

Monthly water situation report: North East Area

1 Summary - July 2026

July rainfall totals were below normal, notably low, or exceptionally low across the area. It was the driest July on record in 3 of the 6 catchments. Monthly mean river flows decreased at all indicator sites and were classed as below normal, notably low, or exceptionally low. Soil moisture deficits (SMDs) increased in 2 catchments and were significantly higher than the long term average (LTA) in all catchments. All reservoirs recorded a decrease in stocks and were below average for the time of year. Groundwater levels decreased at 3 of the 5 indicator sites and increased at 2, falling within the above normal and normal ranges.

1.1 Rainfall

Across the North East area as a whole, July was the fifth driest on record and the driest since 2006. It was also the driest July on record in the Wear, Seaham, and Tees catchments. Monthly rainfall totals ranged from only 13% of the LTA in the Wear catchment to 62% in the Tweed catchment. A north-south trend was evident, with rainfall deficits becoming increasingly severe further south. Totals were below normal in the Tweed catchment, notably low in the Northumbria North Sea Tribs catchment, and exceptionally low in all remaining catchments. This is in stark contrast to June, when rainfall totals were normal for the time of year across all catchments. Daily rainfall totals were low throughout July with most days recording little to no rainfall. The highest totals were generally recorded on 25 and 26 July, with more modest amounts also on 1, 3, and 5 July.

Cumulative 3-month totals were below normal in the Seaham and Tees catchments and notably low in all other catchments. Cumulative 6-month totals were below normal in all catchments except the Tyne catchment, which was normal. Cumulative 12-month totals were normal across all catchments. Rainfall has remained below average for 5 consecutive months in the Tweed and Northumbria North Sea Tribs catchments. In the Tyne catchment, rainfall has been below average for 4 consecutive months.

1.2 Soil moisture deficits

SMDs increased in the Tyne and Tees catchments. Deficits were highest in the Seaham and Tees catchments, ranging from 101 to 130mm. Across all other catchments, deficits ranged from 71 to 100mm. Soils remained drier than average for the time of year. Departures from the 1991 to 2020 LTA increased in the Tyne and Wear catchments. As a result, SMDs were 26 to 50mm above the LTA across all catchments.

1.3 River flows

Monthly mean river flows decreased at all indicator sites as a result of low rainfall. Flows ranged from only 10% of the LTA at Rutherford Bridge on the River Greta to 75% at Middleton-in-Teesdale on the River Tees. Flows remained notably low at Rothbury on the River Coquet and below normal at Witton Park on the River Wear, for the time of year. Flows at Hartford Bridge on the River Blyth, Haydon Bridge on the River South Tyne, and Middleton-in-Teesdale decreased to below normal. Monthly mean flow at Mitford on the River Wansbeck was also below normal for the time of year. Monthly mean flow at Rutherford Bridge decreased by 91% between June and July, moving from normal to exceptionally low for the time of year.

Daily mean flows decreased at most sites through July, leading on from a decreasing trend at the end of June. Daily mean flows increased at all sites around 26 July, following a period of rainfall. Haydon Bridge, Middleton-in-Teesdale, Rutherford Bridge, and Witton Park also recorded increased flows between 3 and 5 July in response to rainfall. By the end of July, daily mean flows were below normal at Hartford Bridge and Haydon Bridge, notably low at Mitford and Rothbury, and exceptionally low at Rutherford Bridge.

Daily mean flows at Middleton-in-Teesdale and Witton Park exhibited different trends, influenced by regulation of the Rivers Tees and Wear upstream of these sites. At Middleton-in-Teesdale, flows were normal for the majority of the month, falling to below normal for only one day on 9 July. Increased upstream releases from Cow Green reservoir led to higher flows at this site for the rest of the month. At Witton Park, daily mean flows decreased to exceptionally low at the start of July. From mid-July onwards, the Kielder transfer system operated to support flows in the River Wear. Flows at Witton Park subsequently increased to within the normal range and remained relatively stable thereafter.

1.4 Groundwater levels

Changes in groundwater levels were varied. In the Fell Sandstone, levels decreased at Royalty Observation and increased at Townlaw. Despite the decrease at Royalty Observation, levels changed from normal to above normal for the time of year at the end of July. Levels at Townlaw remained normal.

In the Magnesian Limestone, groundwater levels decreased at West Hall Farm and Aycliffe Nra2, and increased at Red Lion. Levels at Aycliffe Nra2 changed from above normal to normal for the time of year. Levels at Red Lion and West Hall Farm remained above normal.

1.5 Reservoir stocks

All reservoirs recorded a decrease in stocks. Cow Green reservoir recorded the largest decrease, falling from 83.3% to 62.6% by the end of July. Derwent reservoir recorded the

smallest decrease, falling from 75.8% to 67.5%. All reservoir stocks were below average for the time of year.

The Kielder transfer system has been in operation since 28 May to support stocks in Waskerley reservoir within the Durham group. Additional support began on 13 July through releases at Frosterley to meet the minimum maintained flow requirement in the River Wear. Hury reservoir in the Lune and Balder group was drawn down in April for planned maintenance.

Reservoir or reservoir group	Percentage of current stocks	Percentage of previous month stocks
Kielder	83.5	92.4
North Tynedale group	63.4	72.1
Derwent	67.5	75.8
Durham group	57.3	69.6
Lune and Balder group	66.2	76.9
Cow Green	62.6	83.3

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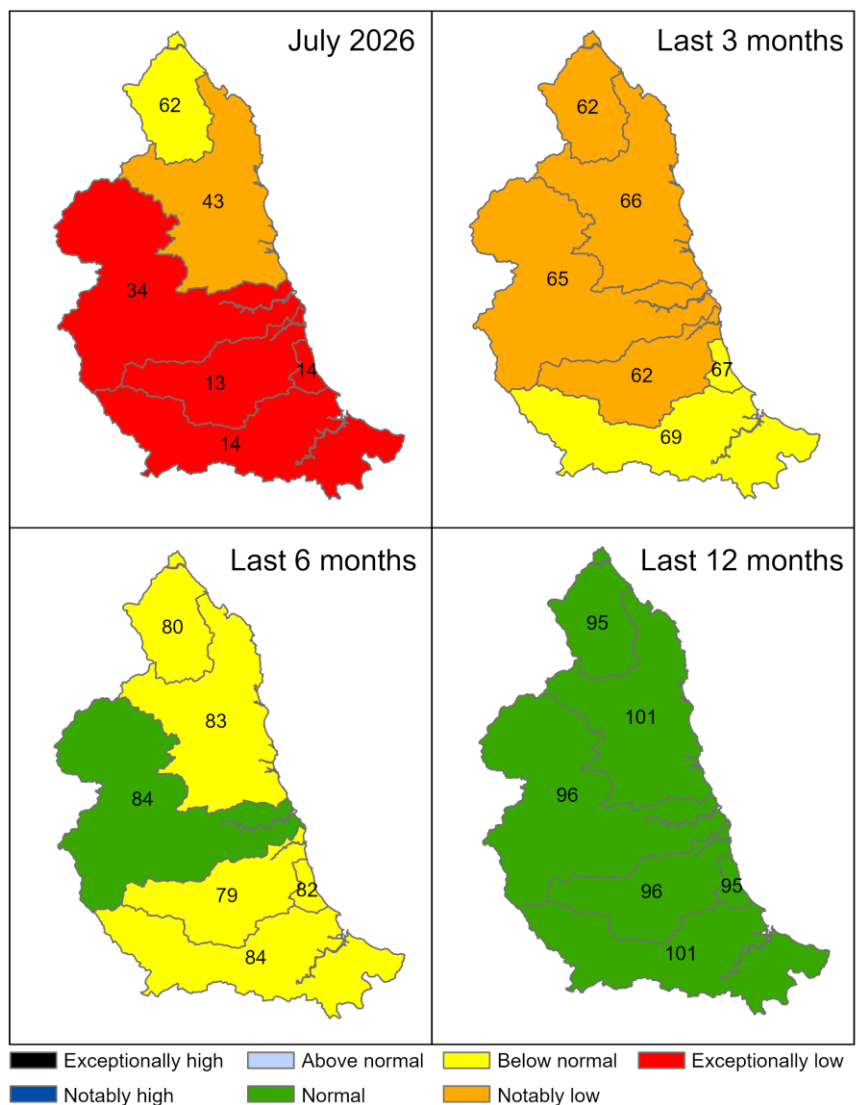
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2 Rainfall

2.1 Rainfall map

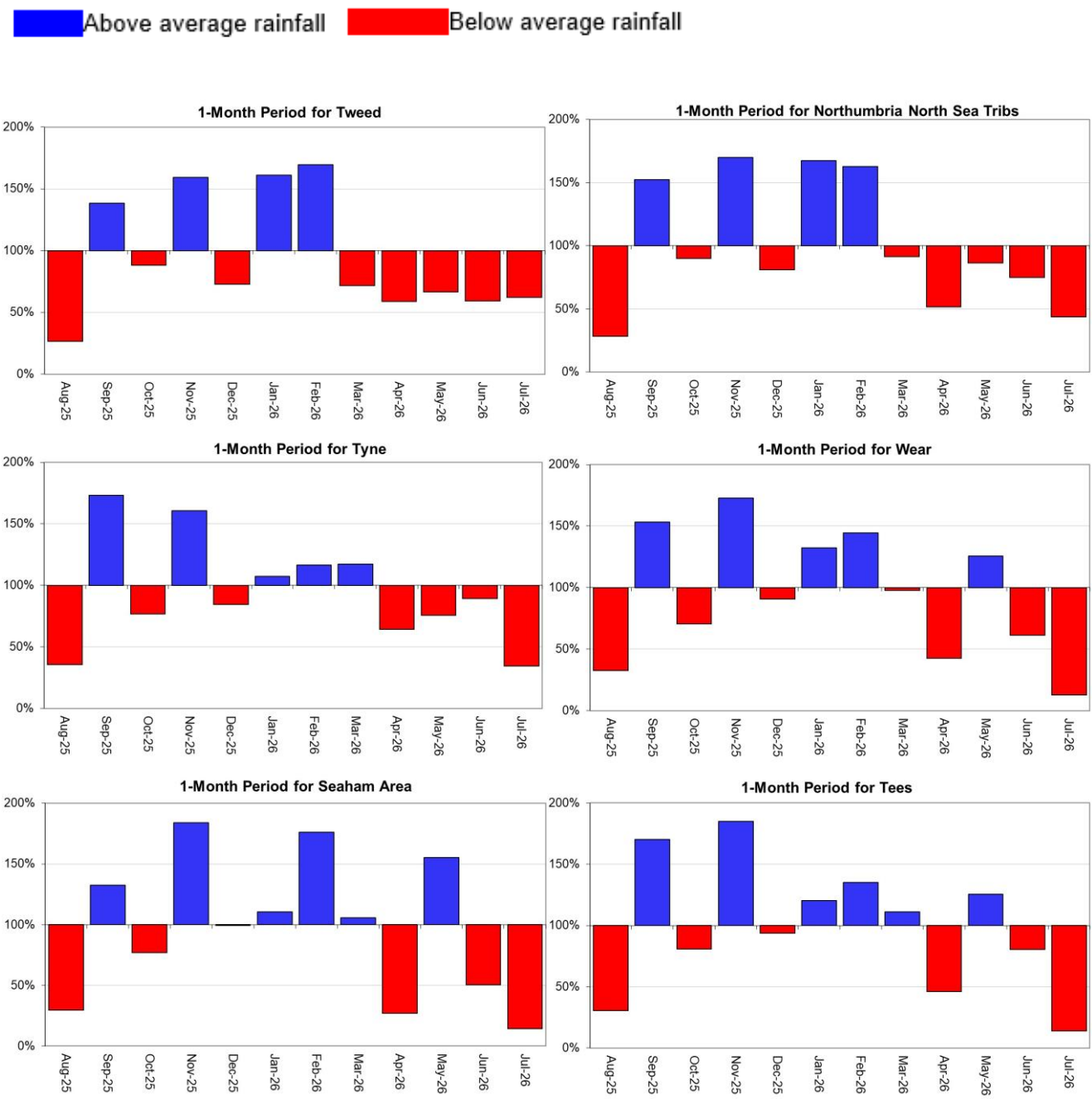
Figure 2.1: Total rainfall for hydrological areas, expressed as a percentage of the 1991 to 2020 LTA. Rainfall is shown for the current month (up to 31 July 2026), the last 3 months, the last 6 months, and the last 12 months. Totals are classed relative to an analysis of respective historic totals. July totals were below normal in the Tweed catchment and notably low in the Northumbria North Sea Tribs catchment. Totals were exceptionally low in all other catchments. Cumulative 3-month totals were below normal in the Seaham and Tees catchments and notably low in all other catchments. Map of catchments and table with detailed information available in the appendices.



Rainfall data extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, AC0000807064, 2026).

2.2 Rainfall charts

Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 LTA for each catchment.

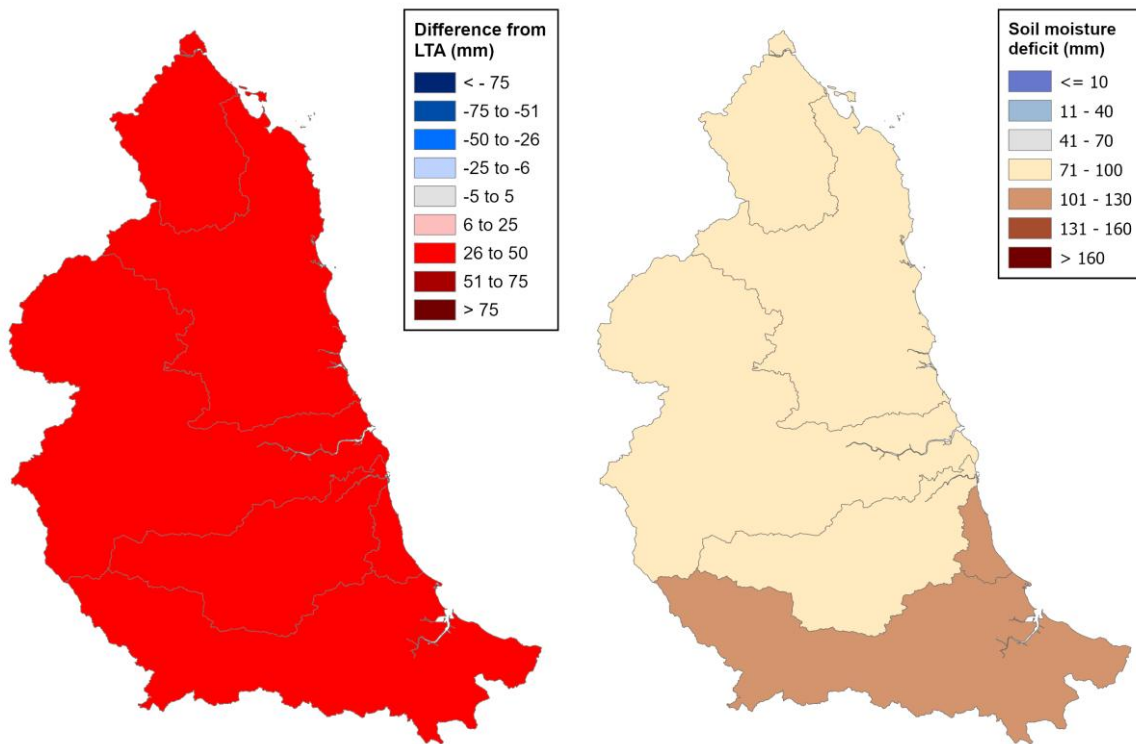


Rainfall data extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 2026).

3 Soil moisture deficit

3.1 Soil moisture deficit map

Figure 3.1: SMDs for week ending 29 July 2026. Right panel shows actual SMDs (mm) in each catchment. Left panel shows the difference (mm) of the actual from the 1991 to 2020 LTA SMDs in each catchment. SMDs were 26 to 50mm above the LTA in all catchments. Actual SMDs were highest in the Seaham and Tees catchments, ranging from 101 to 130mm. Actual SMDs were 71 to 100mm in all other catchments. Calculated from MORECS data for real land use. Map of catchments available in the appendices.

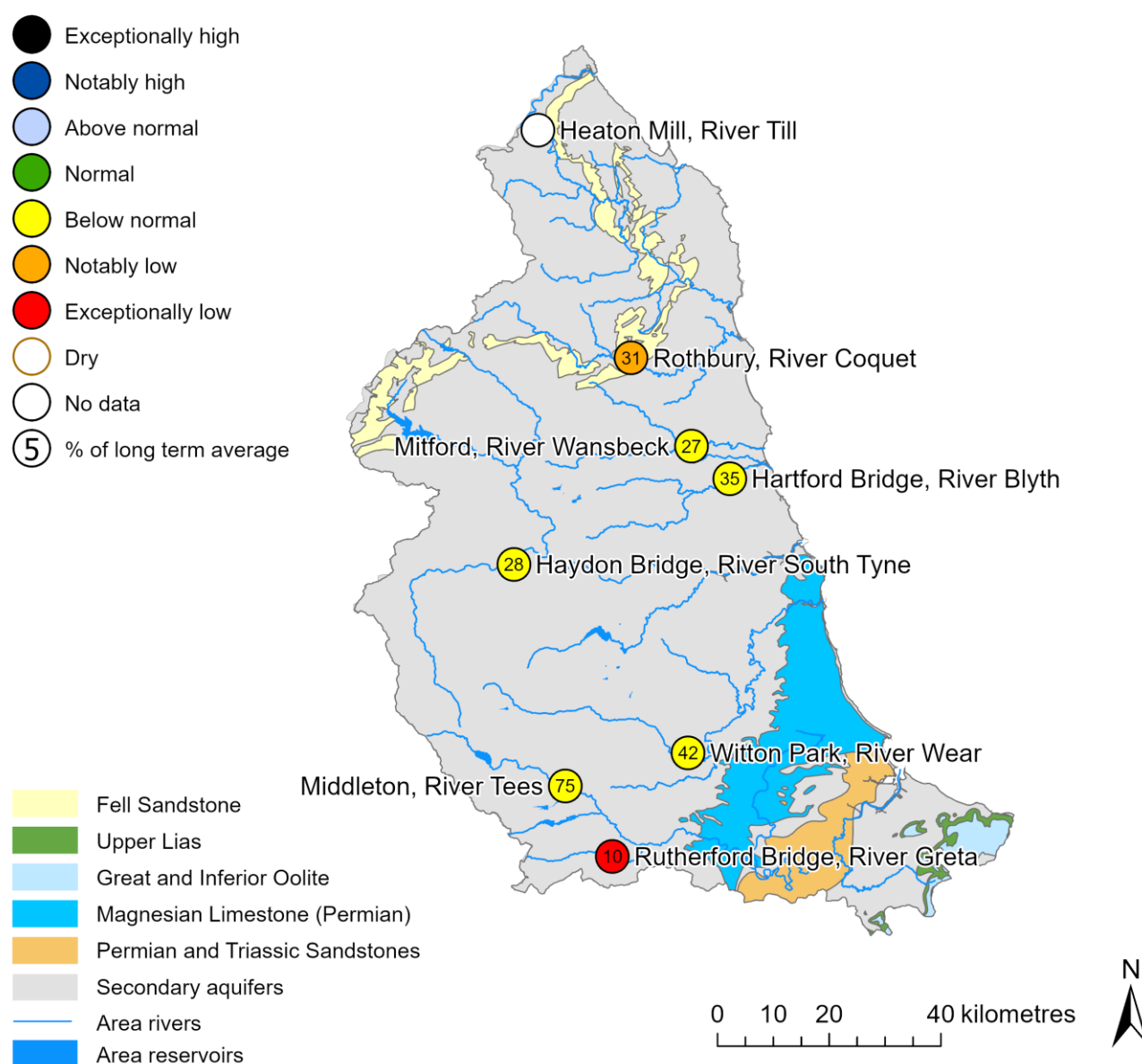


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4 River flows

4.1 River flows map

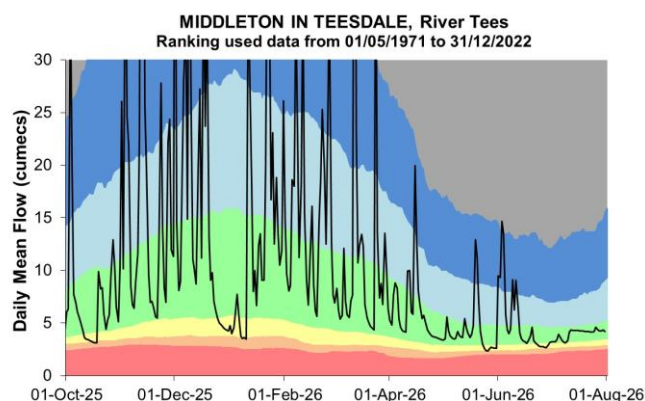
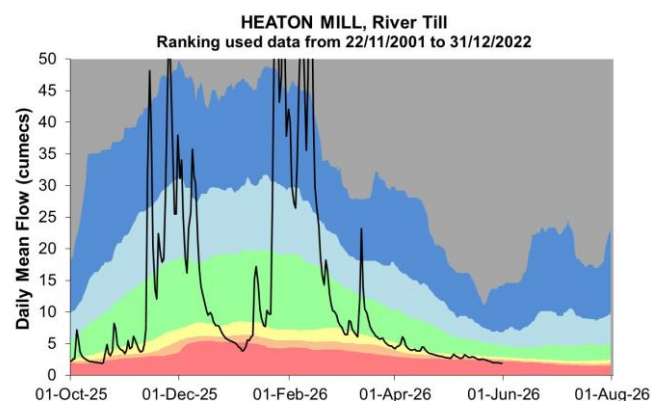
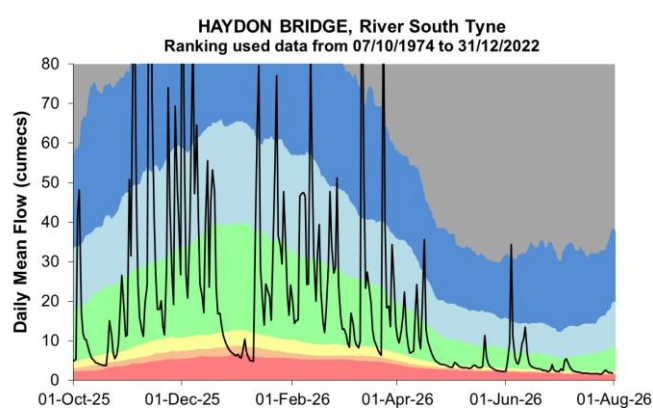
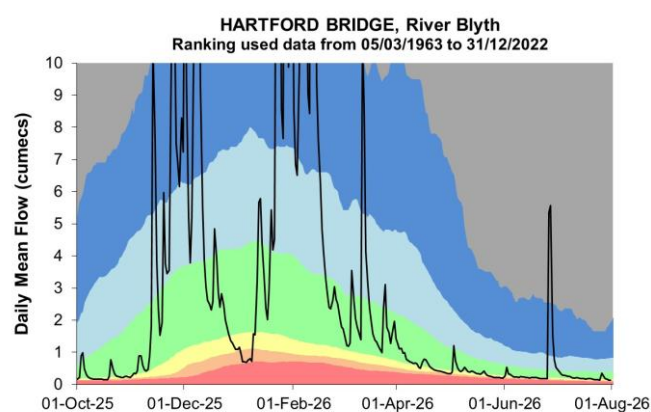
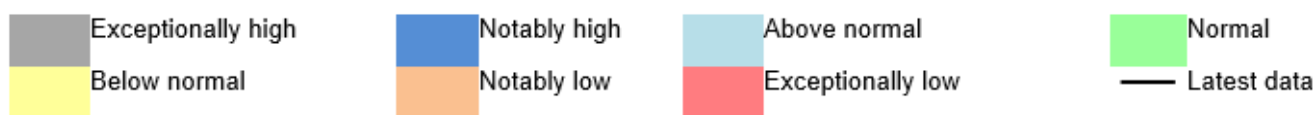
Figure 4.1: Monthly mean river flows for indicator sites for July 2026, expressed as a percentage of the respective LTA. Flows are classed relative to an analysis of historic July monthly means. Monthly mean flows were exceptionally low at Rutherford Bridge and notably low at Rothbury. Monthly mean flows were below normal at Mitford, Hartford Bridge, Haydon Bridge, Witton Park, and Middleton-in-Teesdale. Data is not available at Heaton Mill due to site issues. Table available in the appendices with detailed information.

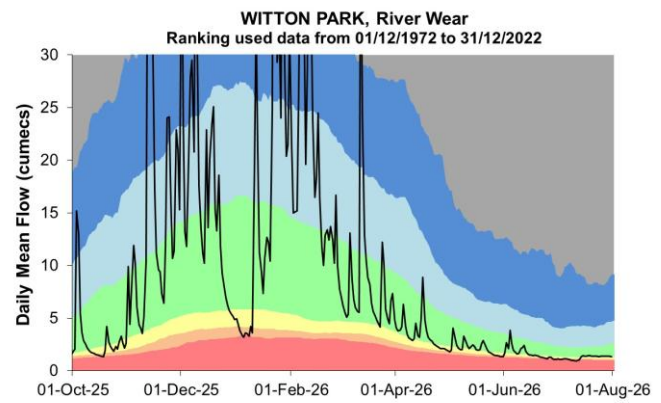
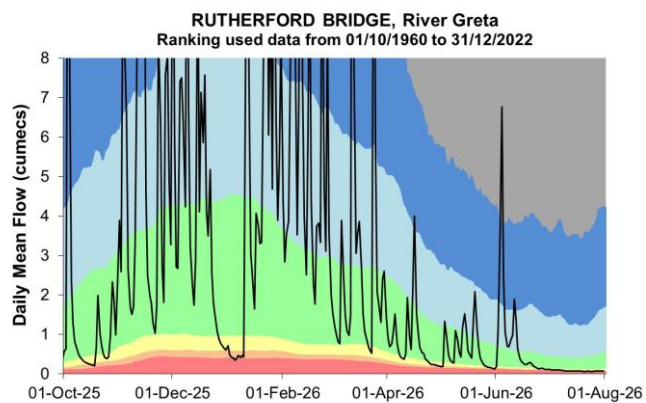
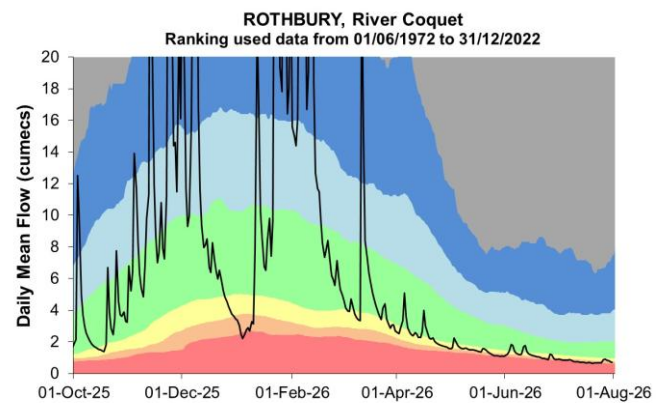
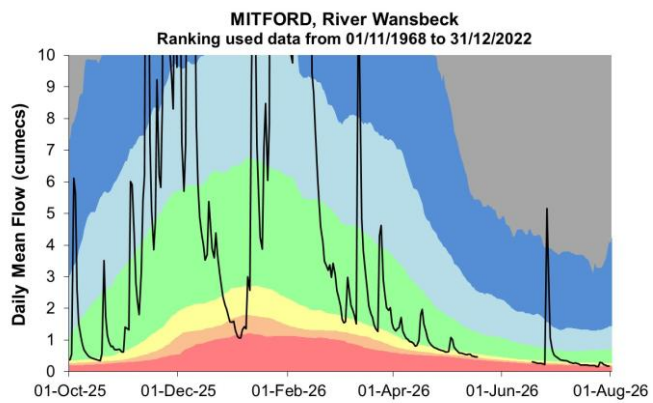


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4.2 River flow charts

Figure 4.2: Daily mean river flows for indicator sites over the past 10 months, compared to an analysis of historic daily mean flows. Data is not available at Heaton Mill due to site issues.



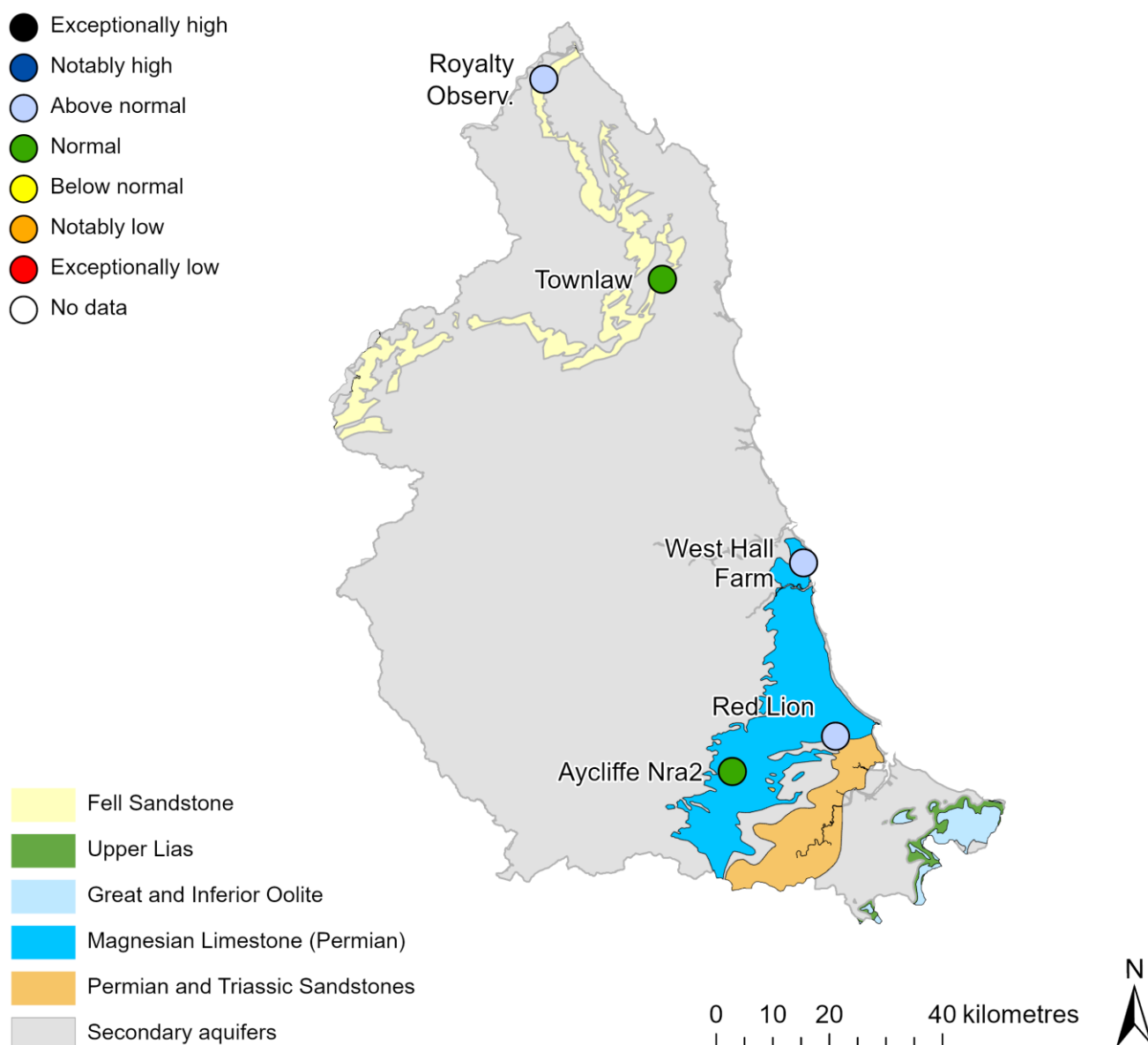


(Source: Environment Agency).

5 Groundwater levels

5.1 Groundwater levels map

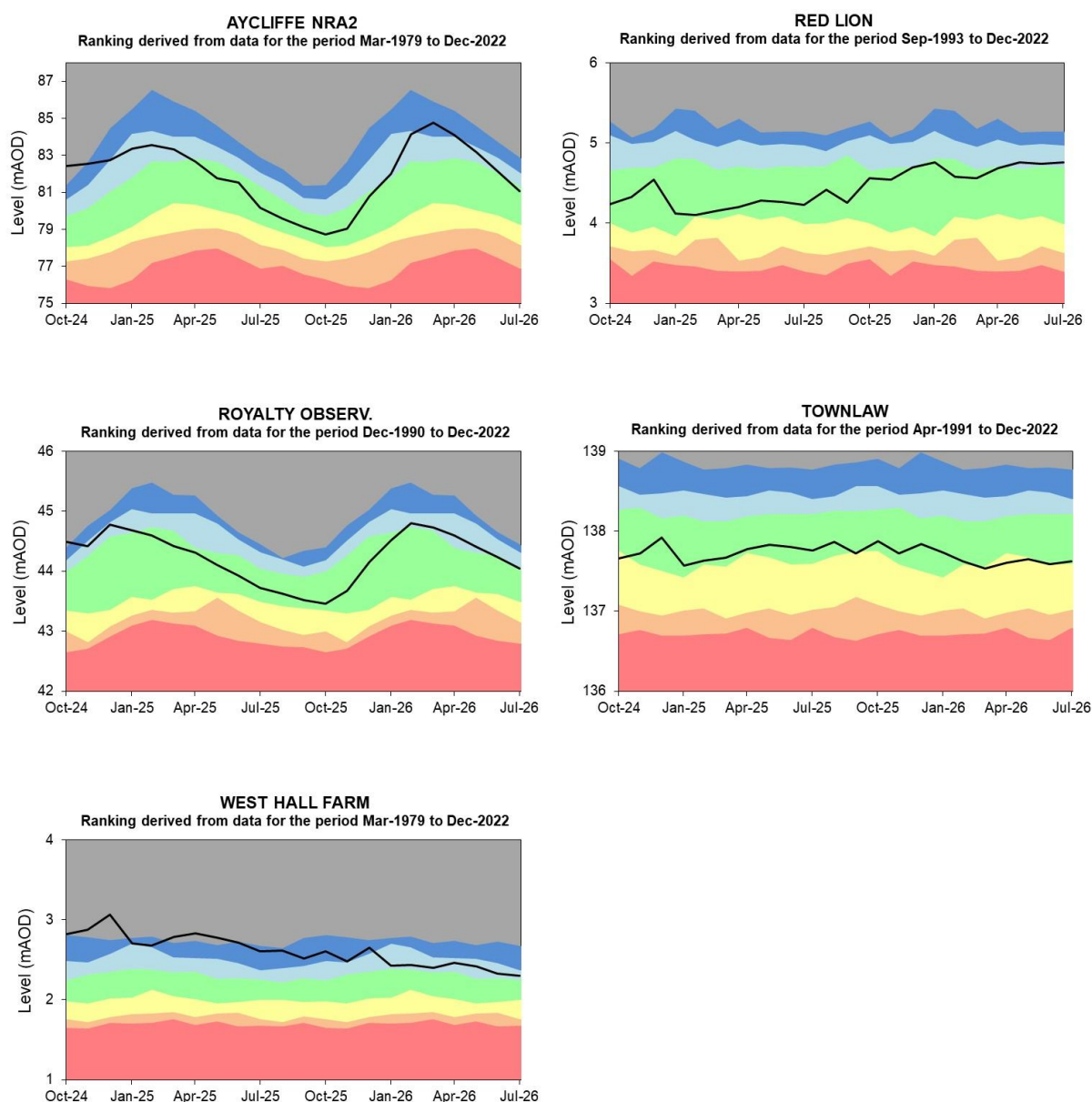
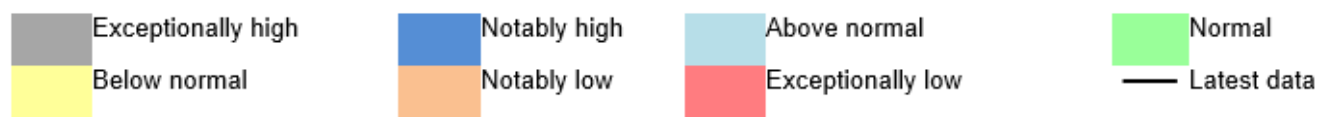
Figure 5.1: Groundwater levels for indicator sites at the end of July 2026, classed relative to an analysis of respective historic end of July levels. Groundwater levels were normal at Townlaw and Aycliffe Nra2 and above normal at Royalty Observation, West Hall Farm, and Red Lion. Table available in the appendices with detailed information.



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5.2 Groundwater level charts

Figure 5.2: End of month groundwater levels at indicator groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of July levels.

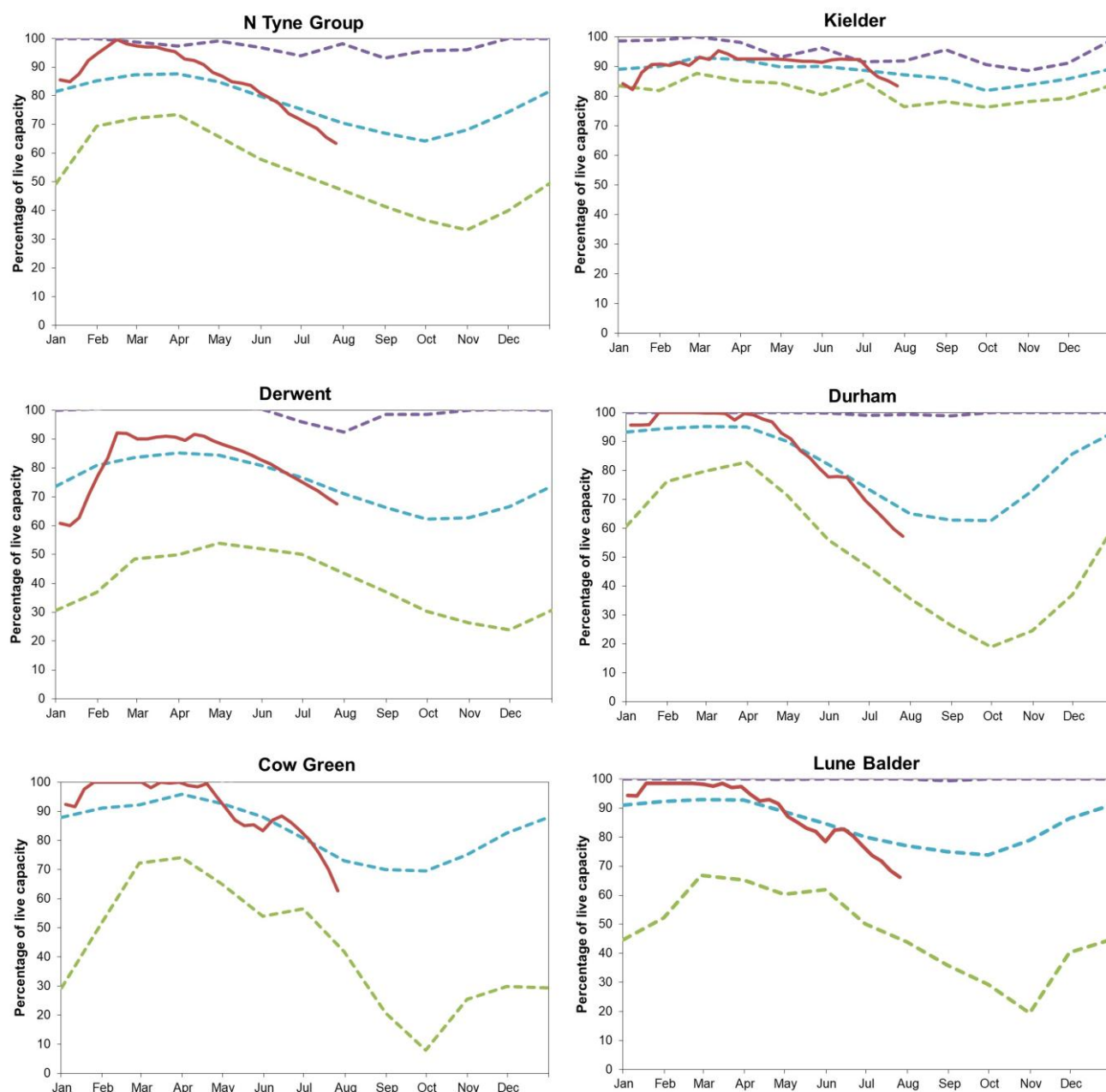


(Source: Environment Agency, 2026).

6 Reservoir stocks

Figure 6.1: End of month reservoir stocks compared to long term maximum, minimum, and mean stocks. Note: Historic records of individual reservoirs and reservoir groups vary in length.

— Maximum — Minimum — Mean — 2026



(Source: Northumbrian Water).

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 40km 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 1km 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

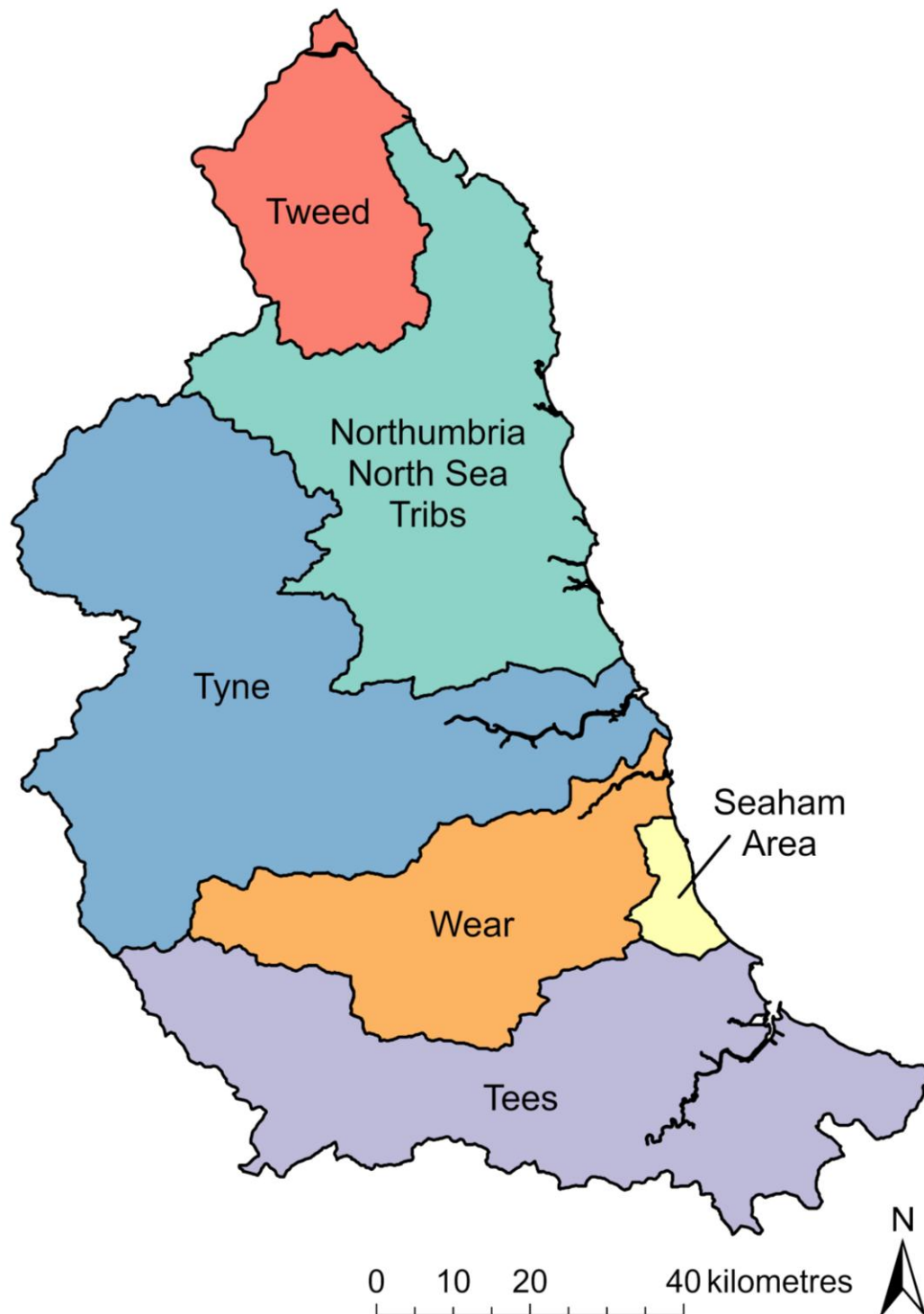
Value likely to fall within this band 8% of the time.

Exceptionally low

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

8 Appendices

8.1 Catchment areas map



8.2 Rainfall table

Hydrological area	Jul 2026 rainfall % of long term average 1991 to 2020	Jul 2026 band	May 2026 to July cumulative band	Feb 2026 to July cumulative band	Aug 2025 to July cumulative band
Northumbria North Sea Tribs	43	Notably Low	Notably low	Below normal	Normal
Seaham Area	14	Exceptionally Low	Below normal	Below normal	Normal
Tees	14	Exceptionally Low	Below normal	Below normal	Normal
Tweed	62	Below Normal	Notably low	Below normal	Normal
Tyne	34	Exceptionally Low	Notably low	Normal	Normal
Wear	13	Exceptionally Low	Notably low	Below normal	Normal

8.3 River flows table

Site name	River	Catchment	Jul 2026 band	Jun 2026 band
Hartford Bridge	Blyth	Blyth	Below normal	Above normal
Haydon Bridge	South Tyne	South Tyne	Below normal	Normal
Heaton Mill	Till	Till	No data	No data
Middleton-in-Teesdale	Tees	Tees	Below normal	Normal
Mitford	Wansbeck	Wansbeck	Below normal	No data
Rothbury	Coquet	Coquet	Notably low	Notably low
Rutherford Bridge	Greta	Greta	Exceptionally low	Normal
Witton Park	Wear	Wear	Below normal	Below normal

8.4 Groundwater table

Site name	Aquifer	End of Jul 2026 band	End of Jun 2026 band
Aycliffe Nra2	Skerne Magnesian Limestone	Normal	Above normal
Red Lion	Skerne Magnesian Limestone	Above normal	Above normal
Royalty Observ.	Till Fell Sandstone	Above normal	Normal
Townlaw	Till Fell Sandstone	Normal	Normal
West Hall Farm	Wear Magnesian Limestone	Above normal	Above normal