | Jul 2026 | Jun26 – Jul26 | RP | May26 – Jul26 | RP | Mar26 – Jul26 | RP | Jan26 – Jul26 | RP |
|---|---|---|---|---|---|---|---|---|---|---|
| United Kingdom | mm | 30 | 121 | | 176 | | 318 | | 579 | |
| | % | 37 | 76 | 2-5 | 76 | 5-10 | 82 | 5-10 | 96 | 2-5 |
| England | mm | 6.5 | 74 | | 117 | | 186 | | 423 | |
| | % | 10 | 57 | 10-15 | 62 | 15-25 | 62 | 40-60 | 94 | 2-5 |
| Scotland | mm | 77 | 195 | | 265 | | 522 | | 794 | |
| | % | 74 | 99 | 2-5 | 93 | 2-5 | 104 | 2-5 | 97 | 2-5 |
| Wales | mm | 8.9 | 107 | | 177 | | 327 | | 665 | |
| | % | 9 | 56 | 8-12 | 64 | 10-20 | 70 | 10-20 | 89 | 2-5 |
| Northern Ireland | mm | 27 | 162 | | 234 | | 384 | | 699 | |
| | % | 30 | 95 | 2-5 | 96 | 2-5 | 95 | 2-5 | 114 | 10-20 |
| England & Wales | mm | 6.8 | 79 | | 125 | | 206 | | 456 | |
| | % | 10 | 56 | 10-15 | 62 | 15-25 | 63 | 30-50 | 93 | 2-5 |
| North West | mm | 26 | 135 | | 206 | | 385 | | 602 | |
| | % | 26 | 73 | 2-5 | 79 | 2-5 | 91 | 2-5 | 92 | 2-5 |
| Northumbria | mm | 23 | 83 | | 139 | | 236 | | 436 | |
| | % | 31 | 56 | 8-12 | 68 | 5-10 | 72 | 8-12 | 91 | 2-5 |
| Severn-Trent | mm | 2.5 | 60 | | 108 | | 172 | | 406 | |
| | % | 4 | 45 | 15-25 | 56 | 20-30 | 57 | 30-50 | 94 | 2-5 |
| Yorkshire | mm | 6.6 | 60 | | 123 | | 204 | | 401 | |
| | % | 10 | 43 | 20-30 | 63 | 10-20 | 65 | 20-30 | 87 | 2-5 |
| Anglian | mm | 1.6 | 54 | | 74 | | 103 | | 263 | |
| | % | 3 | 48 | 15-25 | 47 | 50-80 | 43 | >100 | 79 | 5-10 |
| Thames | mm | 0.6 | 70 | | 98 | | 134 | | 355 | |
| | % | 1 | 66 | 5-10 | 61 | 10-20 | 52 | 30-50 | 93 | 2-5 |
| Southern | mm | 0.7 | 74 | | 102 | | 140 | | 426 | |
| | % | 1 | 69 | 2-5 | 65 | 8-12 | 53 | 30-50 | 104 | 2-5 |
| Wessex | mm | 1.4 | 75 | | 110 | | 163 | | 482 | |
| | % | 2 | 62 | 5-10 | 61 | 8-12 | 54 | 30-50 | 104 | 2-5 |
| South West | mm | 5.7 | 96 | | 148 | | 244 | | 687 | |
| | % | 7 | 60 | 5-10 | 64 | 5-10 | 61 | 15-25 | 107 | 2-5 |
| Welsh | mm | 8.2 | 104 | | 171 | | 313 | | 645 | |
| | % | 9 | 56 | 8-12 | 63 | 10-20 | 69 | 15-25 | 90 | 2-5 |
| Highland | mm | 105 | 247 | | 331 | | 677 | | 917 | |
| | % | 97 | 119 | 5-10 | 106 | 2-5 | 117 | 10-20 | 94 | 2-5 |
| North East | mm | 43 | 111 | | 163 | | 287 | | 563 | |
| | % | 52 | 69 | 5-10 | 71 | 8-12 | 77 | 8-12 | 102 | 2-5 |
| Tay | mm | 42 | 139 | | 196 | | 419 | | 788 | |
| | % | 43 | 75 | 2-5 | 73 | 5-10 | 92 | 2-5 | 107 | 5-10 |
| Forth | mm | 55 | 150 | | 200 | | 373 | | 587 | |
| | % | 59 | 84 | 2-5 | 79 | 2-5 | 89 | 2-5 | 89 | 2-5 |
| Tweed | mm | 44 | 119 | | 160 | | 316 | | 519 | |
| | % | 51 | 72 | 2-5 | 70 | 5-10 | 84 | 2-5 | 91 | 2-5 |
| Solway | mm | 40 | 185 | | 250 | | 497 | | 778 | |
| | % | 36 | 89 | 2-5 | 84 | 2-5 | 98 | 2-5 | 96 | 2-5 |
| Clyde | mm | 108 | 256 | | 337 | | 627 | | 931 | |
| | % | 85 | 110 | 2-5 | 100 | 2-5 | 106 | 5-10 | 95 | 2-5 |

*% = percentage of 1991-2020 average* *RP = Return period*

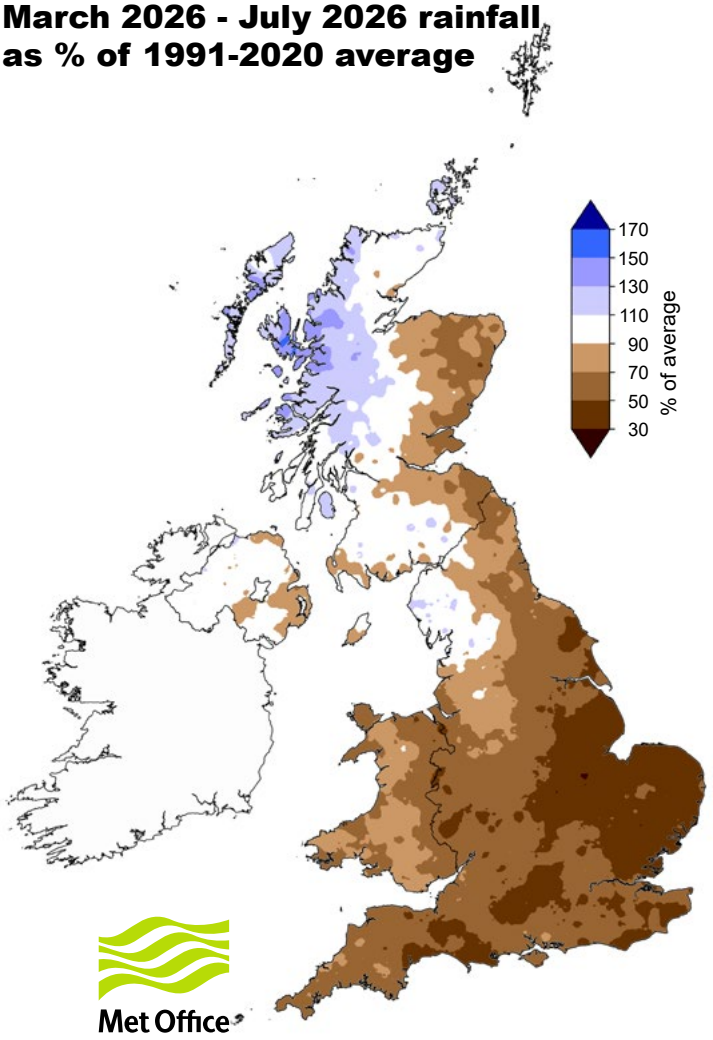
Important note: Figures in the above table may be quoted provided their source is acknowledged. Where appropriate, specific mention must be made of the uncertainties associated with the return period estimates. The RP estimates are based on data provided by the Met Office and reflect climatic variability since 1890; they also assume a stable climate. The quoted RPs relate to the specific timespans only; for the same timespans, but beginning in any month the RPs would be substantially shorter. The timespans featured do not purport to represent the critical periods for any particular water resource management zone. For hydrological or water resources assessments of drought severity, river flows and/or groundwater levels normally provide a better guide than return periods based on regional rainfall totals. Note that precipitation totals in winter months may be underestimated due to snowfall undercatch. All monthly rainfall totals since January 2025 are provisional. Source: Data from HadUK-Grid dataset at 1km resolution v1.3.2.0.

# Rainfall

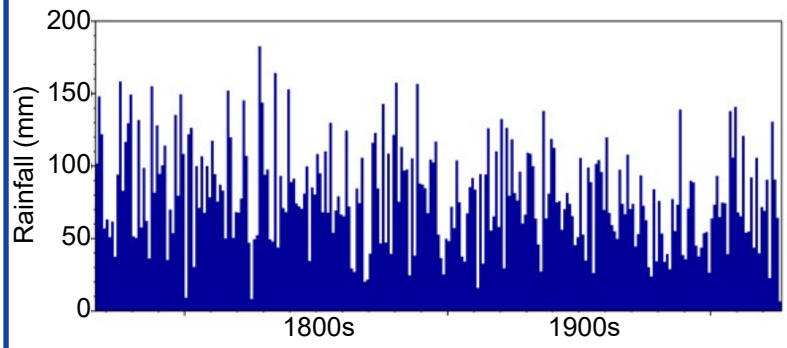
**July 2026 rainfall as % of 1991-2020 average**



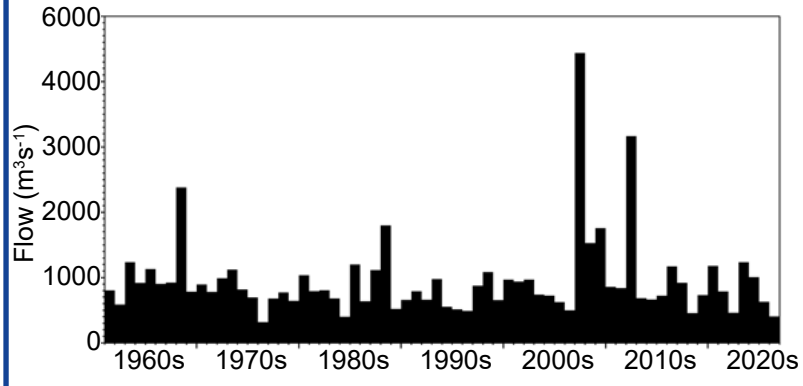

**March 2026 - July 2026 rainfall as % of 1991-2020 average**




## July rainfall for England & Wales




## July mean outflows for England & Wales




## UK Hydrological Outlook

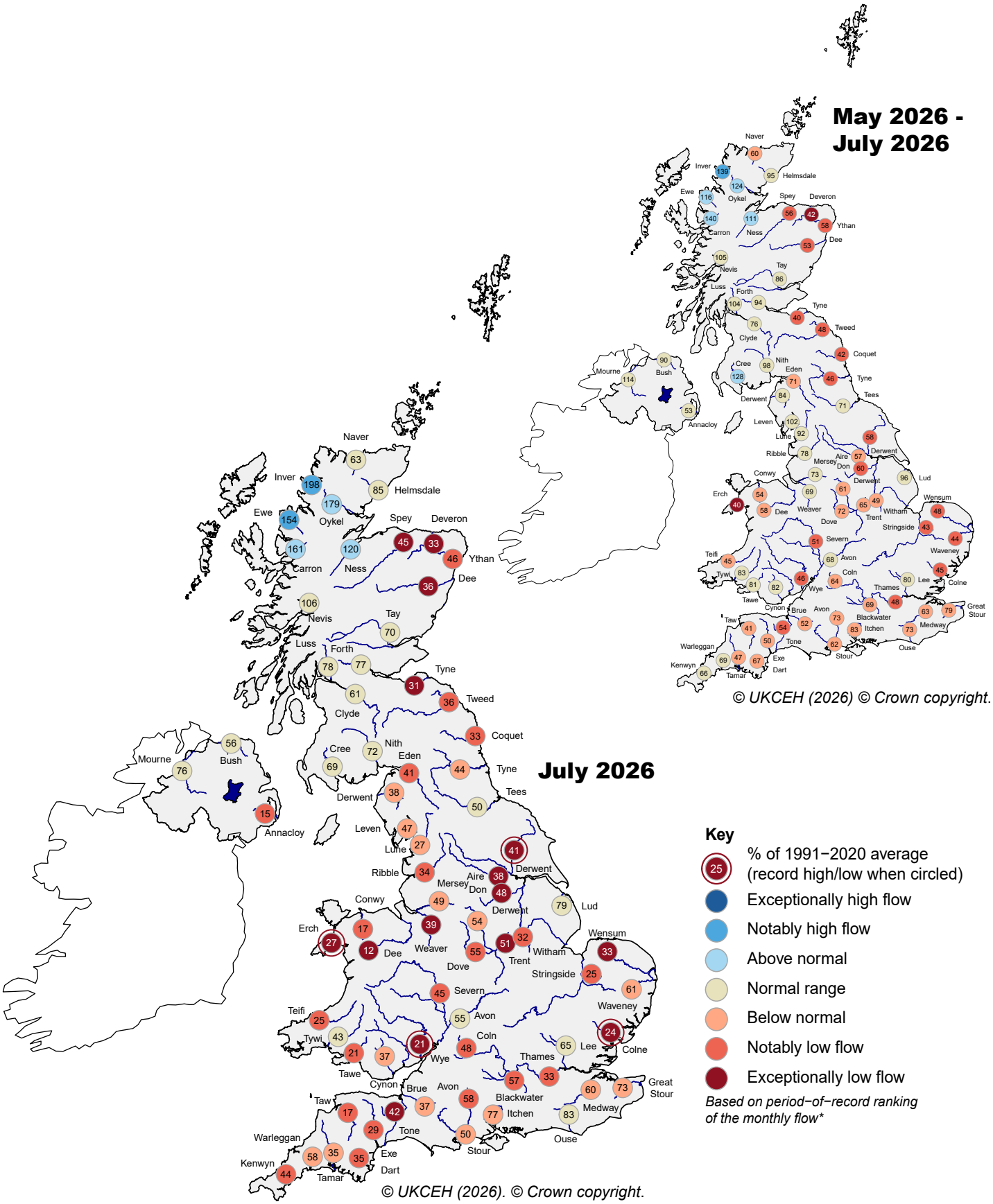
The Hydrological Outlook provides an insight into future hydrological conditions across the UK. Specifically it describes likely trajectories for river flows and groundwater levels on a monthly basis, with particular focus on the next three months.

The complete version of the Hydrological Outlook UK can be found at: [www.hydoutuk.net/latest-outlook/](www.hydoutuk.net/latest-outlook/)

**Period: from August 2026**
**Issued: 10.08.2026**
**using data to the end of July 2026**

The forecast for August is for a continuation of below normal to exceptionally low flows across England, Wales and north-eastern Scotland, with record lows anticipated for August and drought impacts likely to continue into the autumn. Further north, flows are likely to be normal to below normal, with normal to above normal flows expected in north-west Scotland. Groundwater levels are likely to be normal to below normal over the next three months.

# River flow



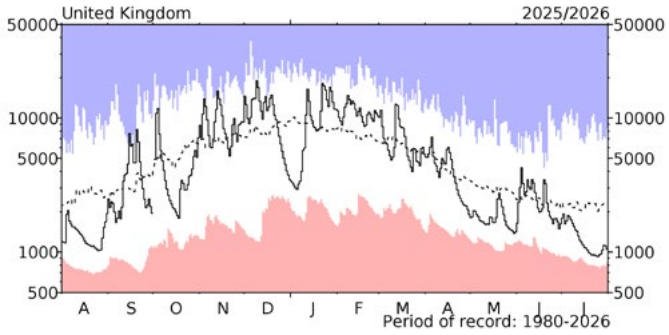


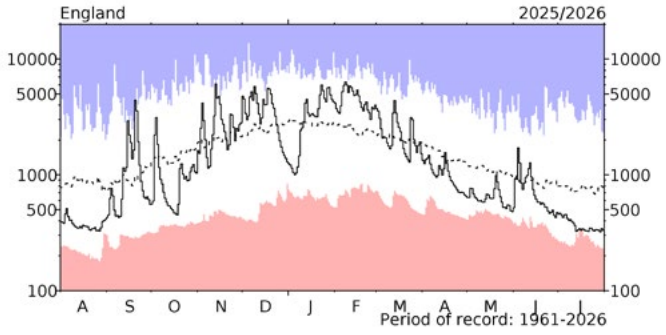


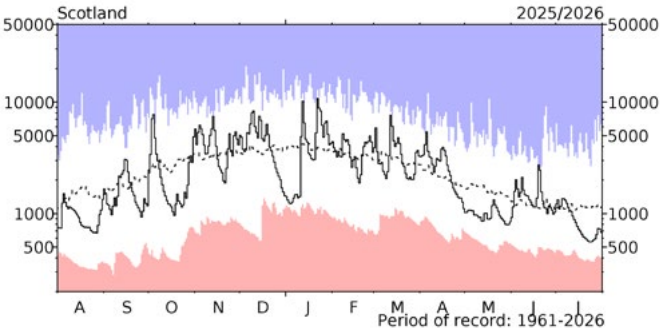

## River flows

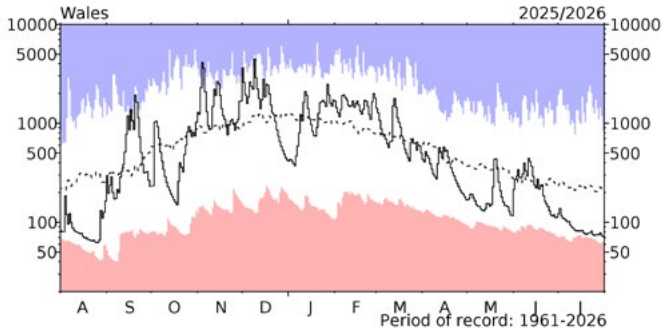
*Comparisons based on percentage flows alone can be misleading. A given percentage flow can represent extreme drought conditions in permeable catchments where flow patterns are relatively stable but be well within the normal range in impermeable catchments where the natural variation in flows is much greater. The categories of the spots are based on the full period-of-record data whereas the percentages are based on the 1991-2020 averaging period for consistency between rainfall and river flows. Percentages may be omitted where flows are under review.

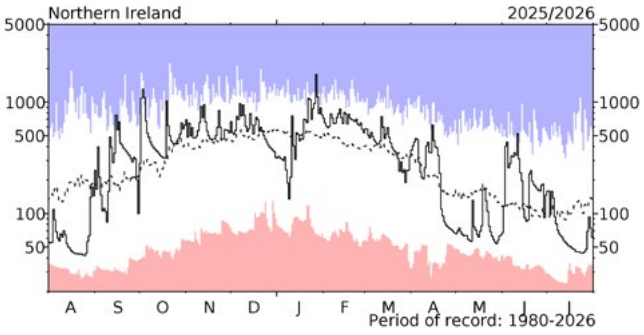
# River flow

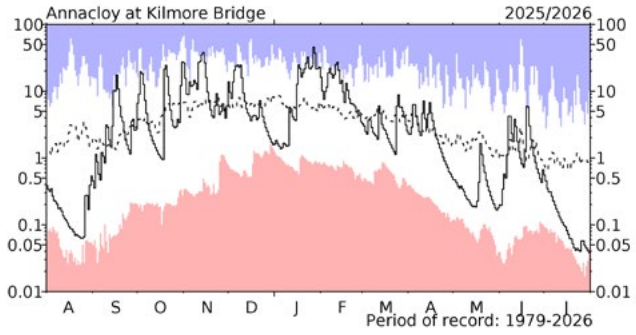


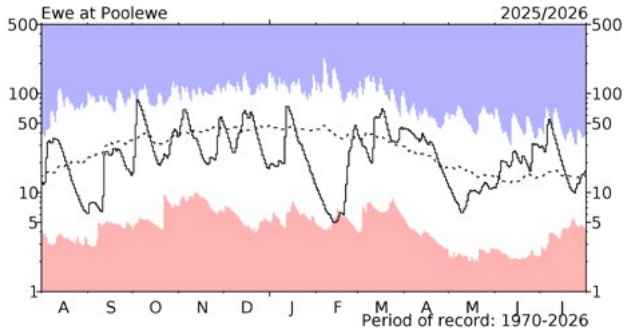



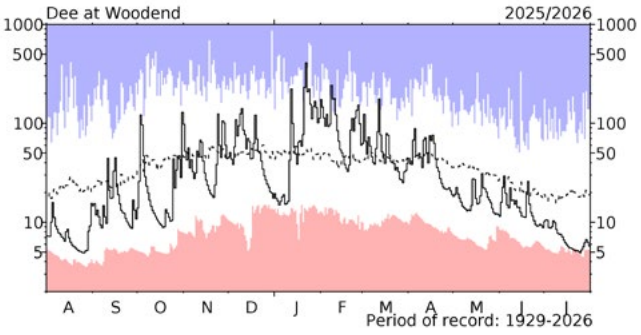



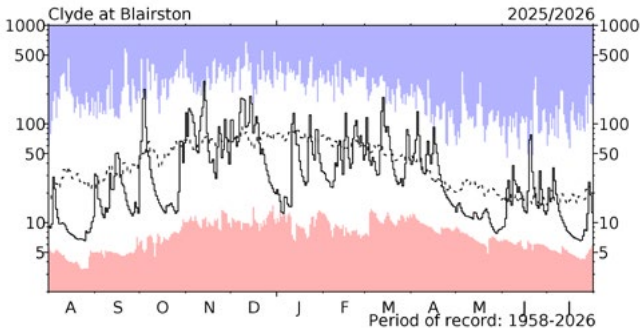



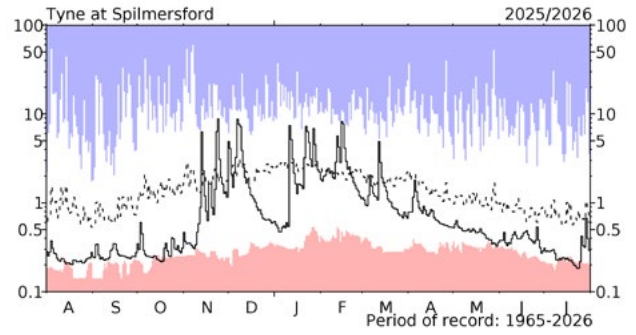



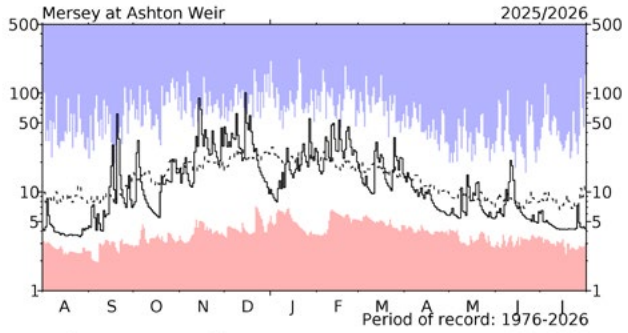



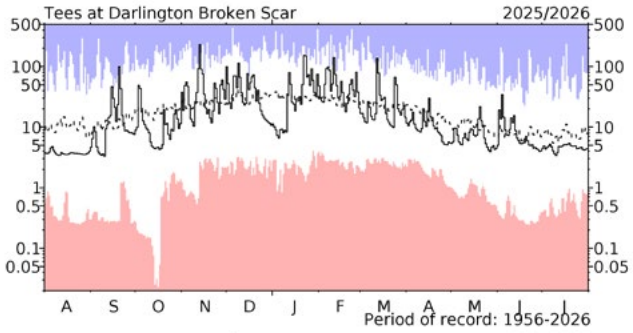



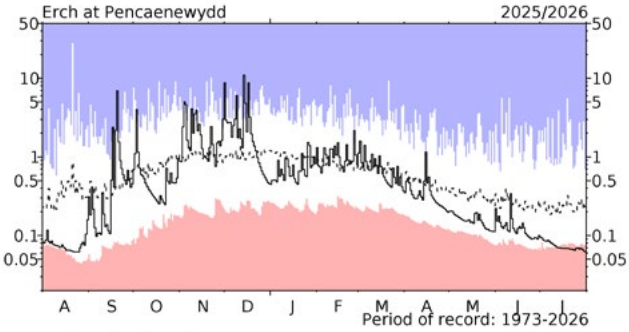

## River flow hydrographs

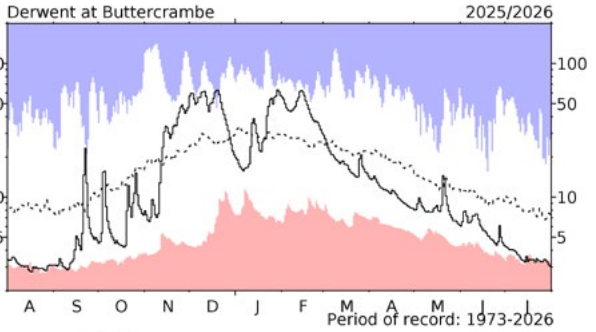
*The river flow hydrographs show the daily mean flows (measured in $m^3s^{-1}$) together with the maximum and minimum daily flows prior to August 2025 (shown by the shaded areas). Daily flows falling outside the maximum/minimum range are indicated where the bold trace enters the shaded areas. The dashed line represents the period-of-record average daily flow.

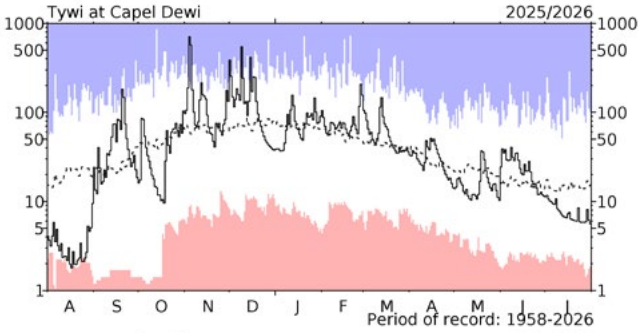
# River flow

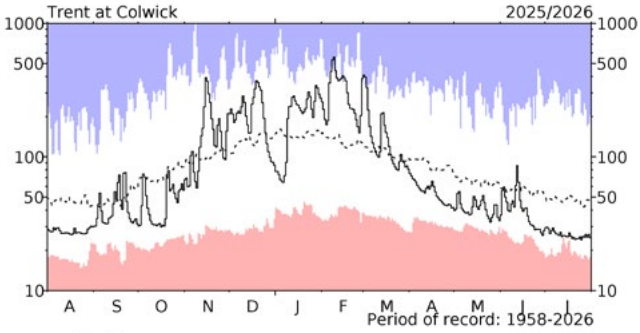

Mersey at Ashton Weir
2025/2026
A S O N D J F M A M J J
Period of record: 1976-2026

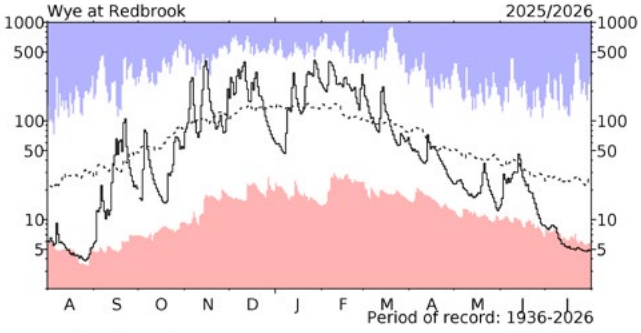

Tees at Darlington Broken Scar
2025/2026
A S O N D J F M A M J J
Period of record: 1956-2026

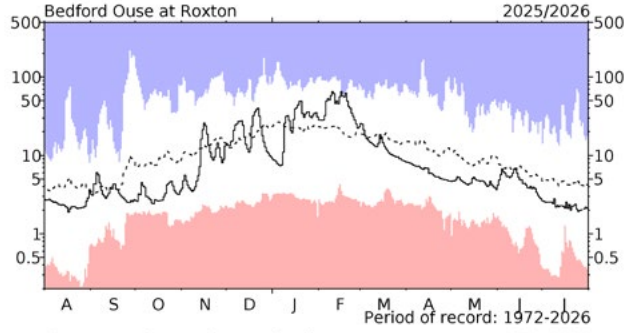

Erch at Pencaenewydd
2025/2026
A S O N D J F M A M J J
Period of record: 1973-2026

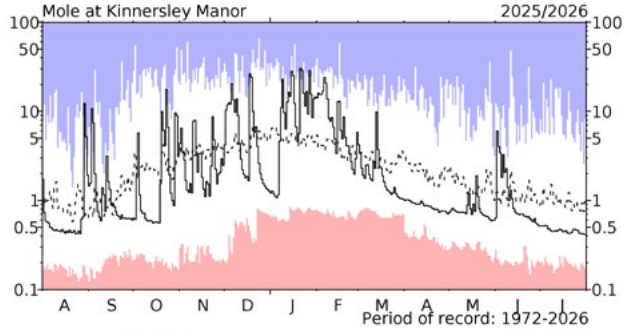

Derwent at Buttercrambe
2025/2026
A S O N D J F M A M J J
Period of record: 1973-2026

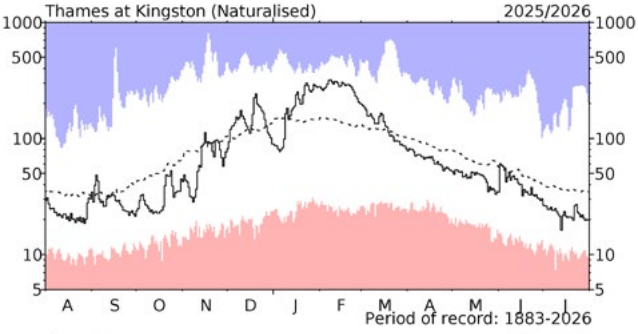

Tywi at Capel Dewi
2025/2026
A S O N D J F M A M J J
Period of record: 1958-2026

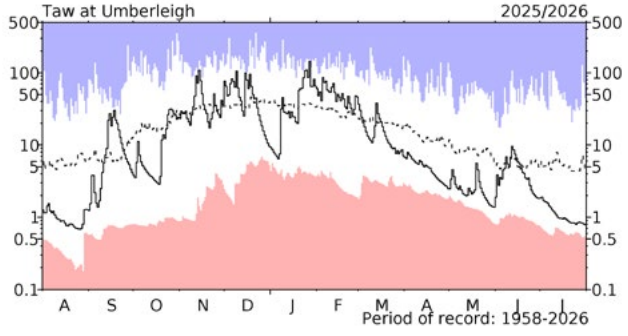

Trent at Colwick
2025/2026
A S O N D J F M A M J J
Period of record: 1958-2026

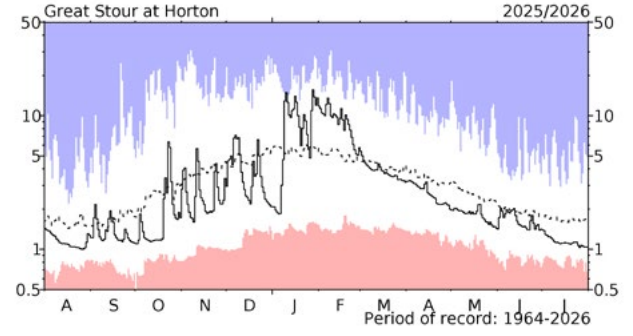

Wye at Redbrook
2025/2026
A S O N D J F M A M J J
Period of record: 1936-2026


Bedford Ouse at Roxton
2025/2026
A S O N D J F M A M J J
Period of record: 1972-2026

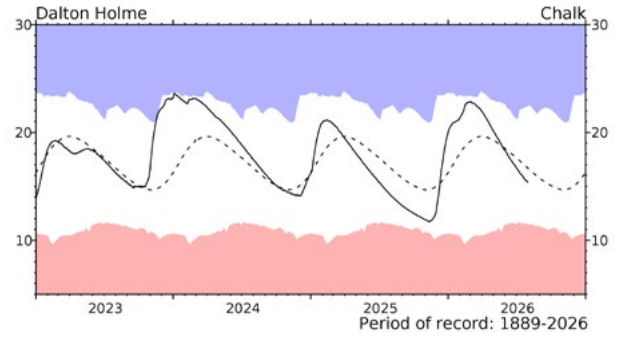

Mole at Kinnersley Manor
2025/2026
A S O N D J F M A M J J
Period of record: 1972-2026

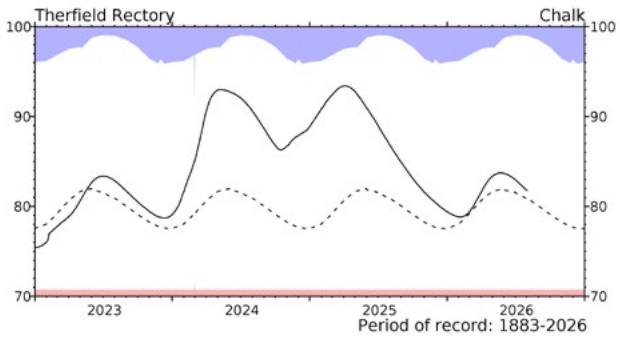

Thames at Kingston (Naturalised)
2025/2026
A S O N D J F M A M J J
Period of record: 1883-2026

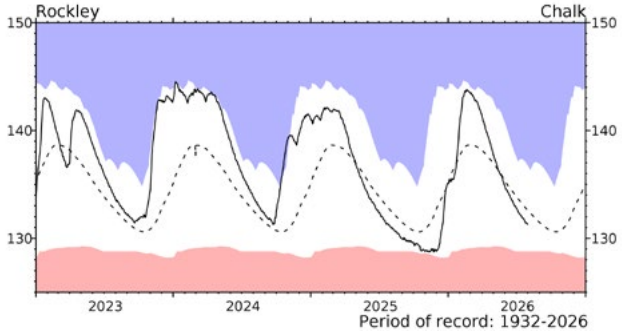

Taw at Umberleigh
2025/2026
A S O N D J F M A M J J
Period of record: 1958-2026

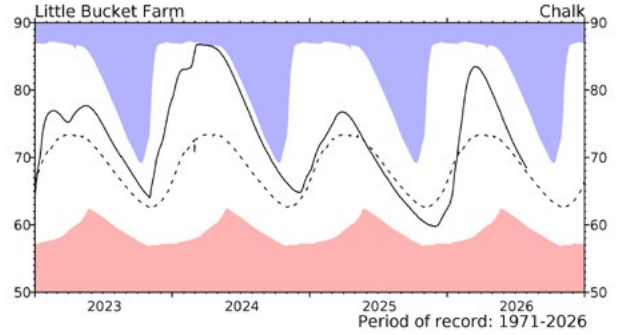

Great Stour at Horton
2025/2026
A S O N D J F M A M J J
Period of record: 1964-2026

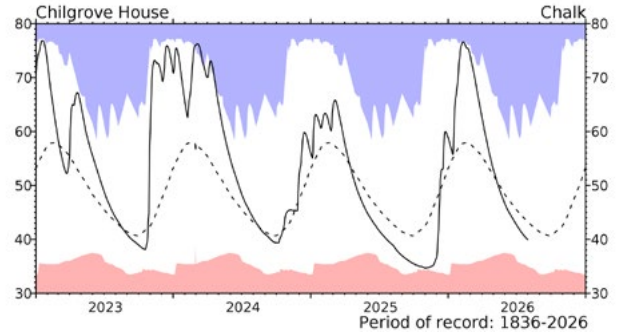
# Groundwater

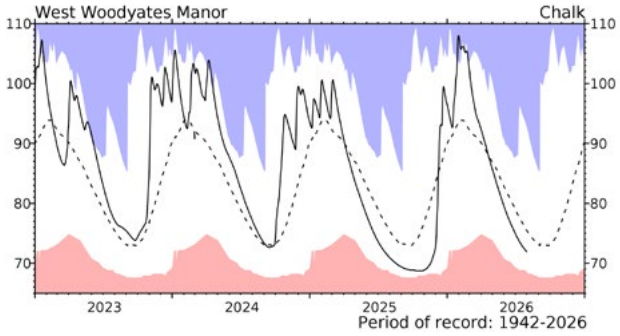


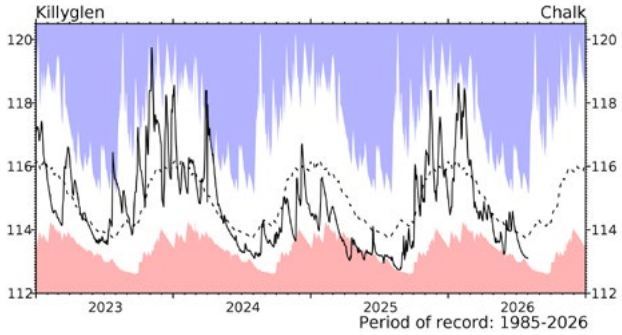



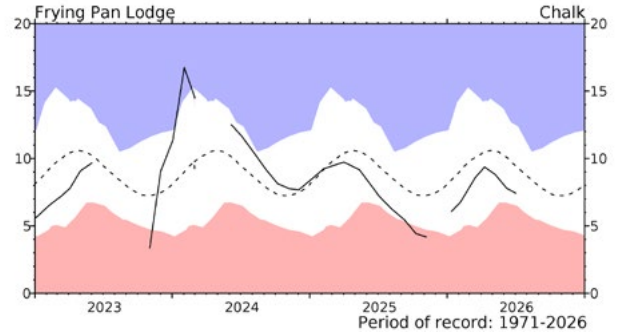



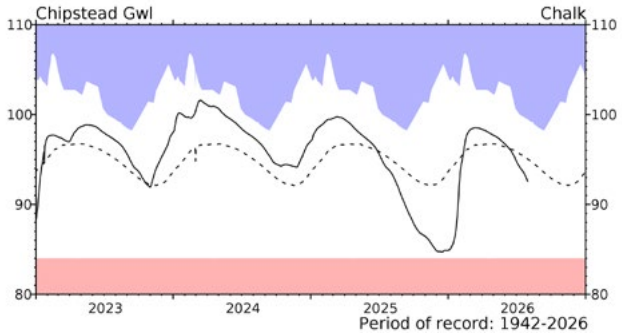



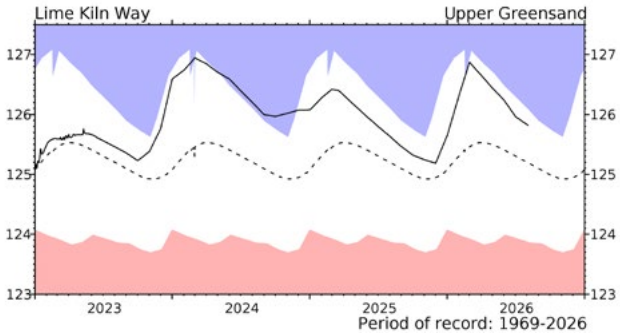



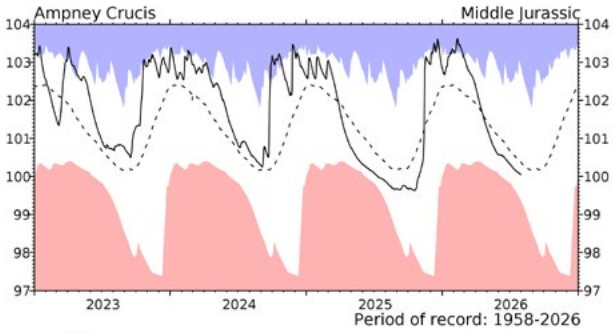



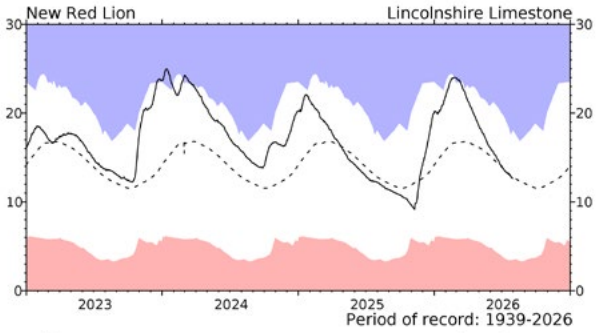



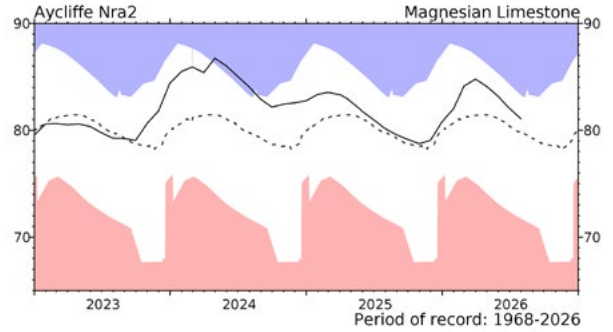



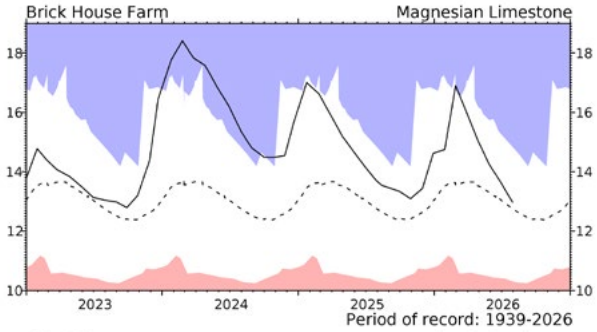

Groundwater levels (measured in metres above ordnance datum) normally rise and fall with the seasons, reaching a peak in the spring following replenishment through the winter (when evaporation losses are low and soil moist). They decline through the summer and early autumn. This seasonal variation is much reduced when the aquifer is confined below overlying impermeable strata. The monthly mean and the highest and lowest levels recorded for each month are calculated with data from the start of the record to the end of 2022. Note that most groundwater levels are not measured continuously and, for some index wells, the greater frequency of contemporary measurements may, in itself, contribute to an increased range of variation.

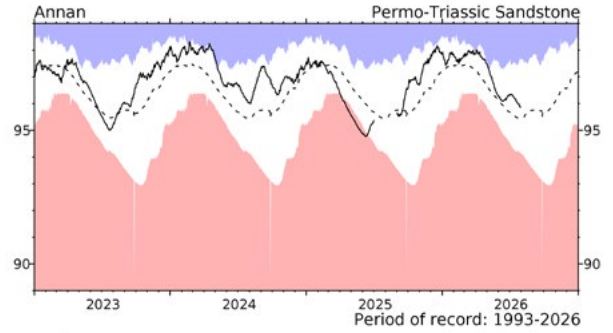
# Groundwater

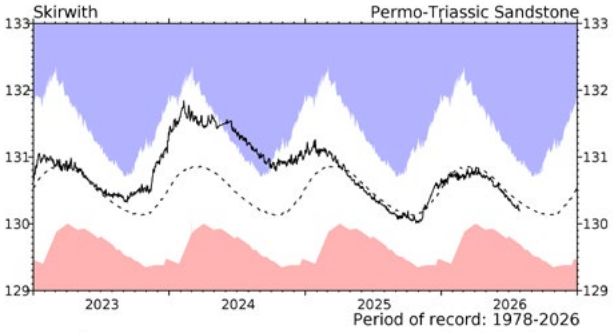


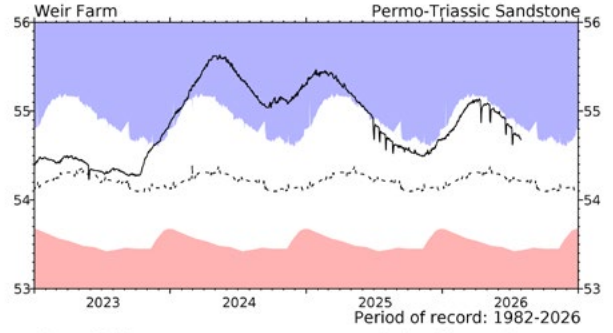



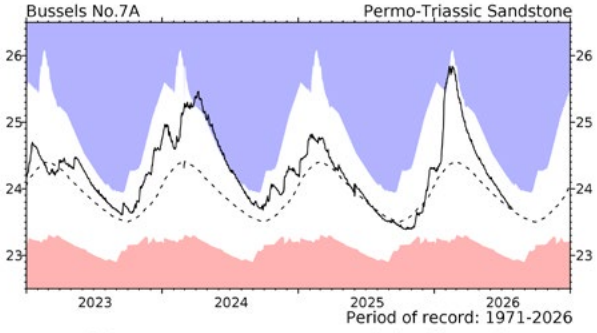



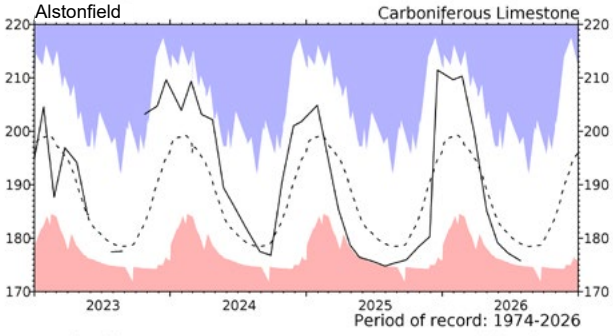



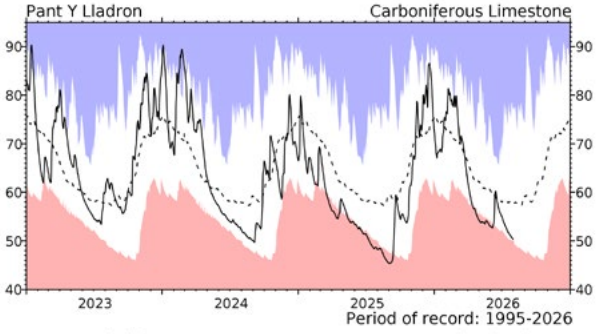



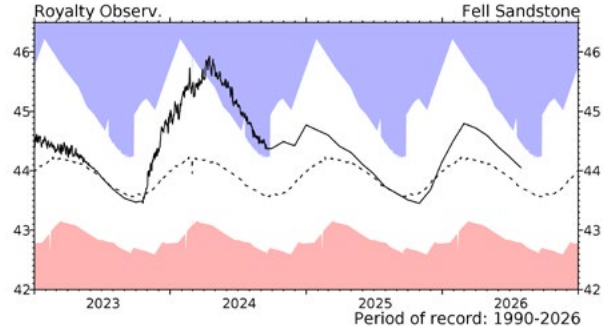



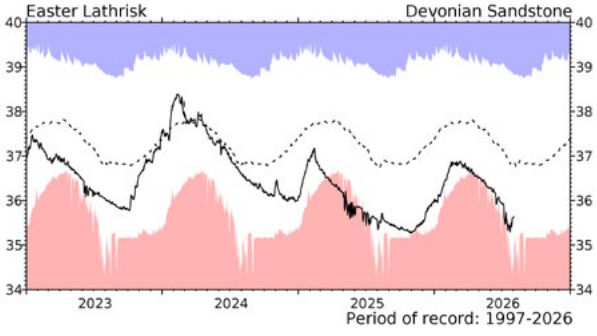



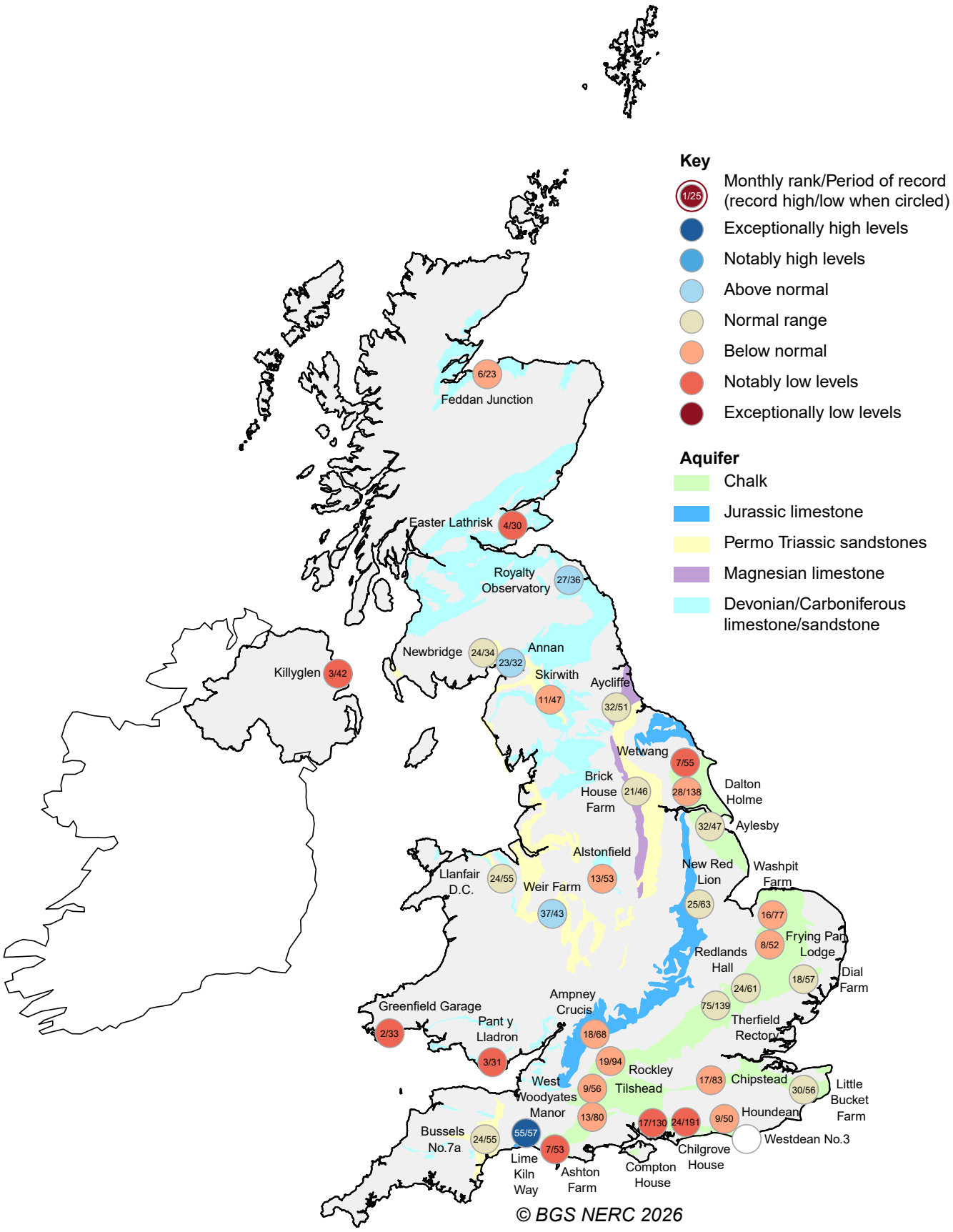



# Groundwater

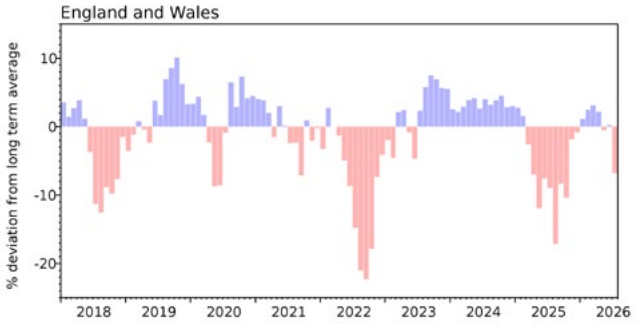



## Groundwater levels - July 2026

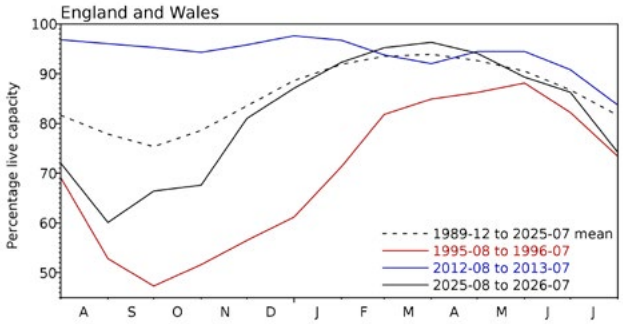
The calculation of ranking has been modified from that used in summaries published prior to October 2012. It is now based on a comparison between the most recent level and levels for the same date during previous years of record. Where appropriate, levels for earlier years may have been interpolated. The rankings are designed as a qualitative indicator, and ranks at extreme levels, and when levels are changing rapidly, need to be interpreted with caution.

# Reservoirs

## Guide to the variation in overall reservoir stocks for England and Wales




## Comparison between overall reservoir stocks for England and Wales in recent years




## Percentage live capacity of selected reservoirs at end of month

| Area | Reservoir | | Capacity (Ml) | 2026 May | 2026 Jun | 2026 Jul | Jul Anom. | Min Jul | Year* of min | 2025 Jul | Diff 26-25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| North West | N Command Zone | • | 124929 | 80 | 82 | 65 | 2 | 23 | 1984 | 58 | 7 |
| | Vyrnwy | | 55146 | 96 | 94 | 82 | 5 | 45 | 1984 | 87 | -5 |
| Northumbrian | Teesdale | • | 87936 | 80 | 81 | 66 | -9 | 45 | 1989 | 68 | -3 |
| | Kielder | | (199175) | 92 | 92 | 82 | -7 | 66 | 1989 | 90 | -8 |
| Severn-Trent | Clywedog | | 49936 | 99 | 95 | 62 | -23 | 50 | 1976 | 86 | -24 |
| | Derwent Valley | • | 46692 | 85 | 79 | 60 | -12 | 43 | 1996 | 49 | 11 |
| Yorkshire | Washburn | • | 23373 | 88 | 77 | 63 | -10 | 50 | 2022 | 51 | 13 |
| | Bradford Supply | • | 40942 | 82 | 78 | 62 | -9 | 38 | 1995 | 48 | 14 |
| Anglian | Grafham | | (55490) | 88 | 88 | 76 | -13 | 66 | 1997 | 80 | -4 |
| | Rutland | | (116580) | 94 | 90 | 81 | -6 | 74 | 1995 | 80 | 1 |
| Thames | London | • | 202828 | 91 | 89 | 89 | 3 | 73 | 1990 | 82 | 7 |
| | Farmoor | • | 13822 | 99 | 99 | 99 | 3 | 84 | 1990 | 90 | 9 |
| Southern | Bewl | | 31000 | 90 | 81 | 68 | -8 | 45 | 1990 | 65 | 3 |
| | Ardingly | | 4685 | 96 | 87 | 61 | -22 | 56 | 2025 | 56 | 6 |
| Wessex | Clatworthy | | 5662 | 81 | 68 | 52 | -20 | 43 | 1992 | 51 | 1 |
| | Bristol | • | (38666) | 86 | 79 | 64 | -10 | 51 | 2025 | 51 | 13 |
| South West | Colliford | | 28540 | 81 | 75 | 61 | -14 | 43 | 2022 | 62 | -1 |
| | Roadford | | 34500 | 89 | 85 | 68 | -9 | 46 | 1996 | 80 | -13 |
| | Wimbleball | | 21320 | 78 | 69 | 50 | -26 | 49 | 2022 | 58 | -8 |
| | Stithians | | 4967 | 85 | 76 | 55 | -15 | 39 | 1990 | 73 | -17 |
| Welsh | Celyn & Brenig | • | 131155 | 89 | 85 | 73 | -13 | 65 | 1989 | 72 | 1 |
| | Brianne | | 62140 | 100 | 99 | 90 | 1 | 64 | 2022 | 72 | 18 |
| | Big Five | • | 69762 | 91 | 84 | 67 | -9 | 41 | 1989 | 60 | 7 |
| | Elan Valley | • | 99106 | 90 | 82 | 68 | -12 | 53 | 2022 | 55 | 13 |
| Scotland(E) | Edinburgh/Mid-Lothian | • | 97223 | 90 | 88 | 80 | -2 | 51 | 1998 | 78 | 2 |
| | East Lothian | • | 9317 | 91 | 82 | 72 | -18 | 72 | 2026 | 72 | 0 |
| Scotland(W) | Loch Katrine | • | 110326 | 80 | 87 | 75 | -1 | 53 | 2000 | 65 | 10 |
| | Daer | | 22494 | 85 | 97 | 85 | 5 | 54 | 2021 | 77 | 8 |
| | Loch Thom | | 10721 | 82 | 84 | 75 | -8 | 55 | 2021 | 82 | -7 |
| Northern Ireland | Total+ | • | 56800 | 87 | 91 | 78 | 0 | 54 | 1995 | 77 | 1 |
| | Silent Valley | • | 20634 | 89 | 96 | 82 | 7 | 42 | 2000 | 80 | 3 |

( ) figures in parentheses relate to gross storage

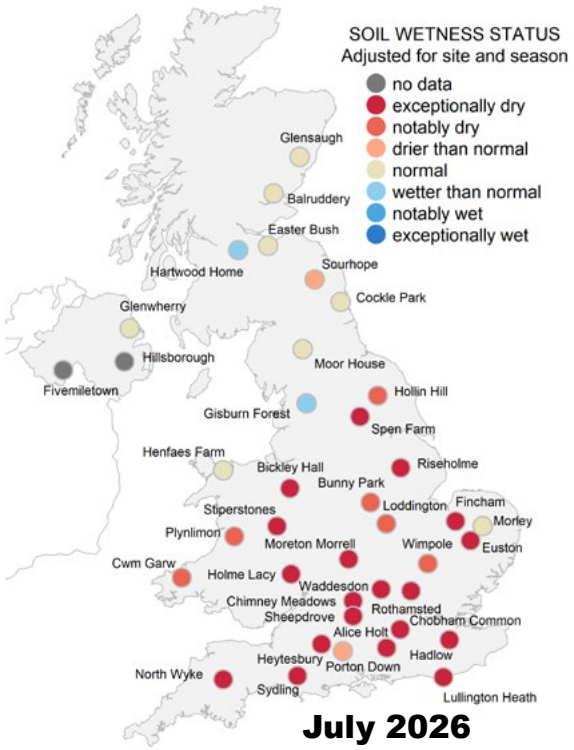
• denotes reservoir groups

*last occurrence

+ excludes Lough Neagh

Details of the individual reservoirs in each of the groupings listed above are available on request. The percentages given in the Average and Minimum storage columns relate to the 1988-2012 period except for West of Scotland and Northern Ireland where data commence in the mid-1990s. In some gravity-fed reservoirs (e.g. Clywedog) stocks are kept below capacity during the winter to provide scope for flood attenuation purposes. Monthly figures may be artificially low due to routine maintenance or turbidity effects in feeder rivers.

# Soil Moisture

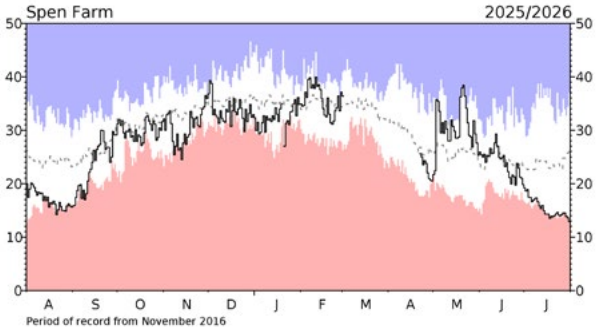


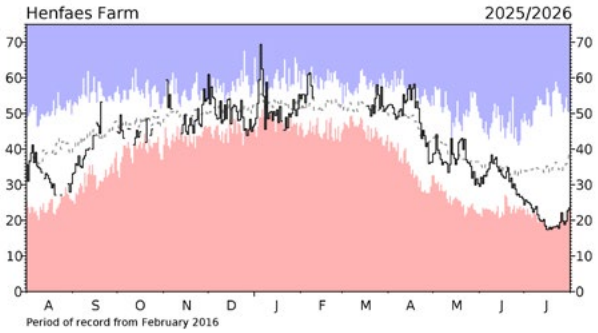

**July 2026**

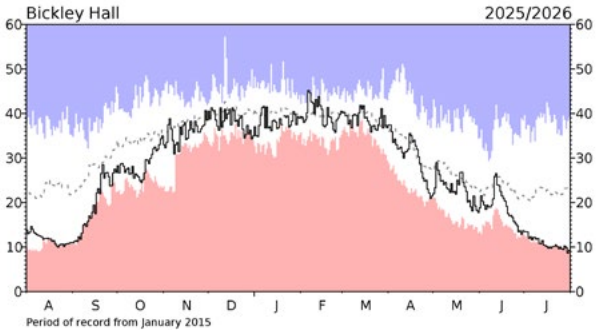
Daily mean soil moisture status at COSMOS-UK sites on the last day of the month 31 July 2026. Soil wetness categories are adjusted for site specific characteristics, i.e. taking account of the possible range of soil wetness at each site, determined through period-of-record data and hindcast modelling. Where no data are available on the last day of the month, these are shown by grey dots.

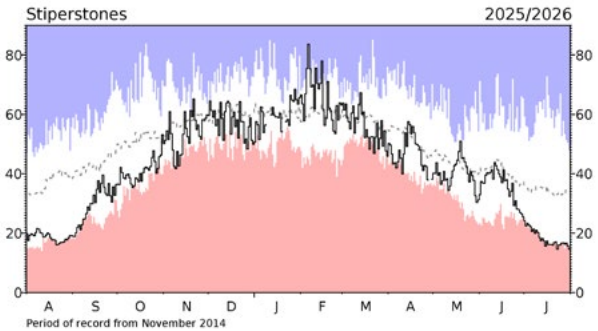
The lack of precipitation and continuous high heat levels this month saw record lows for soil moisture set across multiple COSMOS-UK sites across England and Wales. Lowest ever recorded daily volumetric water content records were seen at Bickley Hall (8.88%), Fincham (8.71%), Henfaes (17.2%), North Wyke (18.4%), Spen Farm (12.93%), and Stiperstones (14.73%). All these sites also recorded their driest month on record, in addition to seven other sites (Hadlow College, Holme Lacy, Heytesbury, Lullington, Riseholme, Rothamsted, and Sheepdrove).

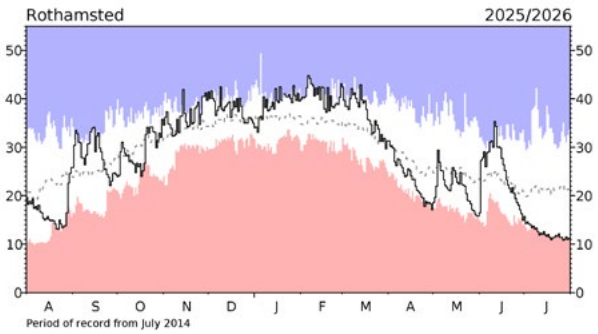
Forecasts for August suggest some rainfall across Scotland, Northern Ireland, and Northern England, but little change for the rest of England and Wales. The network will likely not see significant recovery in soil moisture.




## Soil moisture data

These data are from UKCEH's COSMOS-UK network. The time series graphs show volumetric water content as a percentage in black together with the maximum and minimum daily values for the period-of-record of the sites. The dashed line represents the period-of-record mean VWC. For more information visit cosmos.ceh.ac.uk.

## NHMP

The National Hydrological Monitoring Programme (NHMP) was started in 1988 and is undertaken jointly by the UK Centre for Ecology & Hydrology (UKCEH) and the British Geological Survey (BGS). The NHMP aims to provide an authoritative voice on hydrological conditions throughout the UK, to place them in a historical context and, over time, identify and interpret any emerging hydrological trends. Hydrological analysis and interpretation within the Programme is based on the data holdings of the National River Flow Archive (NRFA; maintained by UKCEH) and National Groundwater Level Archive (NGLA; maintained by BGS), including rainfall, river flows, groundwater levels, soil moisture and reservoir stocks.

The Hydrological Summary is supported by the Natural Environment Research Council award number NE/Y006208/1 as part of the NC-UK programme delivering National Capability.

## Data Sources

The NHMP depends on the active cooperation of many data providers. This cooperation is gratefully acknowledged. A location map of all sites used in the Hydrological Summary can be found on the NHMP website.

River flow and groundwater level data are provided by the Environment Agency (EA), Natural Resources Wales - Cyfoeth Naturiol Cymru (NRW), the Scottish Environment Protection Agency (SEPA) and, for Northern Ireland, the Department for Infrastructure - Rivers and the Northern Ireland Environment Agency. River flow data are subject to revision following an annual validation process by the National River Flow Archive; high and low flows may be subject to significant revision.

Month-end soil moisture data is provided by COSMOS-UK for a network of 40 sites across the UK, the longest records of which extend back to 2013. COSMOS-UK data should be considered provisional until annual data publication. More information about individual COSMOS-UK sites, data and measurements can be found on the COSMOS-UK website.

National and regional soil moisture may also be mentioned and plotted in the Hydrological Summary and other NHMP outputs. These data are provided by the Meteorological Office Rainfall and Evaporation Calculation System (MORECS). MORECS provides estimates of monthly soil moisture deficit in the form of averages over 40 x 40 km grid squares over Great Britain and Northern Ireland. The monthly time series of data extends back to 1961.

Rainfall data are provided by the Met Office. To allow better spatial differentiation the rainfall data for Britain are presented for the regional divisions of the precursor organisations of the EA, NRW and SEPA. The areal rainfall figures have been produced by the Met Office National Climate Information Centre (NCIC), and are based on the HadUK-Grid 1km resolution gridded data from rain gauges. The majority of the full rain gauge network across the UK is operated by the EA, NRW, SEPA and Northern Ireland Water; supplementary rain gauges are operated by the Met Office. The Met Office NCIC monthly rainfall series extend back to 1836 and form the official source of UK areal rainfall statistics which have been adopted by the NHMP. The gridding technique used is described in Hollis, 2019 available at https://doi.org/10.1002/gdj3.78

Given the sparser rain gauge network in the early record and to maintain consistency with previous Hydrological Summaries and NHMP analyses, the NHMP uses rainfall data from 1890 to present in its analyses. Long-term averages are based on the period 1991-2020 and are derived from the monthly areal series.

The regional figures for the current month in the Hydrological Summaries are based on a limited rain gauge network so these (and the associated return periods) should be regarded as a guide only.

The monthly rainfall figures are provided by the Met Office NCIC and are Crown Copyright and may not be passed on to, or published by, any unauthorised person or organisation. These are provisional totals calculated from a sub set of Met Office registered gauges and will be subject to change once data from the complete network of Met Office registered gauges has been quality assured and gridded within the annual process of updating the HadUK-Grid dataset.

For further details on rainfall or MORECS data, please contact the Met Office:

Tel: 0370 900 0100
Email: enquiries@metoffice.gov.uk

## Enquiries

Enquiries should be directed to the NHMP:
Email: nhmp@ceh.ac.uk

Enquiries about COSMOS-UK soil moisture data should be directed to COSMOS-UK:
Email: cosmos@ceh.ac.uk

A full catalogue of past Hydrological Summaries can be accessed and downloaded at:

http://nrfa.ceh.ac.uk/monthly-hydrological-summary-uk

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

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