

Monthly water situation report: North-west England

1 Summary – June 2026

Rainfall for north-west England in June was classed as above normal, having received 125% of the long-term average (LTA). Soil moisture deficit (SMD) varies across all hydrological areas, with higher deficits observed in the south. River flows have increased in response to the rainfall and are classed between normal and exceptionally high. Groundwater levels have risen slightly since last month at most sites and are classed between notably low and exceptionally high. Total reservoir stocks declined between the end of May and the end of June but remain higher than average for the time of year and this time last year.

1.1 Rainfall

During June, north-west England saw most of the rainfall falling within the first half of the month, with a predominantly dry second half of the month. Rainfall across the north-west in June was classed as above normal, having received 125% of the long-term average (LTA). Greater Manchester, Merseyside and Cheshire (GMMC) received 95% of the LTA and classed as normal, whereas Cumbria and Lancashire (CLA) received 137% of LTA and was classed as notably high. The lowest rainfall totals relative to the LTA were recorded in the Cheshire Rivers Group hydrological area (90% of the LTA), while the highest values were recorded in the Esk (Cumbria) hydrological area (161% of the LTA).

Over the 3-month cumulative period ending in June, rainfall patterns were broadly similar to June, with higher rainfall totals in the north. Of the 10 hydrological areas, 5 were classed as normal, 4 were classed as above normal and 1 was classed as notably high.

The 6-month cumulative period ending in June rainfall showed a similar north to south rainfall pattern as the 3-months cumulative and June. Of the 10 hydrological areas, 4 were classed as normal, 3 were classed as above normal, 2 were classed as notably high and 1 was classed as exceptionally high.

Over the 12-month cumulative period ending in June, rainfall has been wetter than the last 3 months and 6 months. Of the 10 hydrological areas, 1 was classed as normal, 3 were classed as above normal, 2 classed as notably high and 4 were classed as exceptionally high.

1.2 Soil moisture deficit and recharge

Soil moisture deficits (SMD) have increased between the end of May and end of June across all hydrological areas in north-west England. The highest deficits were seen in Cheshire River Group with levels between 101mm and 130mm, whereas in Cumbria, all hydrological areas were between 11mm and 40mm.

1.3 River flows

River flows in June reflect the spatial patterns in rainfall with higher flows observed at sites in Cumbria and Lancashire, which were classed between normal and exceptionally high. The flows at sites in Greater Manchester Merseyside and Cheshire were all classed as normal for June. The highest river flows relative to the LTA were on the Esk (Cumbria) at Cropple How with 257% of the LTA and classed as exceptionally high whereas the lowest flows were at Weaver at Ashbrook with 67% of the LTA and classed as normal. For the 24 indicator sites this month, 11 were classed as normal, 5 were classed as above normal, 7 were classed as notably high and 1 was classed as exceptionally high.

1.4 Groundwater levels

Groundwater levels across north-west England at the end of June were classed between below normal and exceptionally high, with absolute levels increasing between May and June at all sites except Lea Lane. Between May and June, a drop in the classifications was seen at Great Musgrave and Victoria Road, whilst the classifications remained then same at all other sites.

- Great Musgrave, changed from normal to below normal
- Victoria Road, changed from below normal to notably low

All other groundwater indicator sites remained at the same classification as May:

- Brown Bank Lay-By, classed as above normal
- Bruntwood Hall, classed as above normal
- Furness Abbey, classed as exceptionally high
- Lea Lane, classed as above normal
- Primrose Hill, classed as normal
- Priors Heyes, classed as exceptionally high
- Skirwith, classed as normal
- Richmond Park, classed as exceptionally high
- Victoria Road, classed as notably low

1.5 Reservoir stocks

Total reservoir storage for north-west England saw a decrease from 83.3% net storage at the end of May to 81.0% net storage at the end of June, which includes a slight recovery in the first half of June. This is 5.4% higher than the average of 75.6% for this time of year, and 21% higher than this time last year when stocks were at 60.0%.

At the end of June, net reservoir storage (in terms of percentage) was highest at Lake Vyrnwy at 94.4% full, and lowest at Rivington, at 63.6% full.

The combined net storage at Haweswater and Thirlmere reservoirs decreased from 80.5% at the end of May to 79.3% at the end of June. This is higher than the average of 67.8% for this time of year, and higher than this time last year when stocks were 57.8%.

Reservoirs kept low for maintenance works include parts of the:

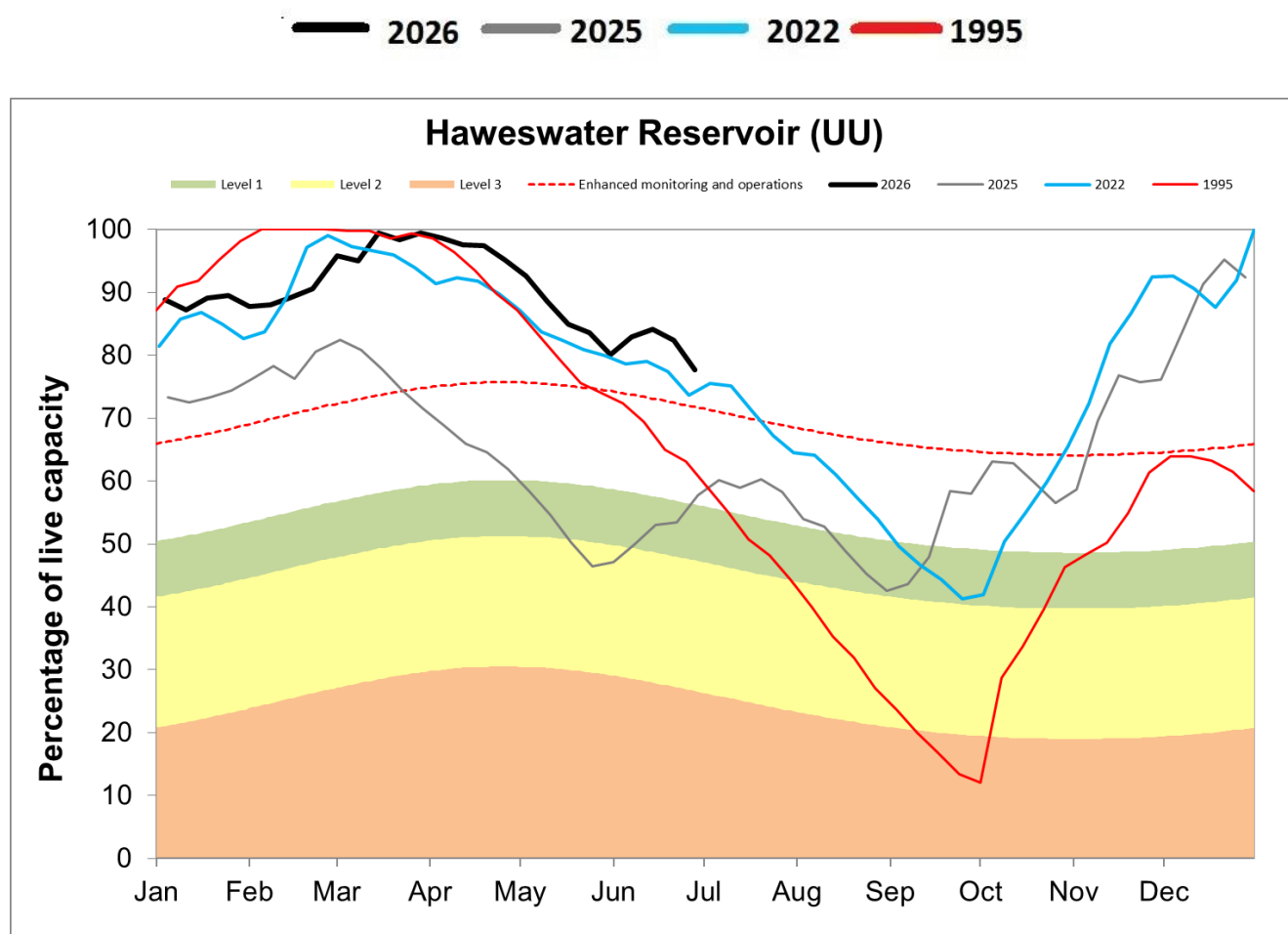
- Longridge System (Ribble Reservoir Supply District) – Alston No.1, Alston No.2, Spade Mill No.1, and Spade Mill No.2
- Rivington System (Rivington Reservoir Supply District) – Anglezarke, High Bullough, and Yarrow
- Longdendale System (Longdendale Reservoir Supply District) – Audenshaw No.1, Torside, and Woodhead
- Barnacre Group (Ribble Reservoir Supply District) – Barnacre North, and Barnacre South
- Cowpe System (Pennines West Reservoir Supply District) – Cragg
- Cowm System (Longdendale Reservoir Supply District) – Cowm
- Ogden (Barley) System (Ribble Reservoir Supply District) – Ogden (Barley) Lower, and Ogden (Barley) Upper
- Ridgeway System (Stockport Reservoir Supply District) – Ridgeway
- Cumbria Compensation & recreation only reservoirs – Borran

1.6 Water abstraction restrictions and environmental impacts

In CLA, 5 water abstraction licences were issued with stop notices in June. In GMMC, 1 water abstraction licence was issued with a reduced notice, 2 licenses with early warning notices and 1 license with a further warning notice. There were no reported environmental incidents related to dry weather across north-west England.

All data are provisional and may be subject to revision. The views expressed in this document are not necessarily those of the Environment Agency. Its officers, servants or agents accept no liability for any loss or damage arising from the interpretation or use of the information, or reliance upon views contained herein.

Figure 1.5: Storage in Haweswater Reservoir, including the drought levels for the reservoir and storage for the current year (2026) and representative years: 1995, 2022 and 2025
(Source: United Utilities (UU)).

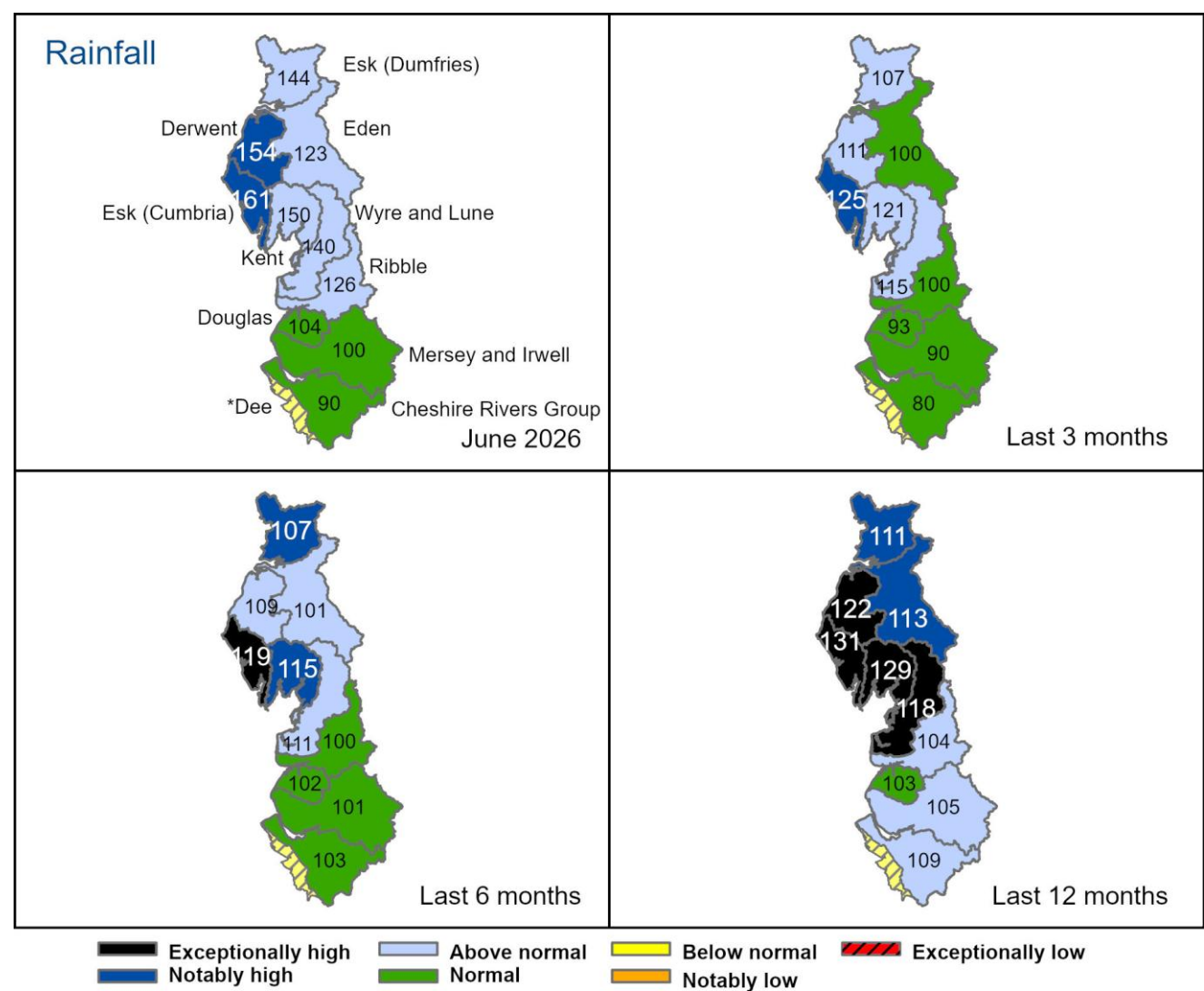


Author: Cumbria and Lancashire Hydrology Team, Hydrology.CMBLNC@environment-agency.gov.uk

2 Rainfall

2.1 Rainfall map

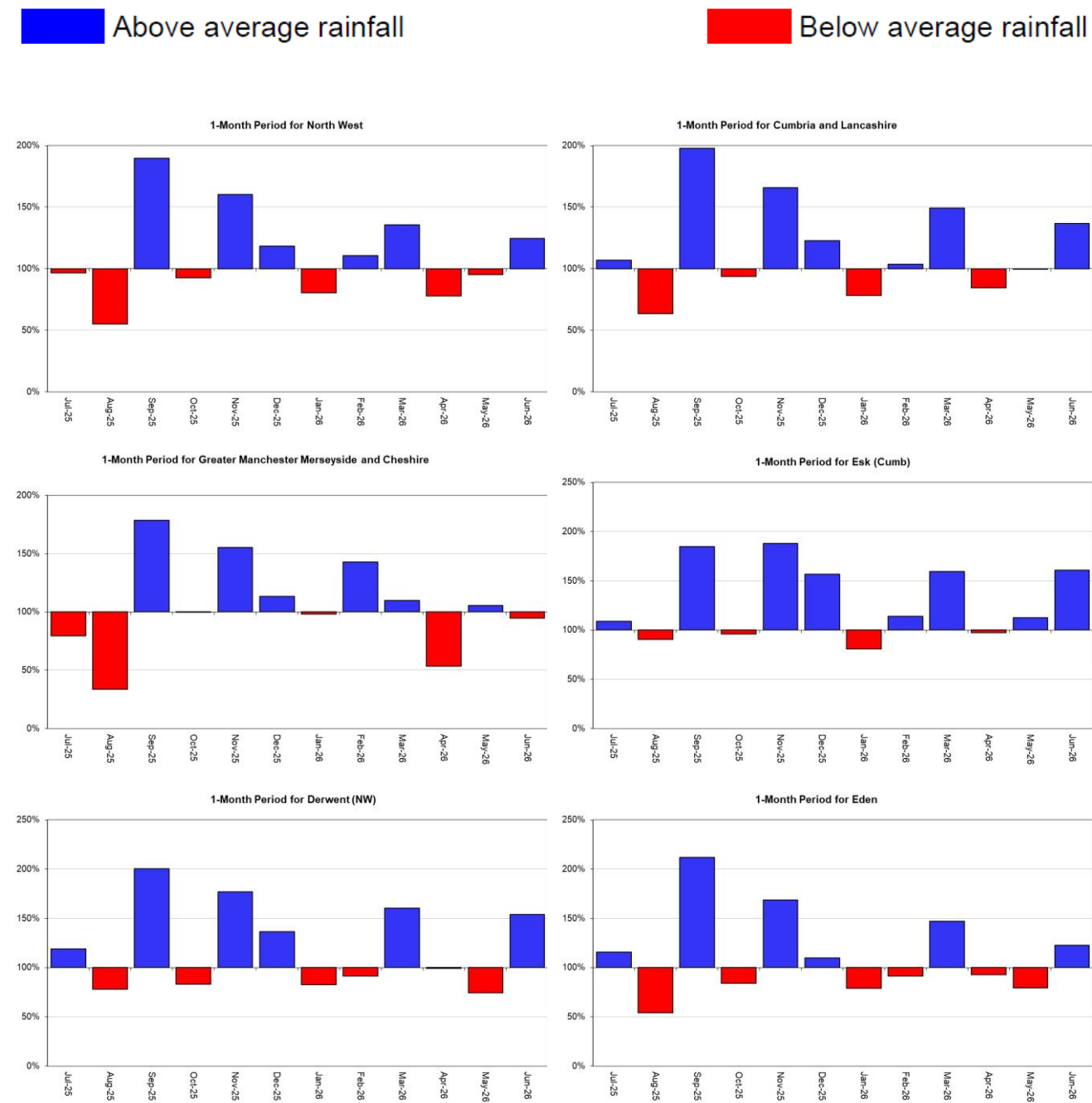
Figure 2.1: Total rainfall (as a percentage of the 1991 to 2020 long term average) for hydrological areas for the current month (up to 30 June 2026), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



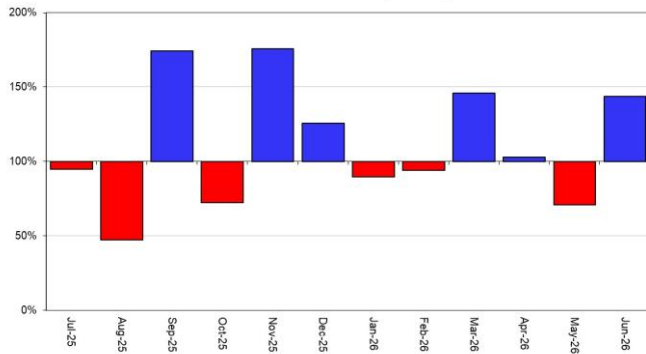
Rainfall data since January 2025, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

2.2 Rainfall charts

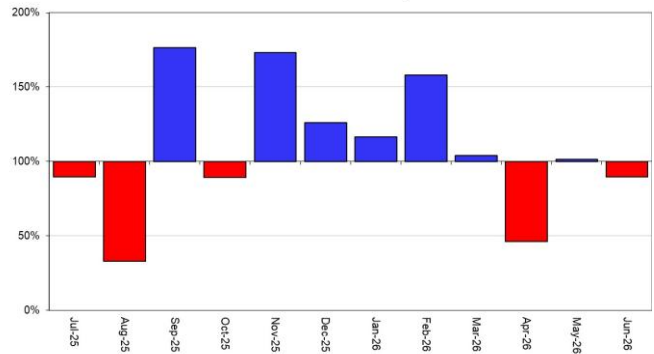
Figure 2.2: Monthly rainfall totals for the past 12 months expressed as a percentage of the 1991 to 2020 long term average for North-west England and its hydrological areas.



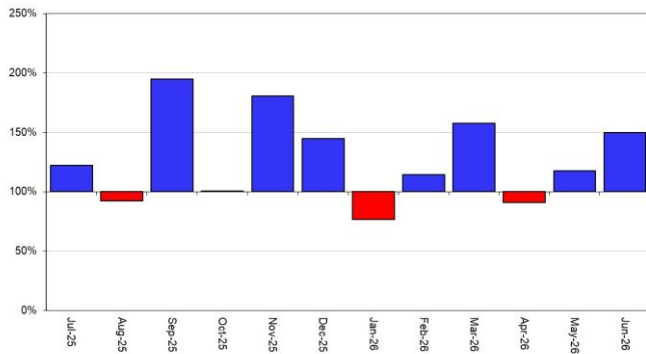
1-Month Period for Esk (Dumfries)



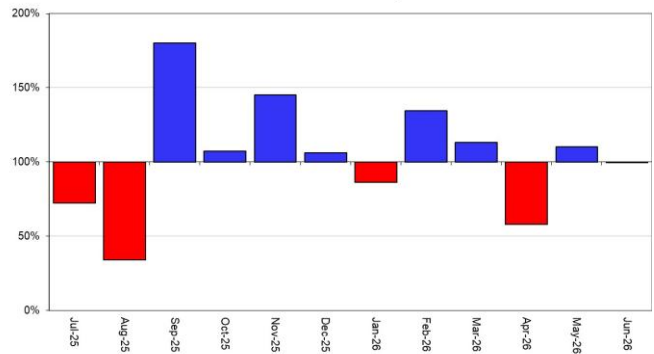
1-Month Period for Cheshire Rivers Group



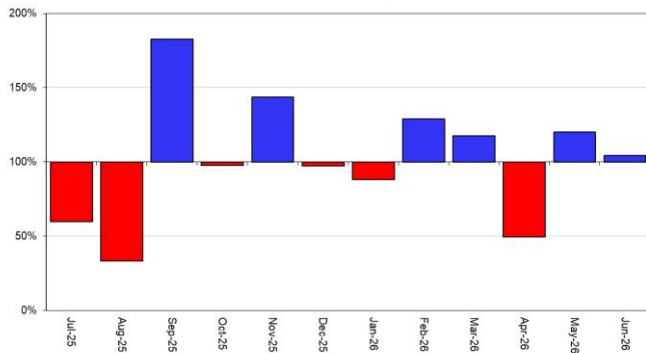
1-Month Period for Kent



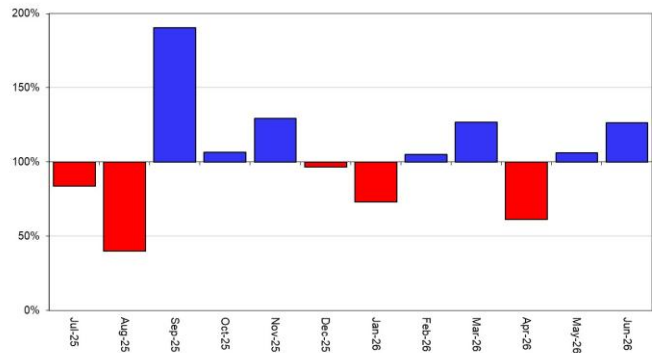
1-Month Period for Mersey and Irwell

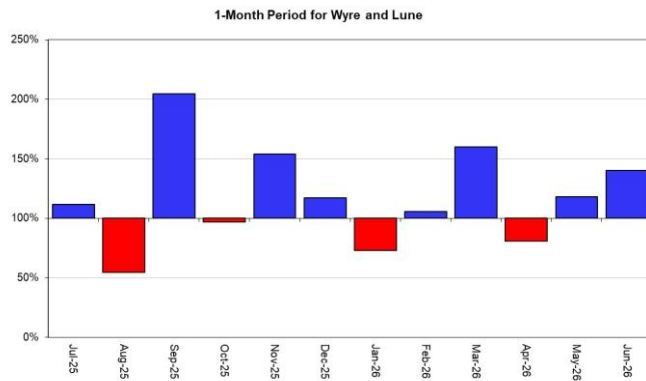


1-Month Period for Douglas



1-Month Period for Ribble



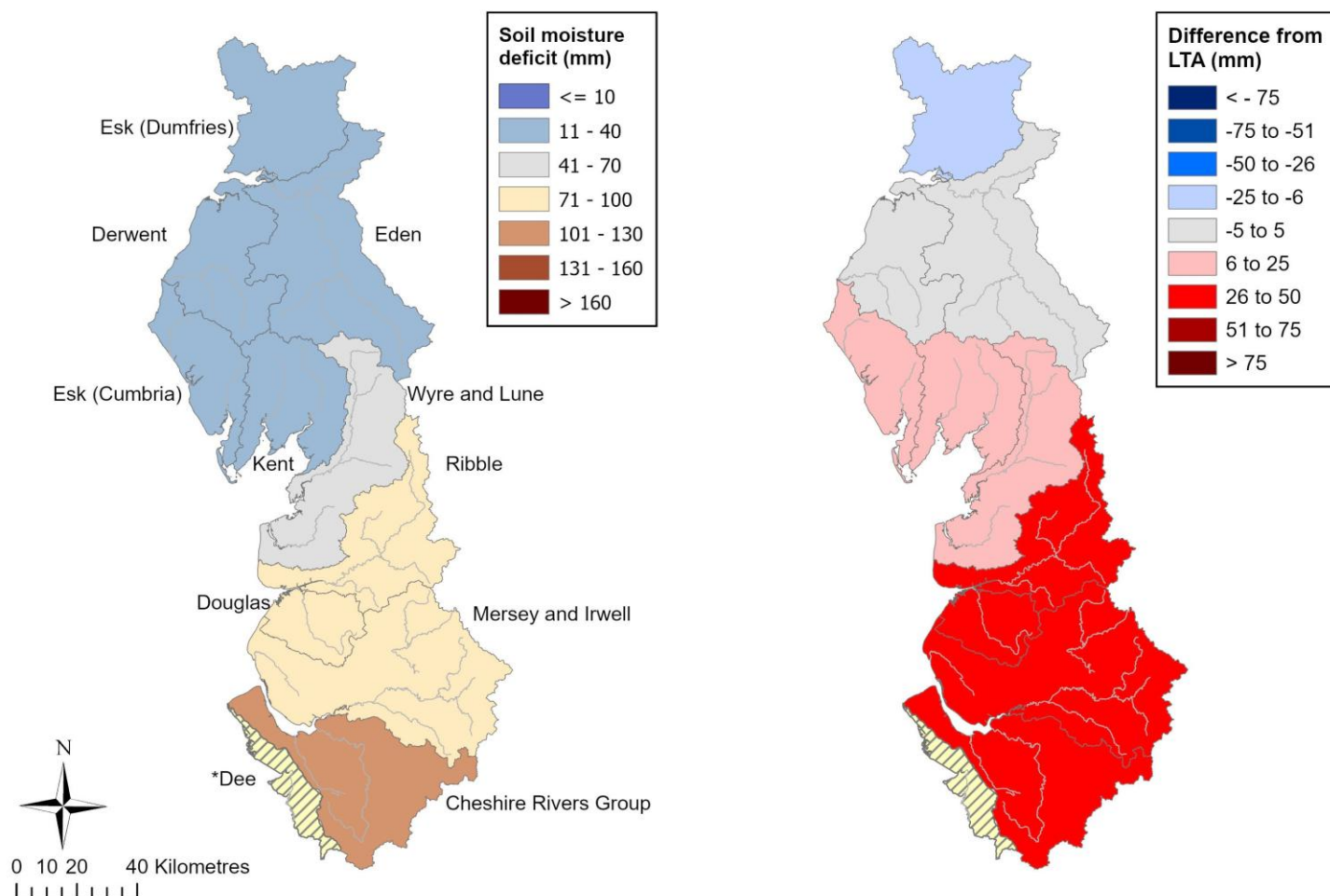


Rainfall data since January 2025, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

3 Soil moisture deficit

3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for the week ending 1 July 2026. The map on the left shows actual soil moisture deficits (mm) and on the right shows the difference (mm) of the actual from the 1991 - 2020 long term average soil moisture deficits. MORECS data for real land use.

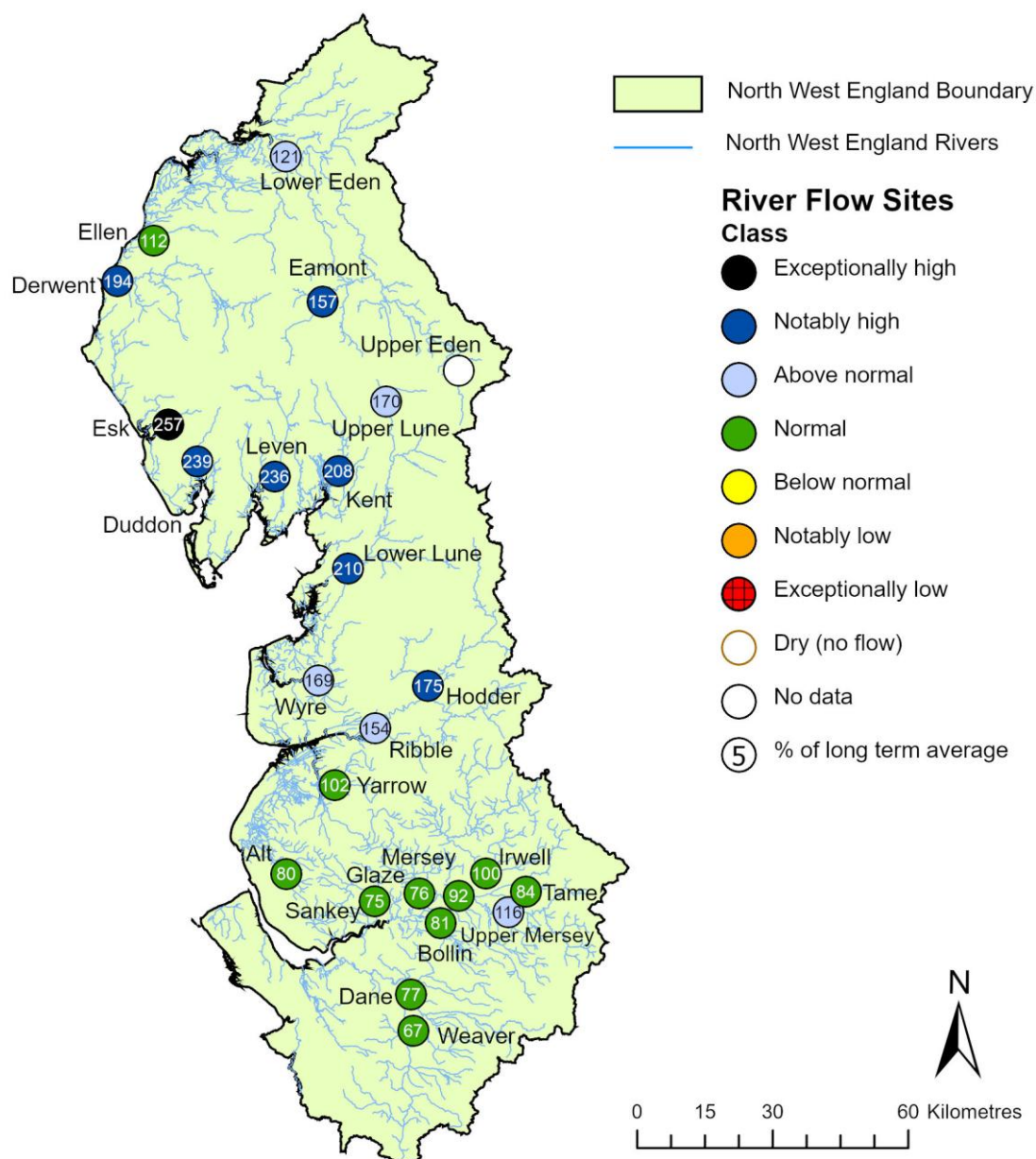


(Source: Met Office. Crown copyright, 2026). All rights reserved. Environment Agency, AC0000807064, 2026.

4 River flows

4.1 River flows map

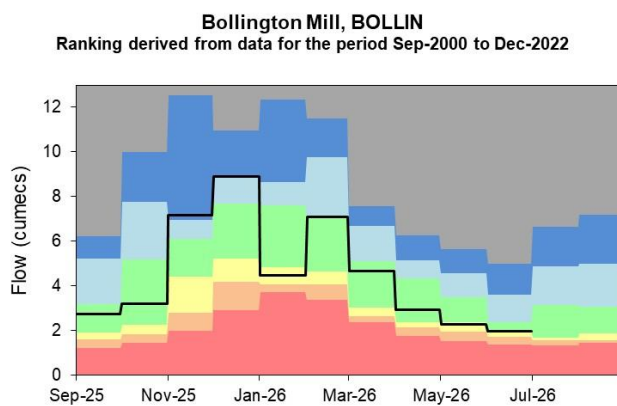
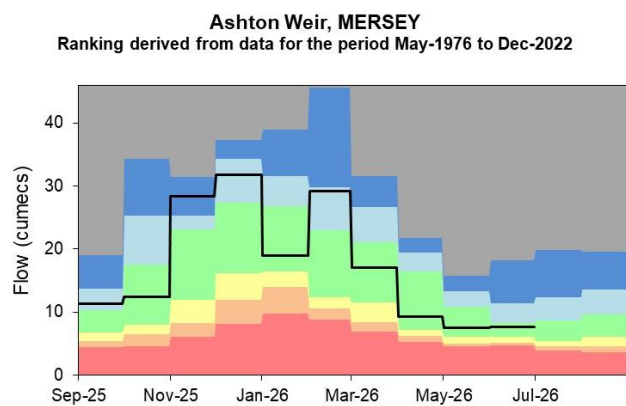
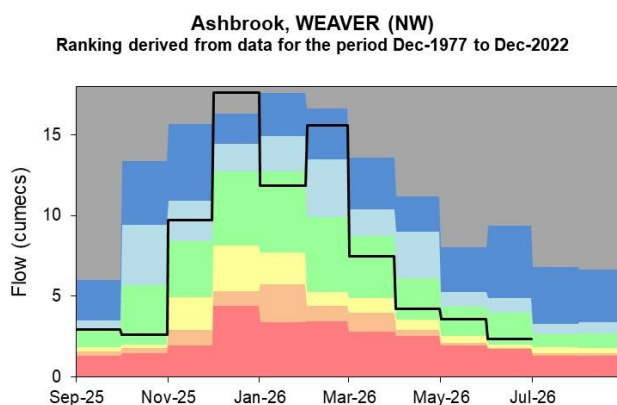
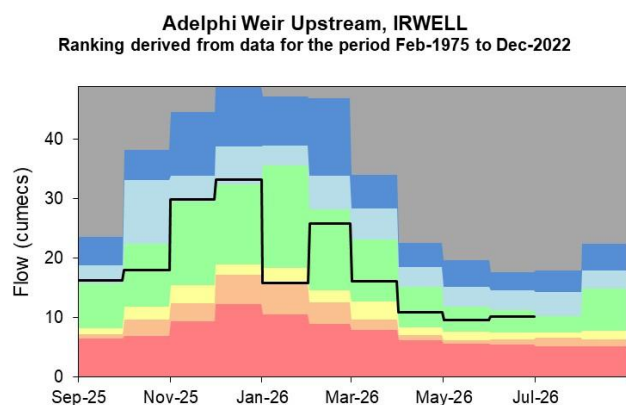
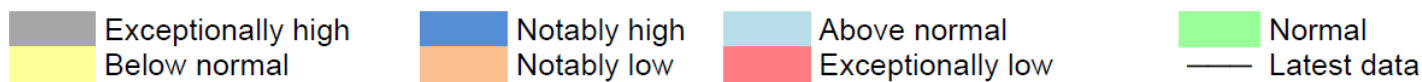
Figure 4.1: Monthly mean river flow for indicator sites for June 2026, expressed as a percentage of the respective long term average and classed relative to an analysis of historic June monthly means. Table available in the appendices with detailed information.



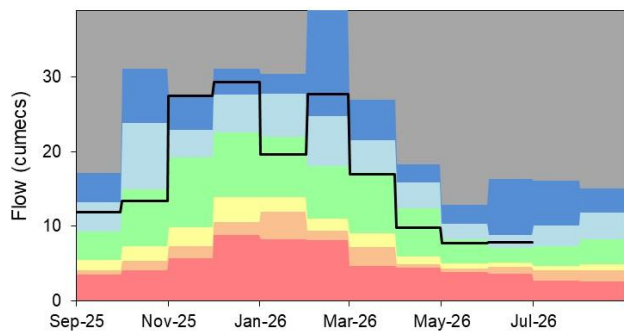
(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, AC0000807064, 2026.

4.2 River flow charts

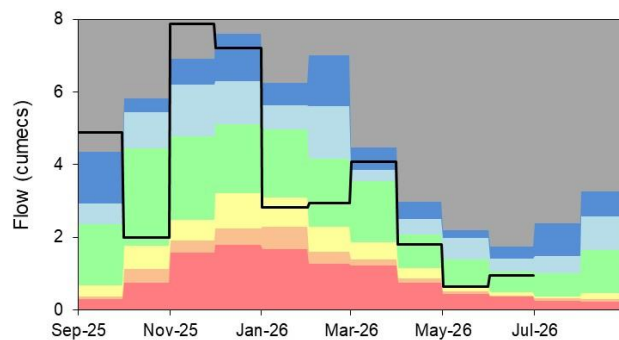
Figure 4.2: Monthly mean river flow for index sites over the past year, compared to an analysis of historic monthly mean flows.



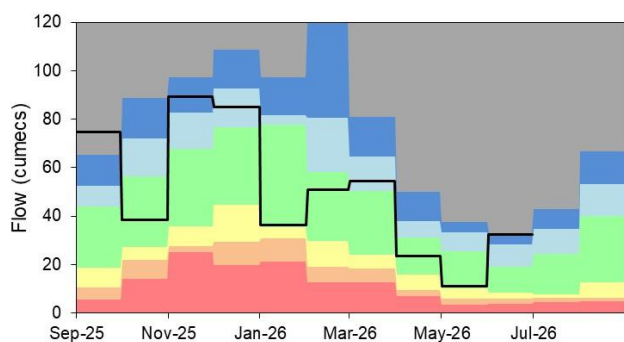
Brinksway, MERSEY
 Ranking derived from data for the period Jan-1974 to Dec-2022



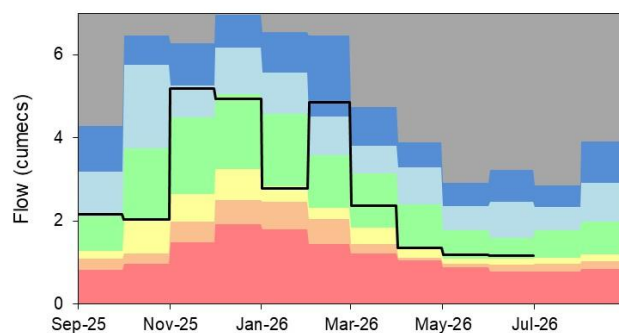
Bullgill, ELLEN
 Ranking derived from data for the period Jan-1976 to Dec-2022



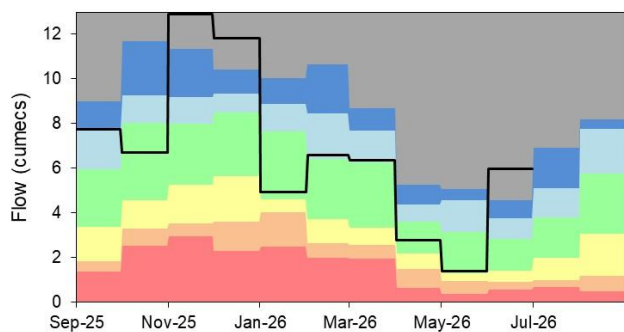
Caton, LUNE
 Ranking derived from data for the period Jan-1959 to Dec-2022



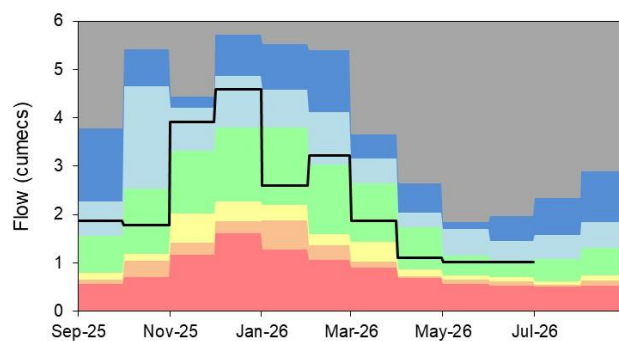
Causey Bridges, SANKEY
 Ranking derived from data for the period Jan-1977 to Dec-2022



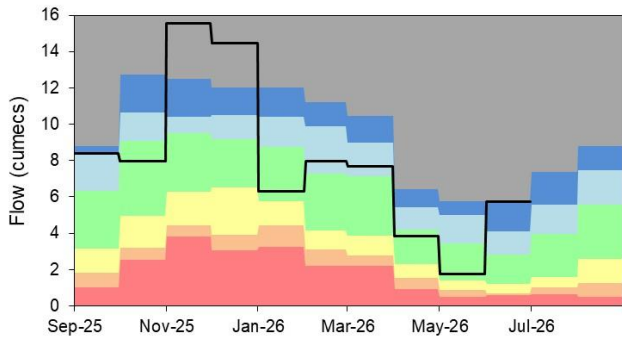
Crople How, ESK (NW)
 Ranking derived from data for the period Jan-1976 to Dec-2022



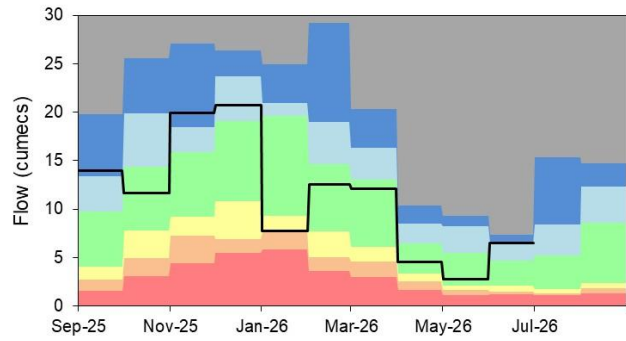
Croston, YARROW
 Ranking derived from data for the period Jan-1976 to Dec-2022



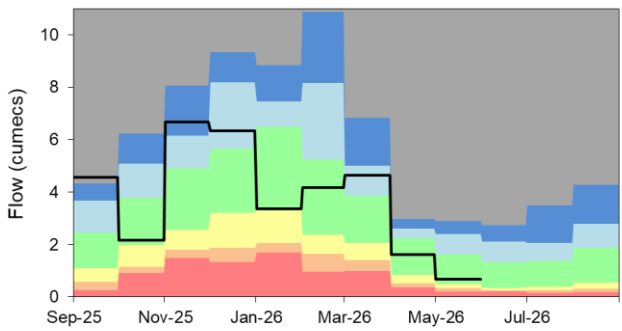
Duddon Hall, DUDDON
 Ranking derived from data for the period Mar-1968 to Dec-2022



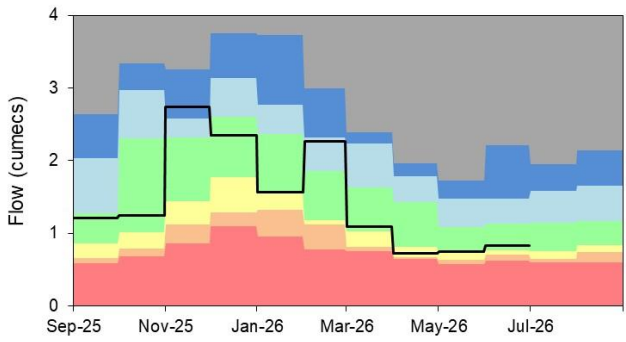
Hodder Place, HODDER
 Ranking derived from data for the period Jan-1976 to Dec-2022



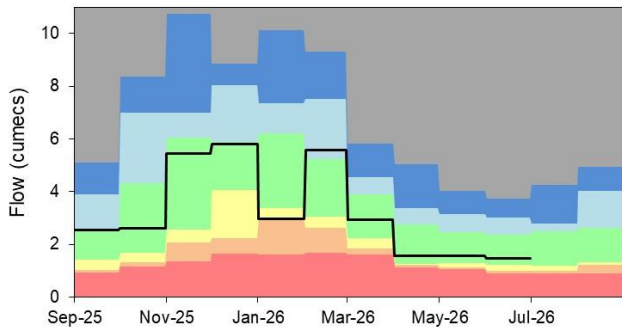
Kirkby Stephen, EDEN (NW)
 Ranking derived from data for the period Oct-1971 to Dec-2022



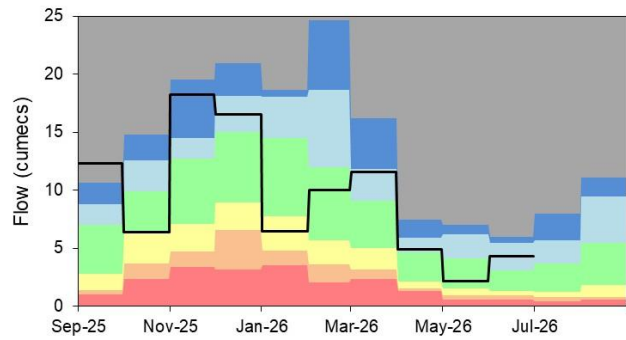
Kirkby, ALT
 Ranking derived from data for the period Oct-1977 to Dec-2022



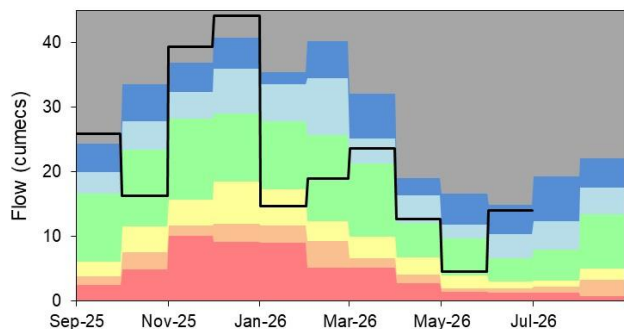
Little Woollen Hall Ultrasonic, GLAZE
 Ranking derived from data for the period Jul-1995 to Dec-2022



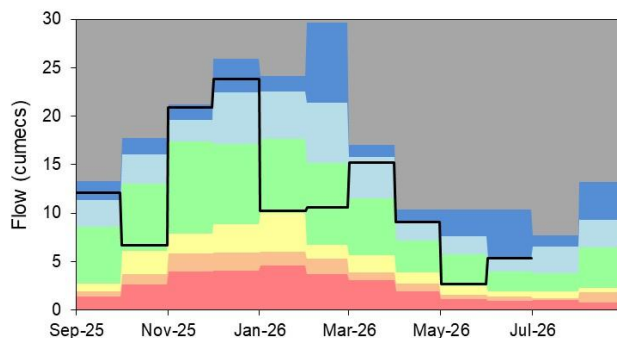
Lunes Bridge, LUNE
 Ranking derived from data for the period Dec-1979 to Dec-2022



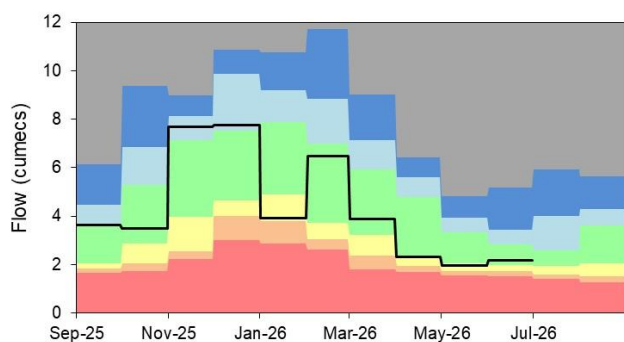
Newby Bridge FMS, LEVEN (NW)
 Ranking derived from data for the period Jan-1972 to Dec-2022



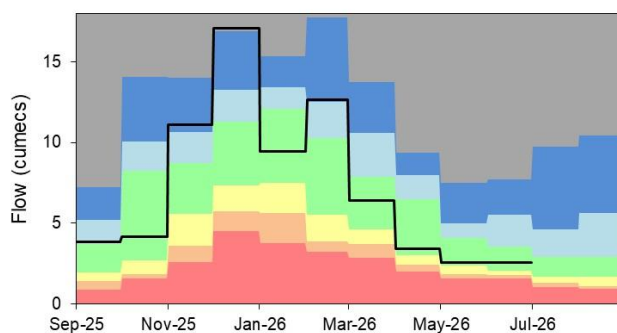
Pooley Bridge, EAMONT
 Ranking derived from data for the period Jul-1970 to Dec-2022



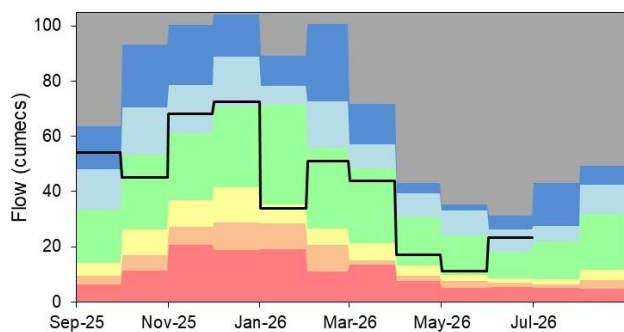
Portwood, TAME
 Ranking derived from data for the period Jan-1976 to Dec-2022



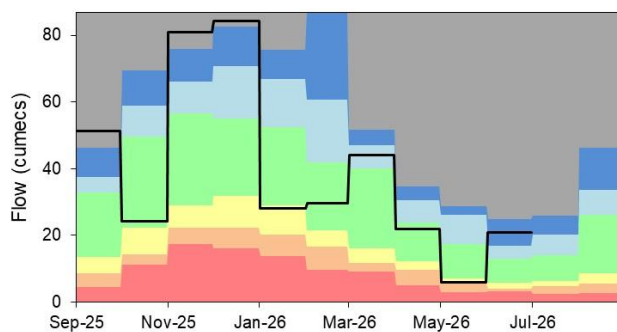
Rudheath, DANE
 Ranking derived from data for the period Jan-1976 to Dec-2022

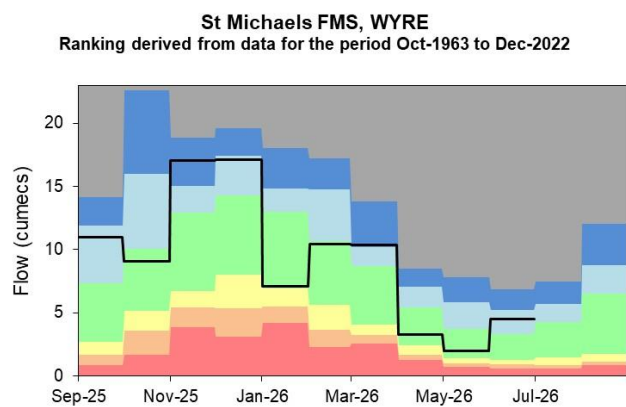
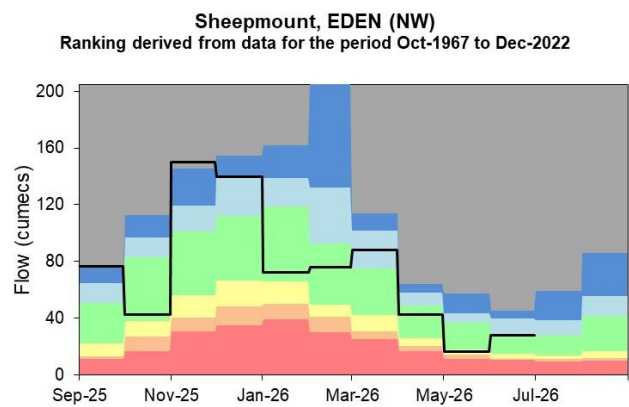
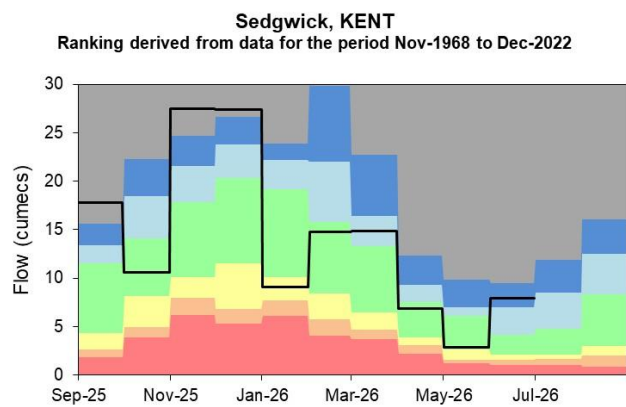


Samlesbury Pgs, RIBBLE (NW)
 Ranking derived from data for the period May-1960 to Dec-2022



Seaton Mill, DERWENT (NW)
 Ranking derived from data for the period Sep-1960 to Dec-2022



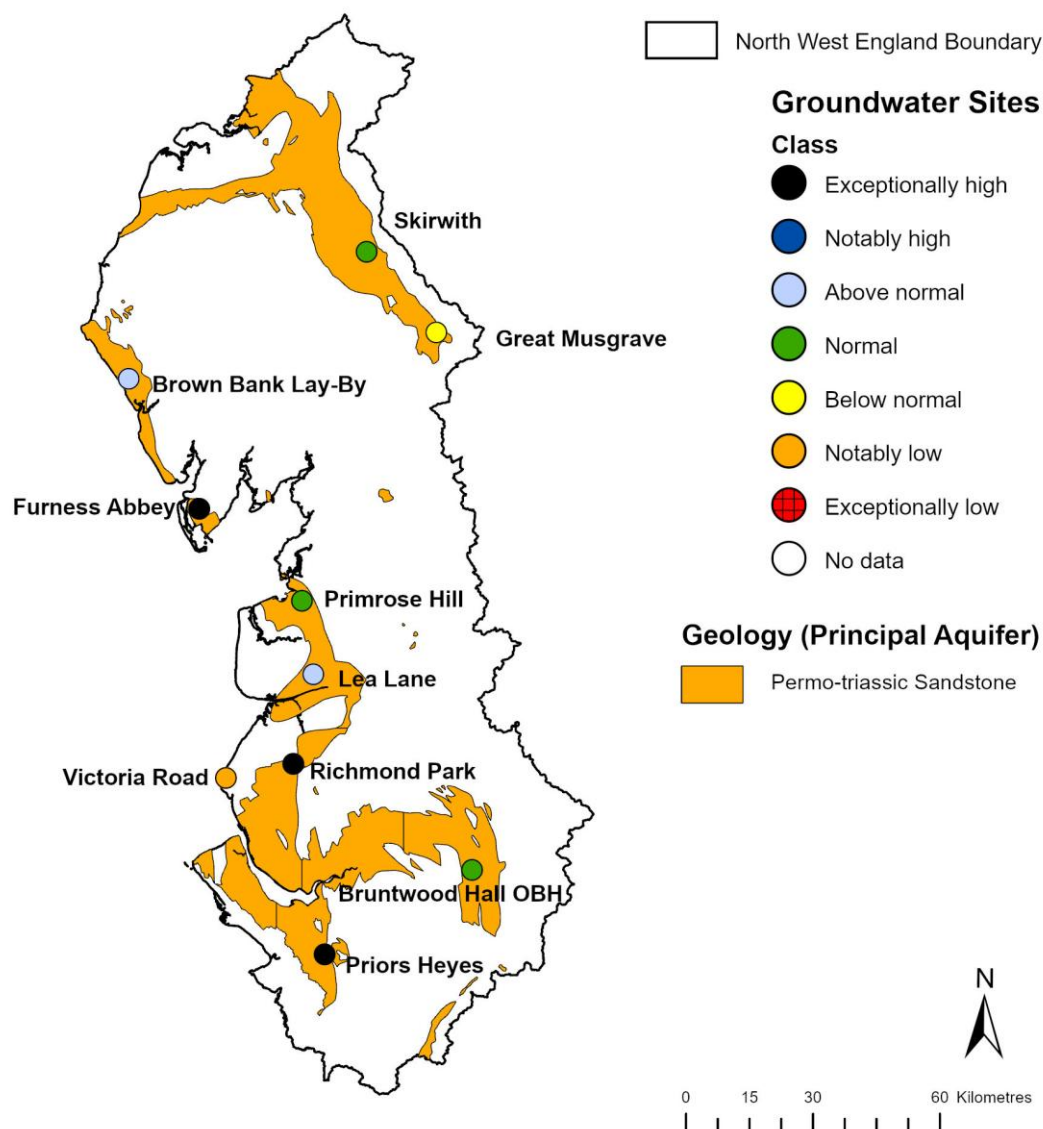


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

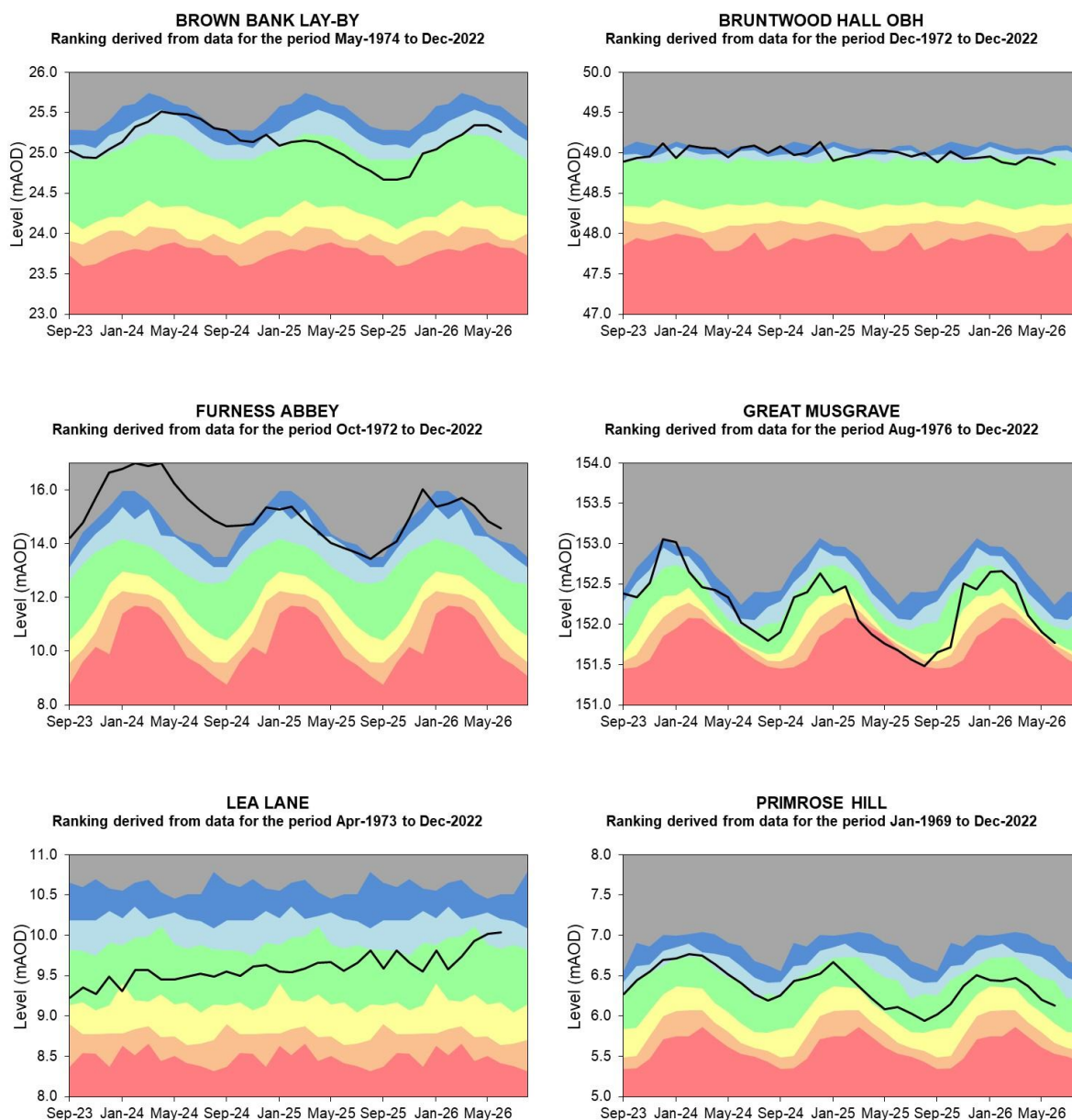
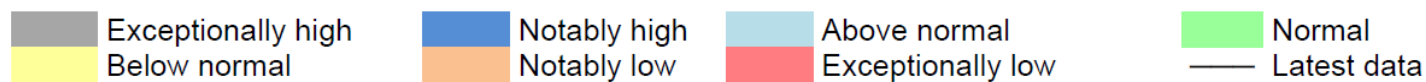
Figure 5.1: Groundwater levels for indicator sites at the end of June 2026, classed relative to an analysis of respective historic June levels. Table available in the appendices with detailed information. Please note Victoria Road Borehole sits within a superficial deposit as opposed to a bedrock aquifer. This is why the geology type is not marked on the map.

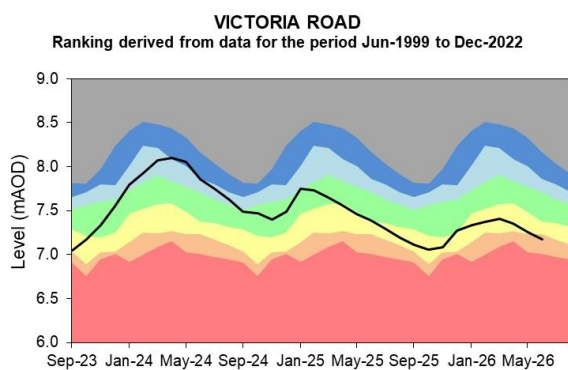
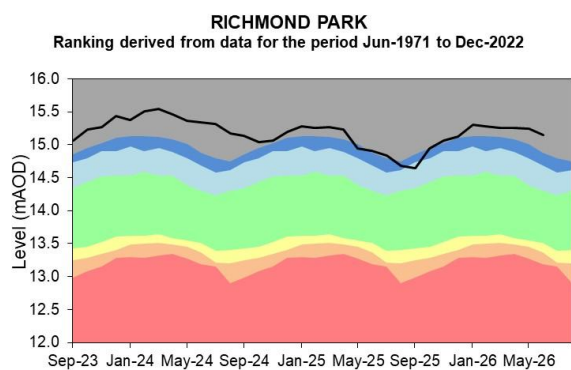
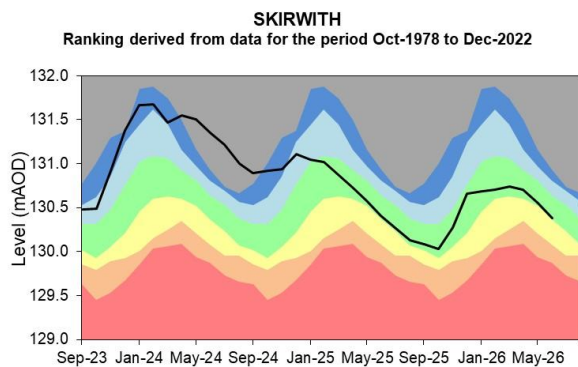
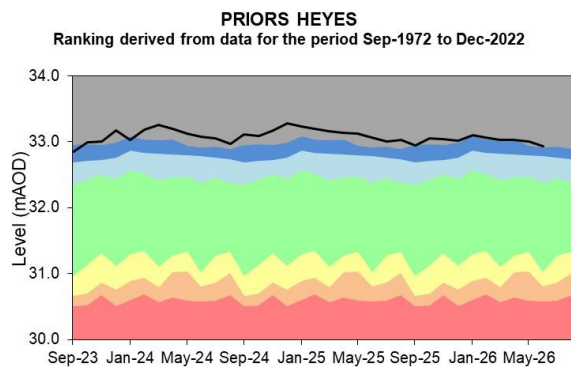


(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, AC0000807064, 2026.

5.2 Groundwater level charts

Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 34 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.





Source: Environment Agency, 2026.

6 Reservoir stocks

Figure 6.1: The location of reservoirs that comprise the supply districts across North-west England and selected individual reservoirs.

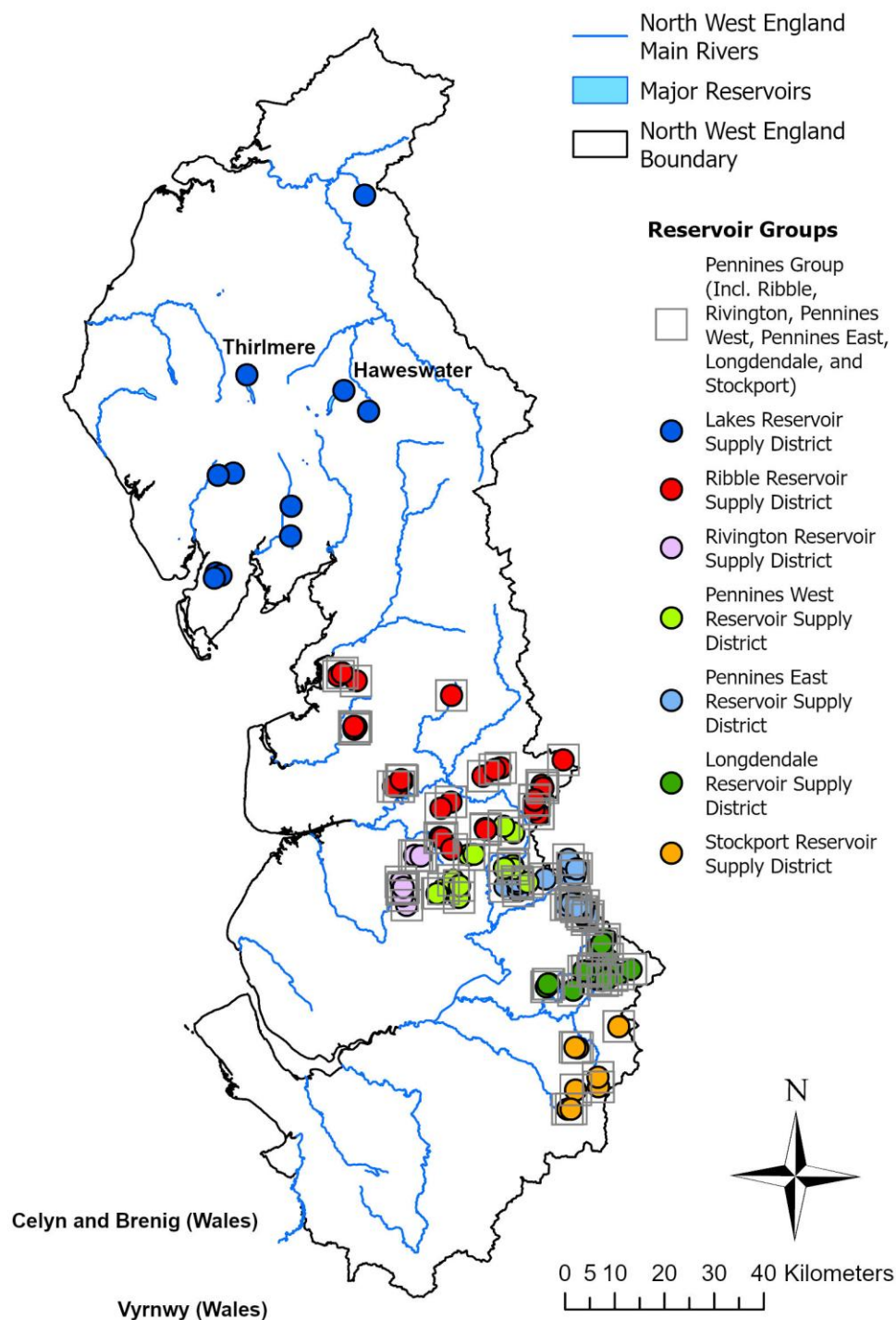
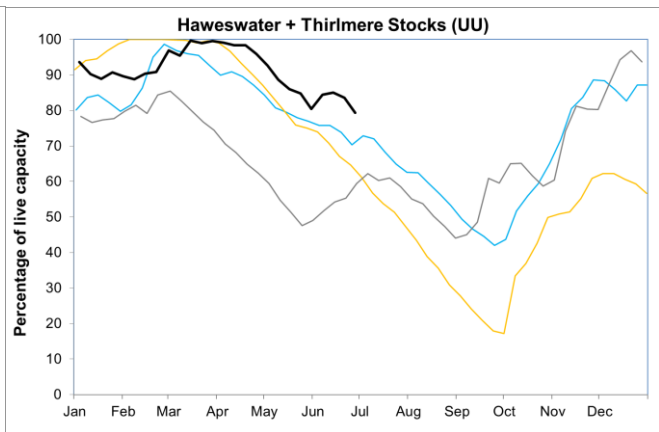
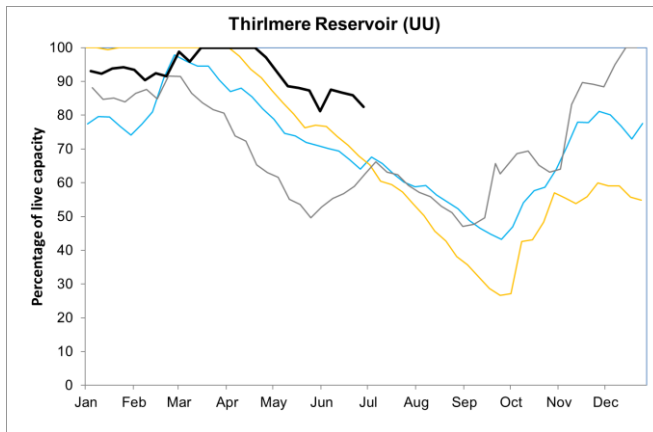
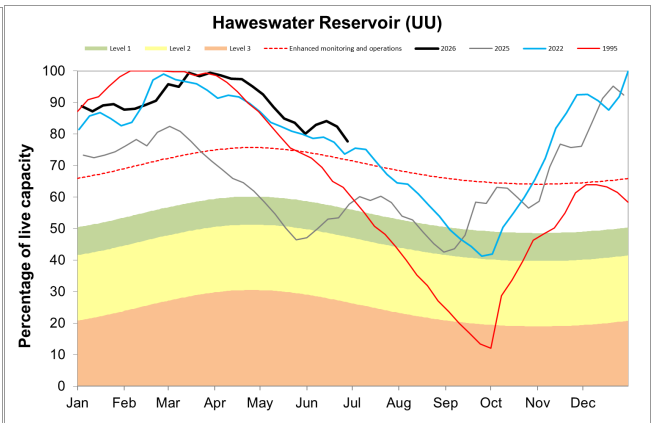
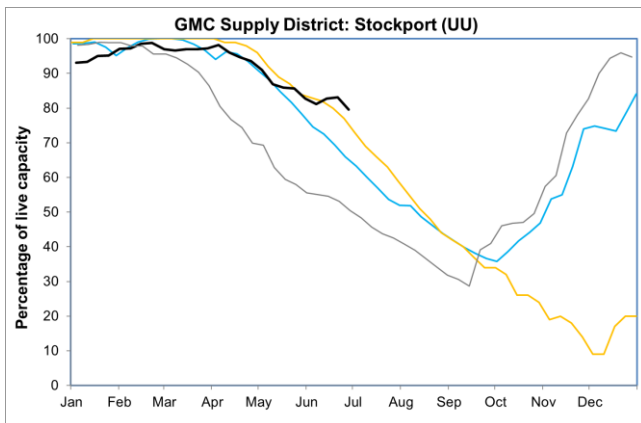
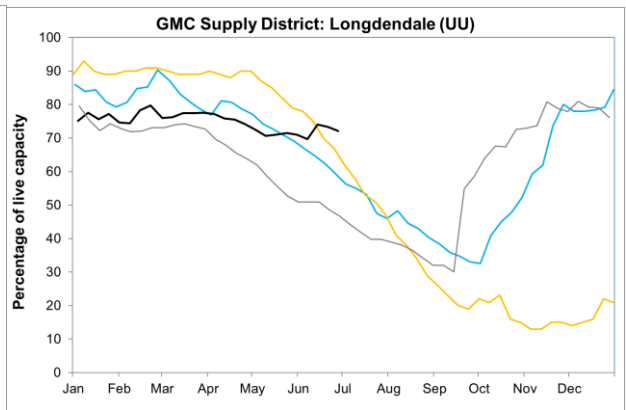
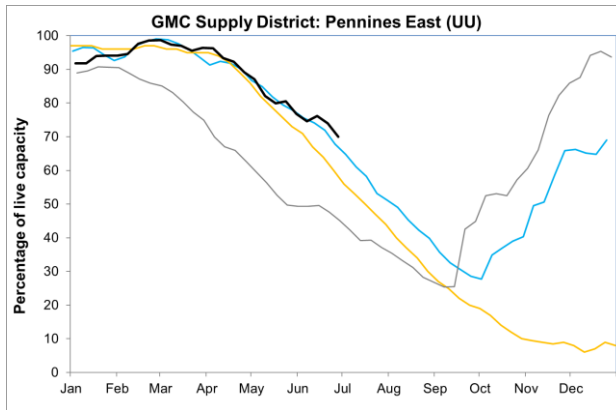
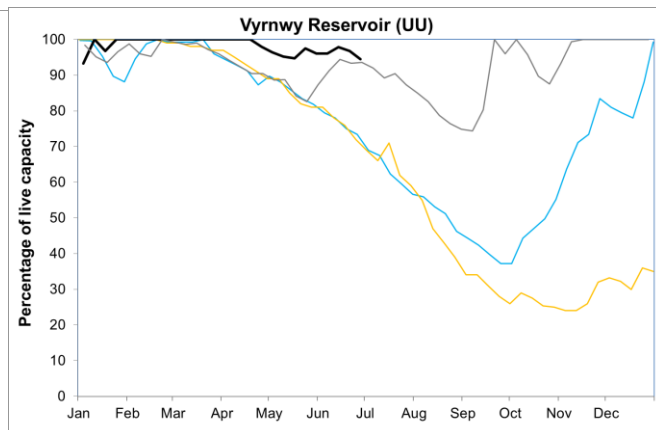
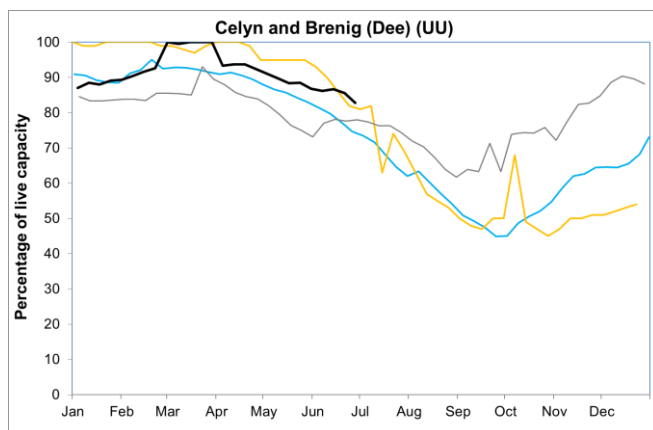


Figure 6.2: End of month reservoir stocks for supply districts across North-west England and selected individual reservoirs for current year (2025) and representative years: 1995, 2003 and 2022. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.







Source: (UU) United Utilities, (EA) The Environment Agency.

7 Glossary

7.1 Terminology

Aquifer

A geological formation able to store and transmit water.

Areal average rainfall

The estimated average depth of rainfall over a defined area. Expressed in depth of water (mm).

Artesian

The condition where the groundwater level is above ground surface but is prevented from rising to this level by an overlying continuous low permeability layer, such as clay.

Artesian borehole

Borehole where the level of groundwater is above the top of the borehole and groundwater flows out of the borehole when unsealed.

Cumecs

Cubic metres per second (m^3s^{-1}).

Effective rainfall

The rainfall available to percolate into the soil or produce river flow. Expressed in depth of water (mm).

Flood alert and flood warning

Three levels of warnings may be issued by the Environment Agency. Flood alerts indicate flooding is possible. Flood warnings indicate flooding is expected. Severe flood warnings indicate severe flooding.

Groundwater

The water found in an aquifer.

Long term average (LTA)

The arithmetic mean calculated from the historic record, usually based on the period 1991 to 2020. However, the period used may vary by parameter being reported on (see figure captions for details).

mAOD

Metres above ordnance datum (mean sea level at Newlyn Cornwall).

MORECS

Met Office Rainfall and Evaporation Calculation System. Met Office service providing real time calculation of evapotranspiration, soil moisture deficit and effective rainfall on a 40 by 40 km grid.

Naturalised flow

River flow with the impacts of artificial influences removed. Artificial influences may include abstractions, discharges, transfers, augmentation and impoundments.

NCIC

National Climate Information Centre. NCIC area monthly rainfall totals are derived using the Met Office 5 km gridded dataset, which uses rain gauge observations.

Recharge

The process of increasing the water stored in the saturated zone of an aquifer. Expressed in depth of water (mm).

Reservoir gross capacity

The total capacity of a reservoir.

Reservoir live capacity

The capacity of the reservoir that is normally usable for storage to meet established reservoir operating requirements. This excludes any capacity not available for use (for example, storage held back for emergency services, operating agreements or physical restrictions). May also be referred to as 'net' or 'deployable' capacity.

Soil moisture deficit (SMD)

The difference between the amount of water actually in the soil and the amount of water the soil can hold. Expressed in depth of water (mm).

7.2 Categories

Exceptionally high

Value likely to fall within this band 5% of the time.

Notably high

Value likely to fall within this band 8% of the time.

Above normal

Value likely to fall within this band 15% of the time.

Normal

Value likely to fall within this band 44% of the time.

Below normal

Value likely to fall within this band 15% of the time.

Notably low

Value likely to fall within this band 8% of the time.

Exceptionally low

Value likely to fall within this band 5% of the time.

8 Appendices

8.1 Rainfall table

Hydrological area	Jun 2026 rainfall % of long term average 1991 to 2020	Jun 2026 band	Apr 2026 to June cumulative band	Jan 2026 to June cumulative band	Jul 2025 to June cumulative band
Cheshire Rivers Group	90	Normal	Normal	Normal	Above normal
Derwent (NW)	154	Notably High	Above normal	Above normal	Exceptionally high
Douglas	104	Normal	Normal	Normal	Normal
Eden	123	Above Normal	Normal	Above normal	Notably high
Esk (Cumbria)	161	Notably High	Notably high	Exceptionally high	Exceptionally high
Esk (Dumfries)	144	Above Normal	Above normal	Notably high	Notably high
Kent	150	Above Normal	Above normal	Notably high	Exceptionally high
Mersey And Irwell	100	Normal	Normal	Normal	Above normal
Ribble	127	Above Normal	Normal	Normal	Above normal
Wyre And Lune	140	Above Normal	Above normal	Above normal	Exceptionally high

North West	125	Above Normal	Normal	Above normal	Notably high
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8.2 River flows table

Site name	River	Catchment	Jun 2026 band	May 2026 band
Adelphi Weir Upstream	Irwell	Irwell (Croal to Irk)	Normal	Normal
Ashbrook	Weaver (nw)	Weaver Upper	Normal	Normal
Ashton Weir	Mersey	Mersey Non Tidal	Normal	Normal
Bollington Mill	Bollin	Bollin	Normal	Below normal
Brinksway	Mersey	Mersey Non Tidal	Above normal	Normal
Bullgill	Ellen	Ellen Lower	Normal	Normal
Caton	Lune	Lune Lower Tidal	Notably high	Normal
Causey Bridges	Sankey	Mersey Non Tidal	Normal	Normal
Crople How	Esk (nw)	Esk (South West Lakes)	Exceptionally high	Normal
Croston	Yarrow	Yarrow Lower	Normal	Normal
Duddon Hall	Duddon	Duddon	Notably high	Normal
Hodder Place	Hodder	Hodder Lower	Notably high	Normal
Kirkby	Alt	Alt	Normal	Normal

Kirkby Stephen	Eden (nw)	Eden Cumb Upper	Exceptionally high	Normal
Little Woolden Hall Ultrasonic	Glaze	Glaze	Normal	Normal
Lunes Bridge	Lune	Lune Upper	Above normal	Normal
Newby Bridge Fms	Leven (nw)	Leven Cumb	Notably high	Normal
Pooley Bridge	Eamont	Eamont	Notably high	Normal
Portwood	Tame	Tame	Normal	Below normal
Rudheath	Dane	Dane	Normal	Normal
Samlesbury Pgs	Ribble (nw)	Ribble Lower	Above normal	Normal
Seaton Mill	Derwent (nw)	Derwent Cumb Lower	Notably high	Below normal
Sedgwick	Kent	Levens Bridge	Notably high	Normal
Sheepmount	Eden (nw)	Eden Cumb Lower	Above normal	Below normal
St Michaels Fms	Wyre	Brock	Above normal	Normal

8.3 Groundwater table

Site name	Aquifer	End of Jun 2026 band	End of May 2026 band
Brown Bank Lay-by	West Cumbria Permo-triassic Sandstone	Above normal	Above normal
Bruntwood Hall Obh	East Cheshire Permo-triassic Sandstone	Normal	Above normal
Furness Abbey	Furness Permo-triassic Sandstone	Exceptionally high	Exceptionally high
Great Musgrave	Eden Valley And Carlisle Basin Permo-triassic Sandstone	Below normal	Normal
Lea Lane	Fylde Permo-triassic Sandstone	Above normal	Above normal
Priors Heyes	West Cheshire Permo-triassic Sandstone	Exceptionally high	Exceptionally high
Primrose Hill	Fylde Permo-triassic Sandstone	Normal	Normal
Richmond Park	Rufford Permo-triassic Sandstone	Exceptionally high	Exceptionally high

Skirwith	Eden Valley And Carlisle Basin Permo-triassic Sandstone	Normal	Normal
Victoria Road Entrance	West Lancashire Quarternary Sand And Gravel Superficial Deposits	Notably low	Below normal