Monthly water situation report: Devon and Cornwall Area

1 Summary - July 2025

Devon and Cornwall received 58% of the July long term average (LTA) rainfall, which was below normal for the time of year. Soil moisture deficit increased overall in July. Monthly mean river flows were normal to notably high for the time of year across the area. Groundwater levels ended the month between normal and exceptionally high for the time of year. Total reservoir storage across Devon and Cornwall ended the month at 69%, with Wimbleball, Colliford and Roadford at 58%, 62% and 80% respectively at the end of July.

1.1 Rainfall

Devon and Cornwall received 48mm of rain during July (58% of the July LTA), which is below normal for the time of year. Although rain fell every day in July, the most significant periods of rain occurred on 5, 15 and 19 to 21 July.

In July, rainfall was normal in Cornwall and mostly below normal in Devon, except for the Teign and Torbay and the Taw and North Devon Streams hydrological areas where cumulative rainfall was also normal for the time of year. Cumulative rainfall was mostly normal in the last 3 months across Devon and Cornwall, except for the Exe and West Cornwall where rainfall was below normal for the time of year and the Otter, Sid, Axe and Lim hydrological area where rainfall was notably low for the time of year. In the last 6 months, cumulative rainfall was normal in most hydrological areas, including all of Cornwall and West Devon. The 6-month cumulative rainfall was below normal for the time of year in the Taw and North Devon Streams and the Exe hydrological areas, and notably low for the time of year in the Otter, Sid, Axe and Lim hydrological area. In the last 12 months, cumulative rainfall was normal for the time of year across Devon and Cornwall.

1.2 Soil moisture deficit

SMD increased overall in July due to dry periods at the beginning and end of the month. It did however decrease in the middle of the month for a short period in response to the most significant period of rainfall. The SMD at the end of July was higher (drier) than the LTA for the time of year and higher (drier) than the SMD at the end of July 2024.

The average deficit at the end of July for most of Devon and Cornwall was between 101 and 130mm, apart from the Tamar, Seaton, Looe and Fowey and Avon, Dart and Erme hydrological areas where the average deficit was between 71 and 100mm. The average deficit

was highest in the Otter, Sid, Axe and Lim hydrological area recording a deficit of 131 and160mm.

SMD at the end of July was 26-50mm higher (drier) than the LTA for the time of year across most of Devon and Cornwall. In the Exe and the Otter, Sid, Axe and Lim hydrological areas SMD was 51-75mm higher (drier) than the LTA for the time of year.

1.3 River flows

July monthly mean river flows were normal at most sites, except for some sites in South and East Devon where monthly mean river flows were above normal and Whitford on the River Axe where the July mean monthly flow was exceptionally high.

Daily mean flows decreased at all sites during the last week of July, except for Lifton Park on the River Lyd, Torrington on the River Torridge and Woodleigh on the River Mole where daily mean flows increased by the end of the month. On 31 July, all reporting sites recorded notably low to normal daily mean flows for the time of year.

Due to data accuracy concerns, St Erth on the River Hayle has been excluded from the July report.

1.4 Groundwater levels

On 31 July, groundwater levels were classed as follows:

- Normal at Bussels No7A (monitoring the Dawlish sandstone), Coleford Production (monitoring the Permian Breccias and Sandstones), Winnards Perch (monitoring the Staddon Formation), Woodbury Common No2 (monitoring the Budeligh Salterton Pebble Beds) and Woodleys No1 (monitoring the Otterton Sandstone Formation)
- Above normal at Branscombe Lane (monitoring the Dawlish Sandstone)
- Exceptionally high at Whitlands (monitoring the Upper Greensand).

Groundwater levels at all sites continue to be in recession, which is normal for the time of year.

1.5 Reservoir stocks

Total reservoir storage was 69% at the end of July, which is an overall decrease of 11% since the end of July. This is higher than storage at the same time in 2022 (the most recent drought

year), which was 56%. At the end of July, storage at Wimbleball, Colliford and Roadford was 58%, 62% and 80% respectively, compared to 51%, 45% and 62% at the same time in 2022.

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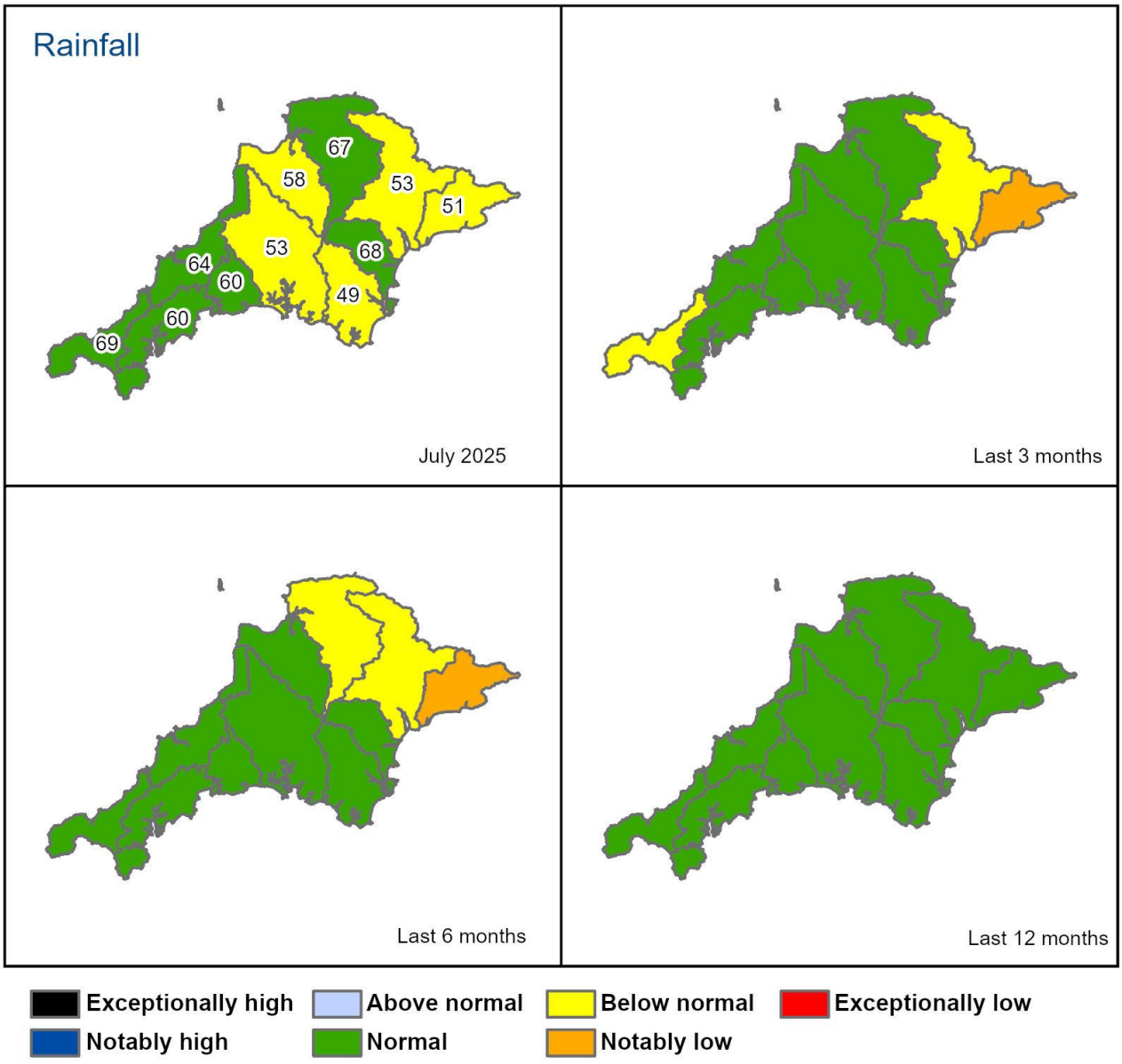
2 Rainfall

2.1 Rainfall map

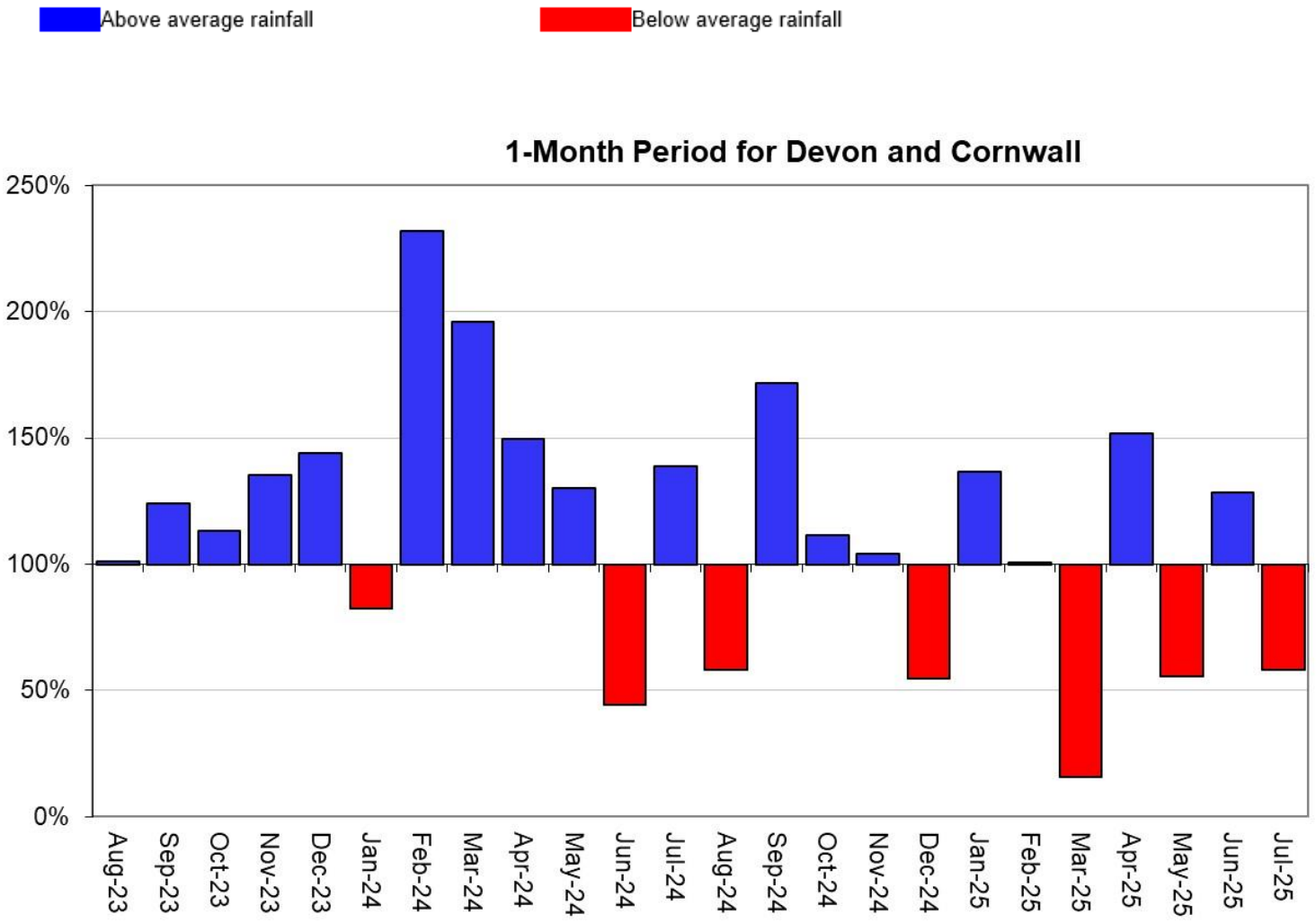
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 31 July 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

2.2 Rainfall charts

Figure 2.2: Monthly rainfall totals for the past 24 months as a percentage of the 1991 to 2020 long term average for Devon and Cornwall area.

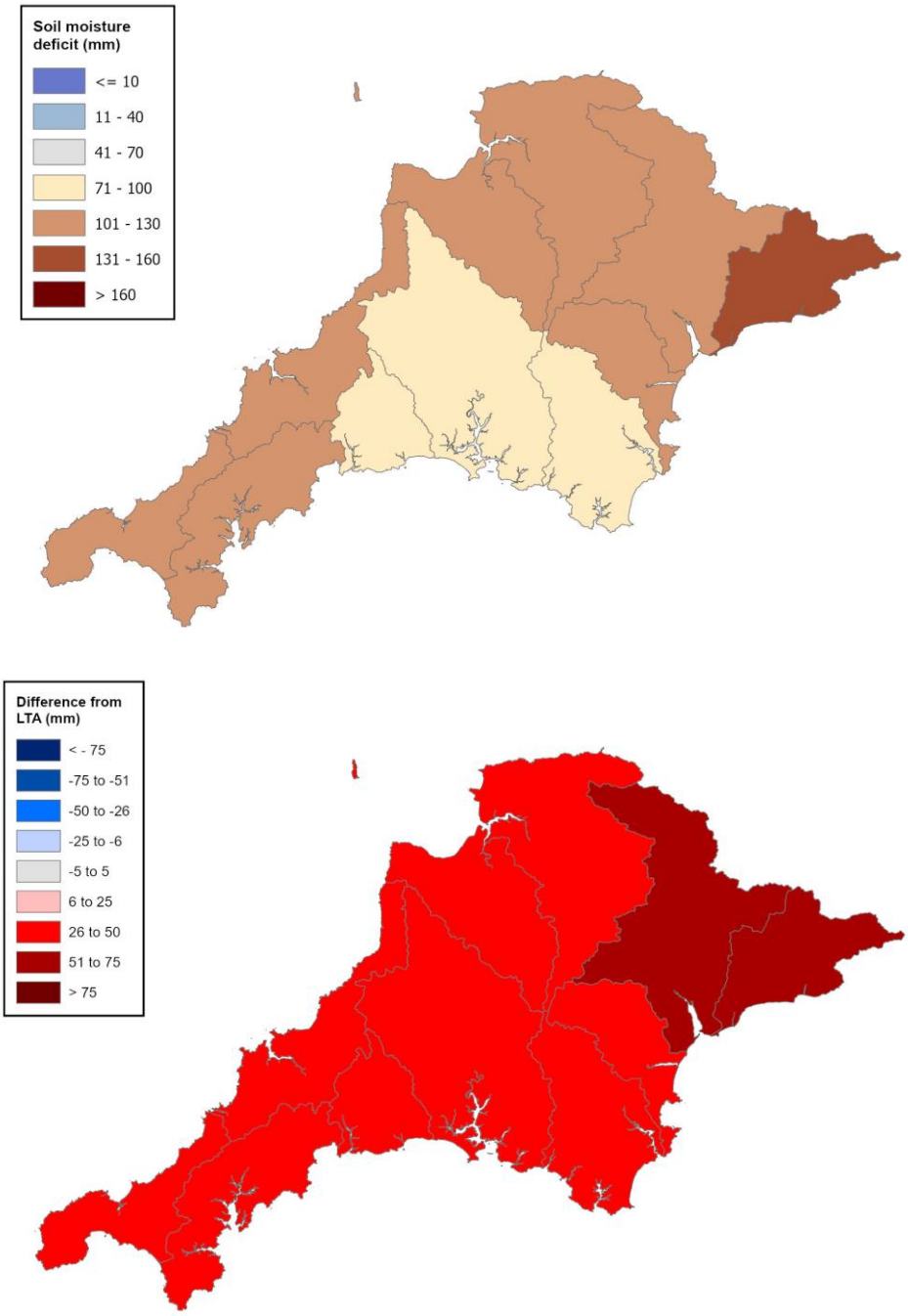


Rainfall data for 2025, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

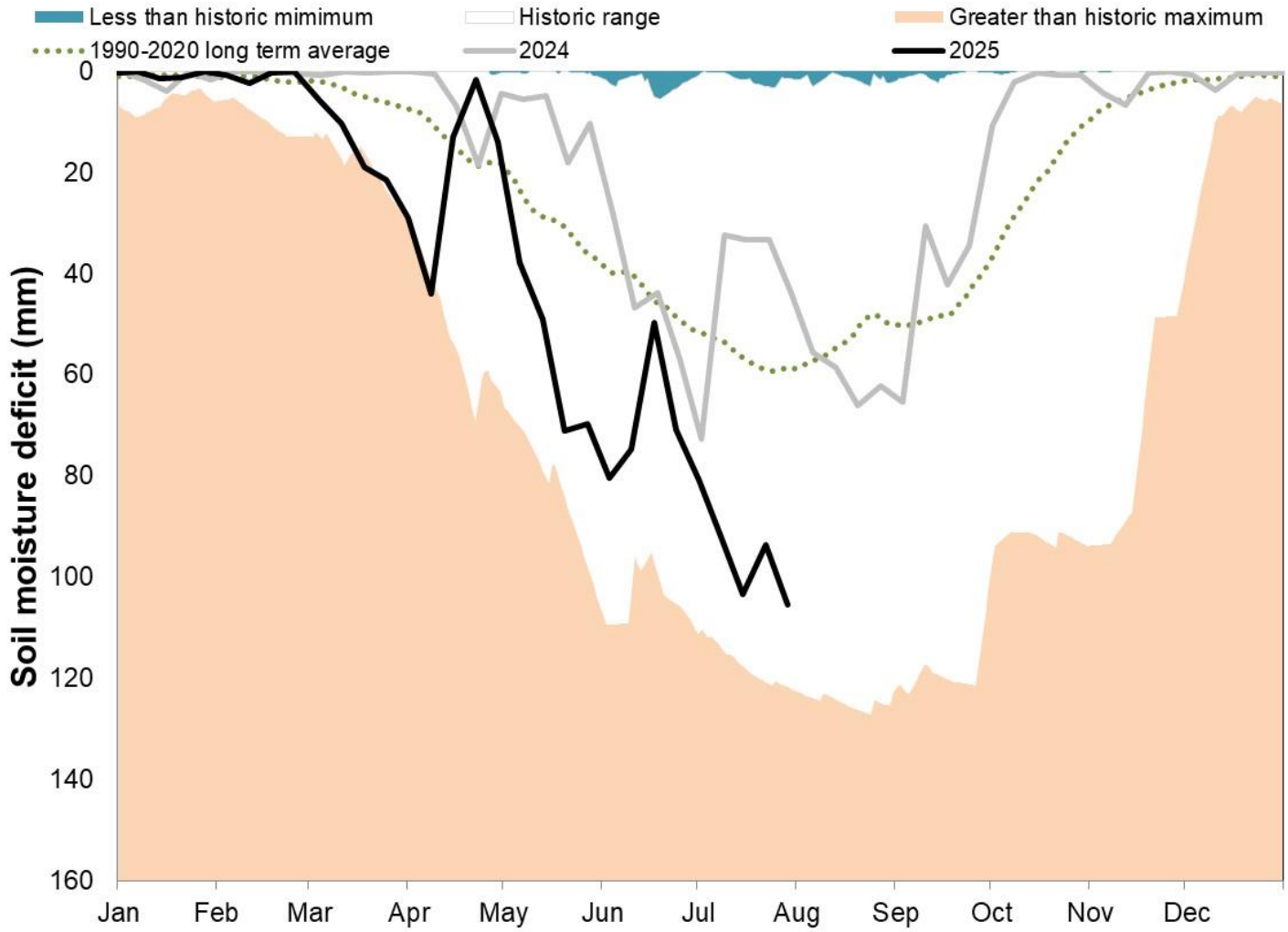
3.1 Soil moisture deficit map

Figure 3.1: Top map shows soil moisture deficit for week ending 31 July 2025. Bottom map shows the difference (mm) between the actual soil moisture deficit and the 1991 to 2020 long term average soil moisture deficits. MORECS data for real land use.



3.2 Soil moisture deficit charts

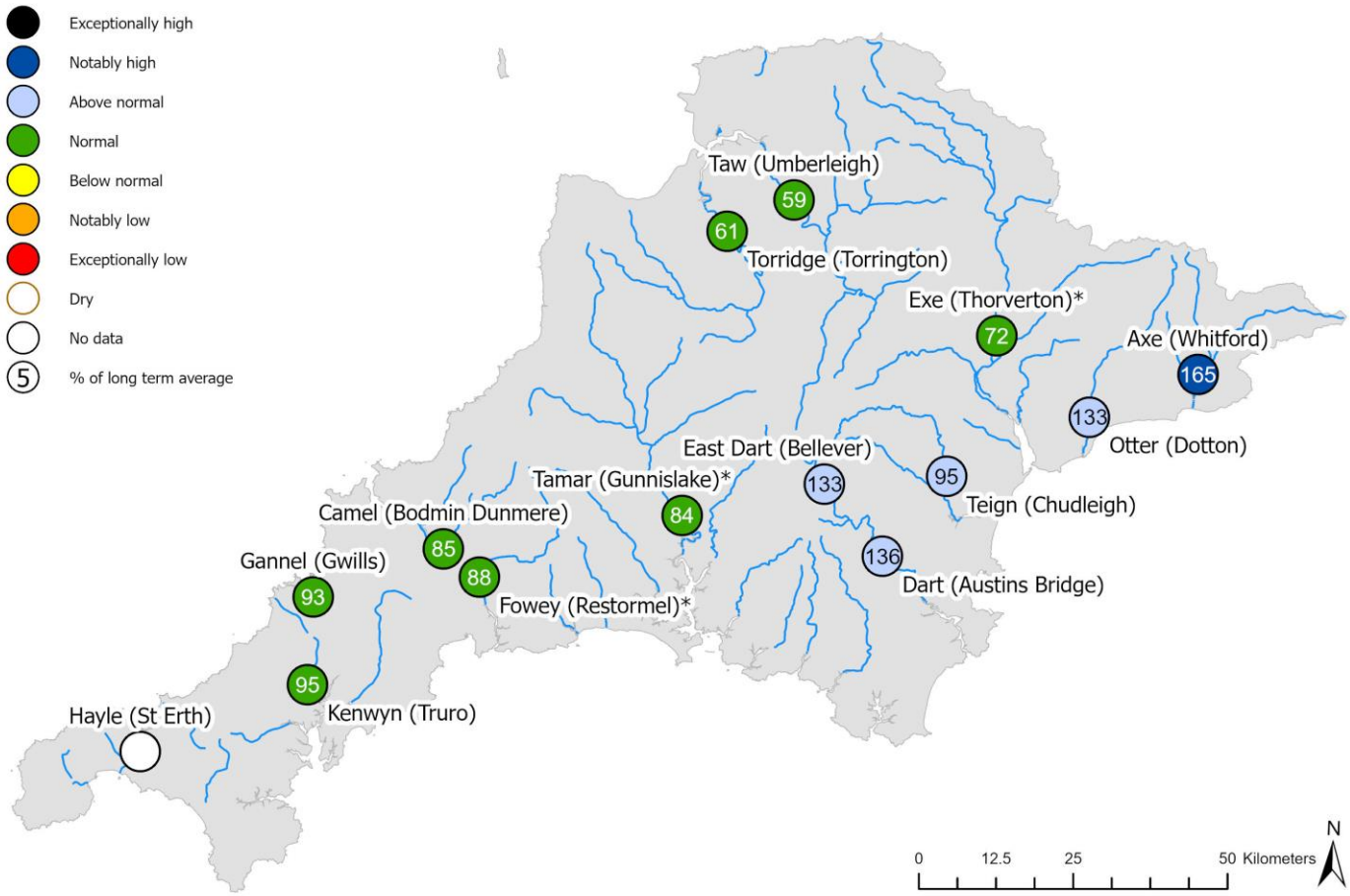
Figure 3.2: Latest soil moisture deficit compared to previous year, maximum, minimum, and 1991 to 2020 long term average. Weekly MORECS data for real land use.



4 River flows

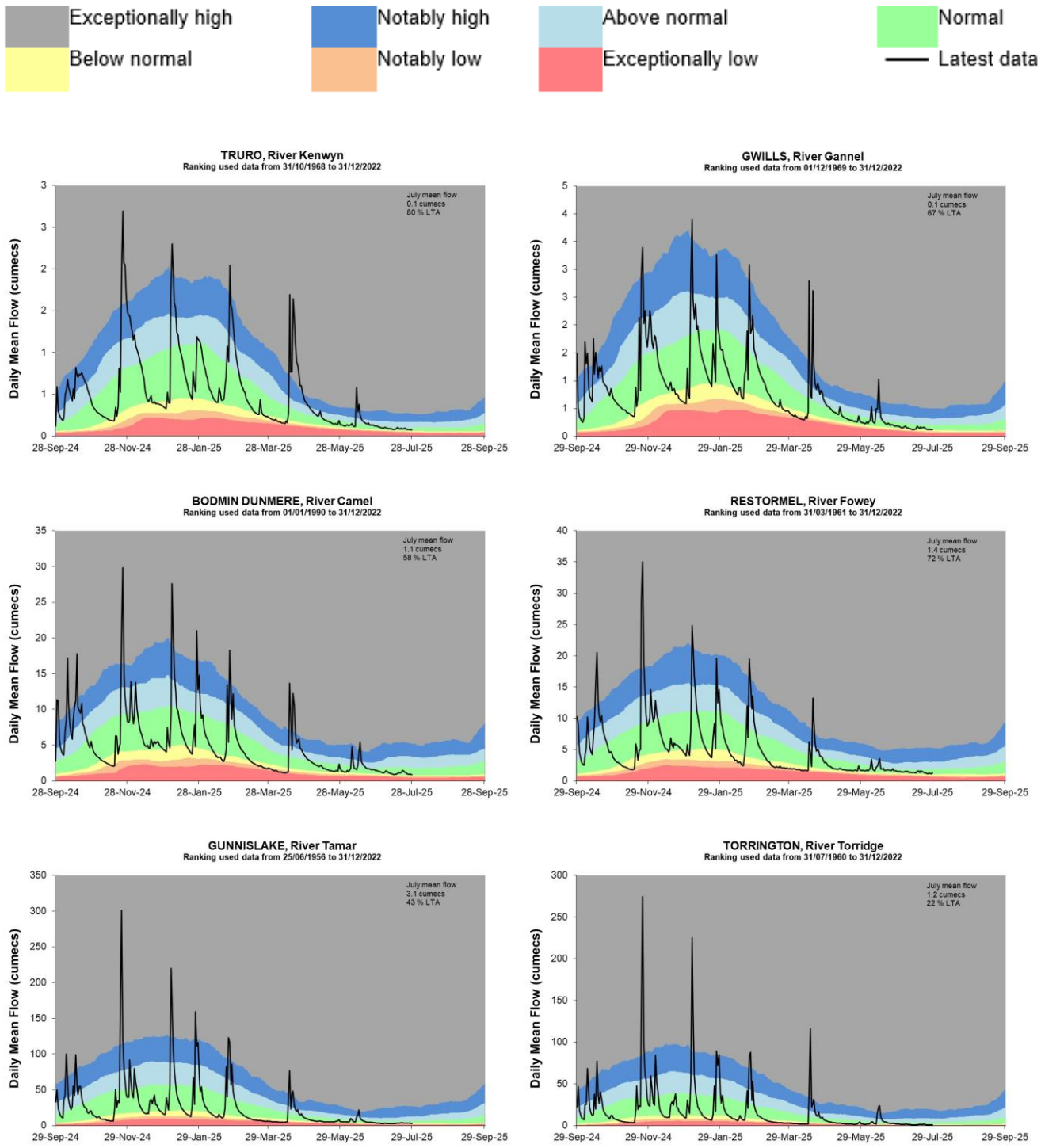
4.1 River flows map

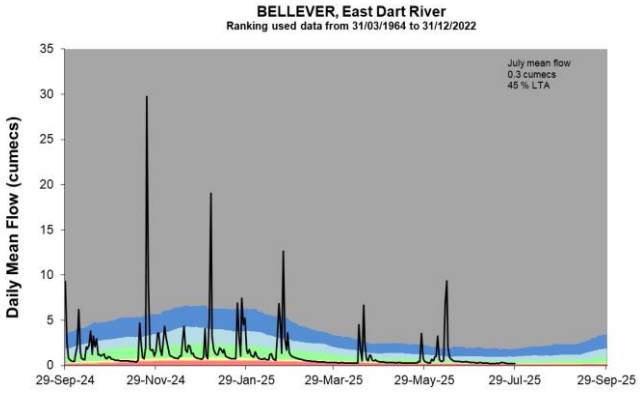
Figure 4.1: Monthly mean river flow for indicator sites for July 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic July monthly means. Table available in the appendices with detailed information.

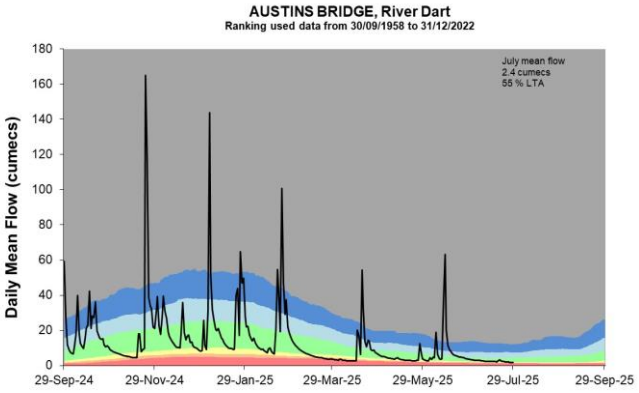


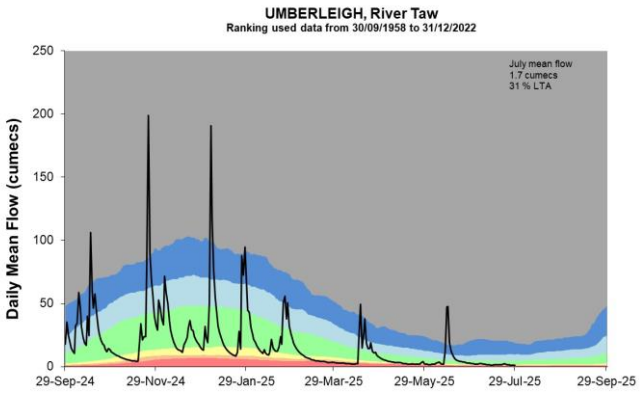
4.2 River flow charts

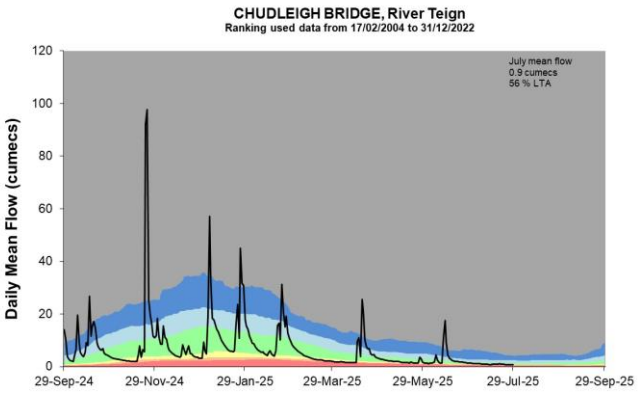
Figure 4.2: Daily mean river flow for indicator sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

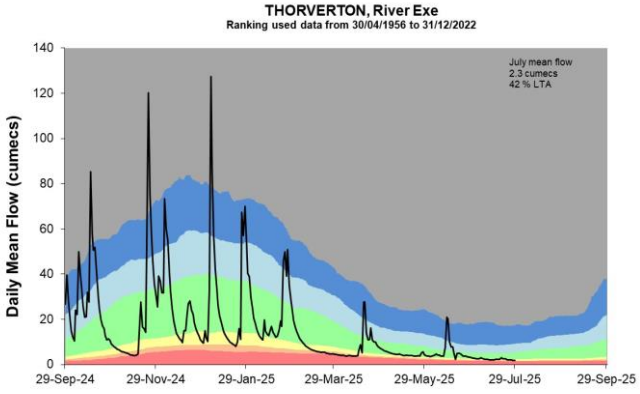


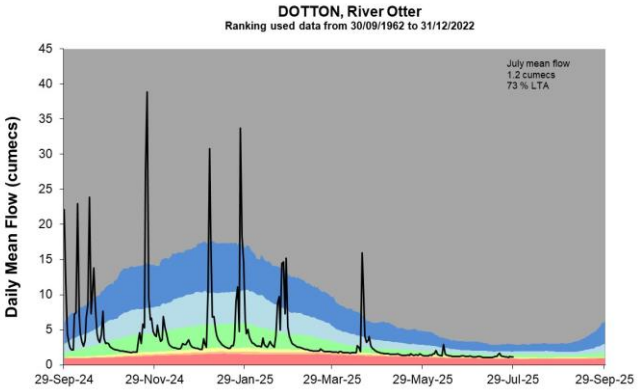


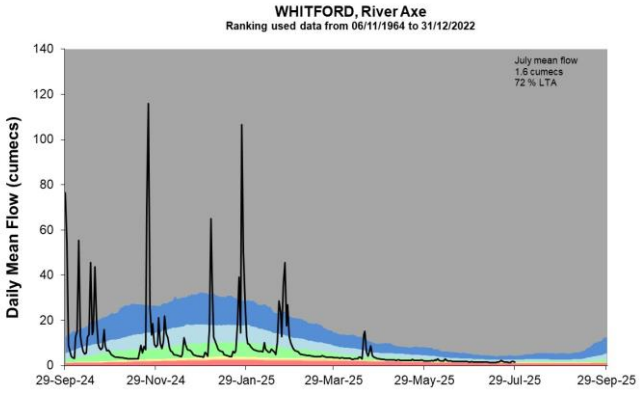










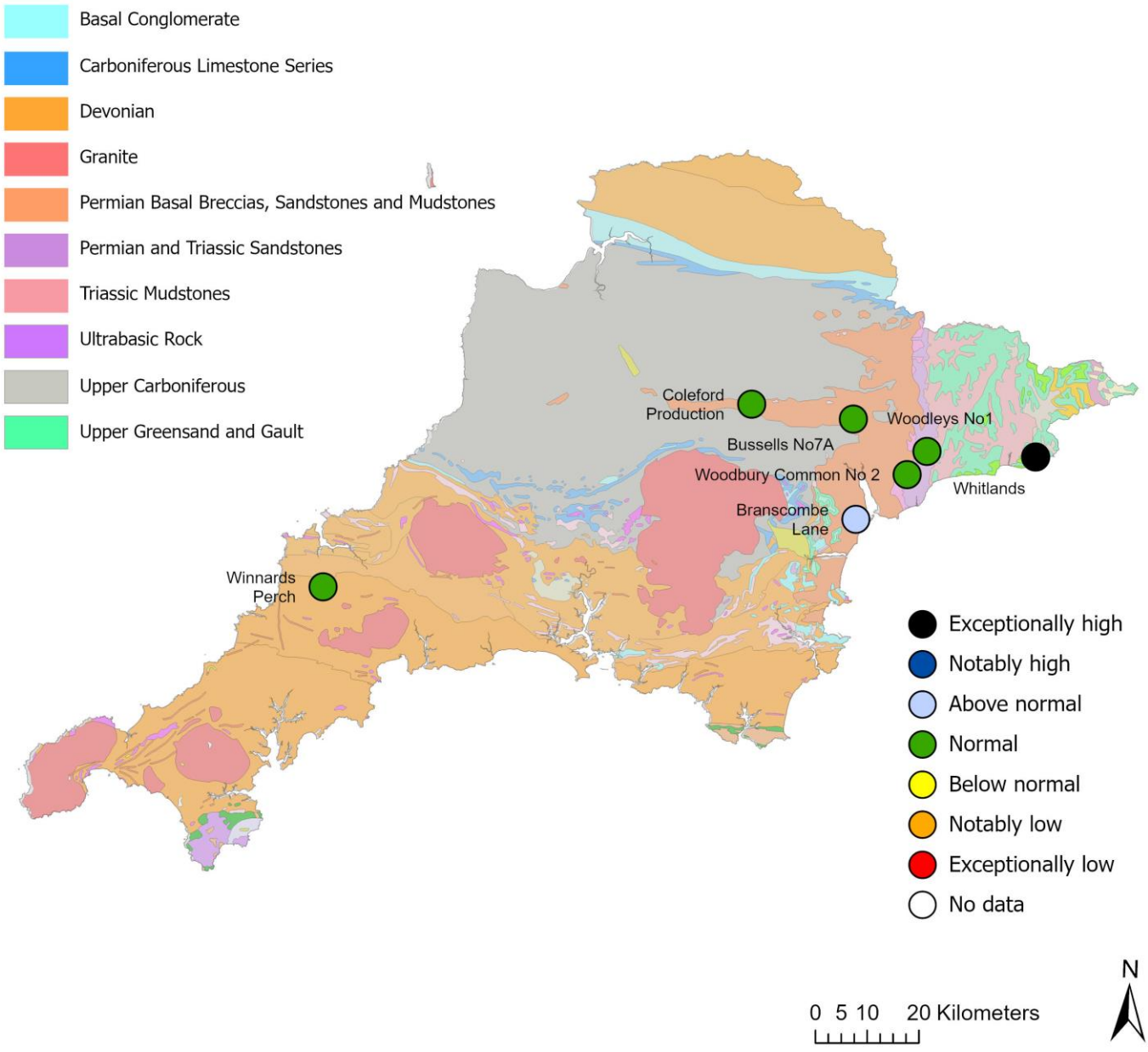


Source: Environment Agency.

5 Groundwater levels

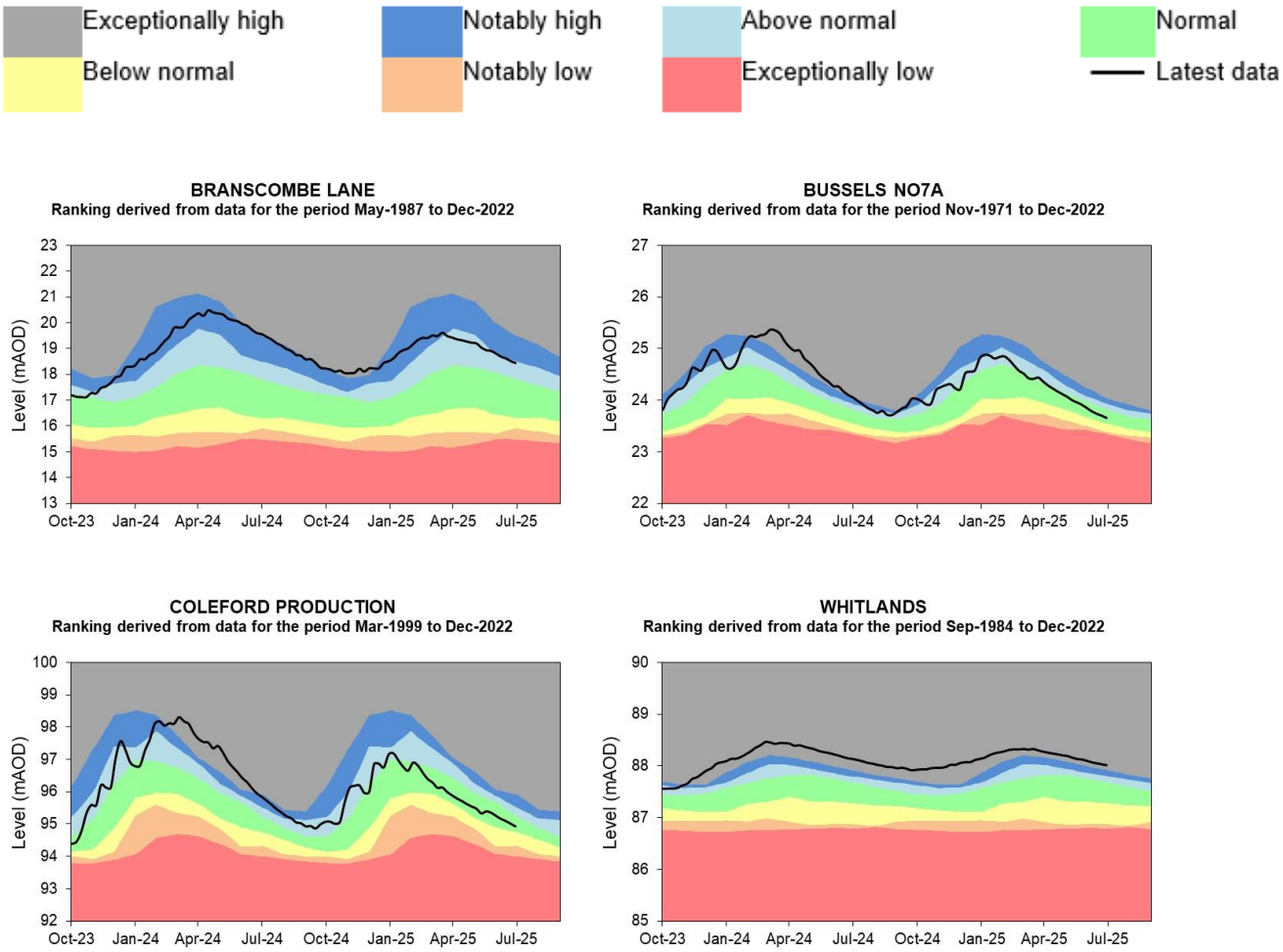
5.1 Groundwater levels map

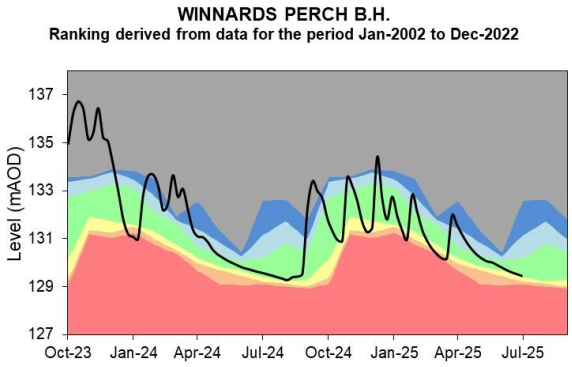
Figure 5.1: Groundwater levels for indicator sites at the end of July 2025, classed relative to an analysis of respective historic July levels. Table available in the appendices with detailed information.

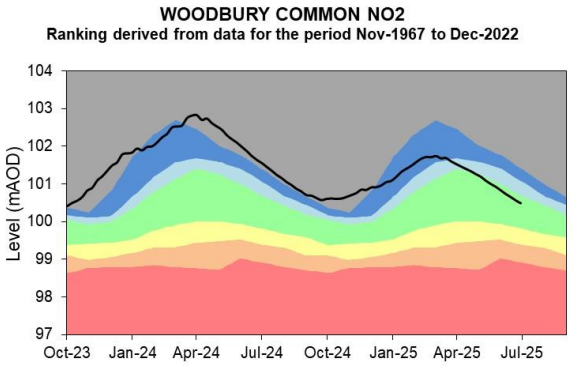


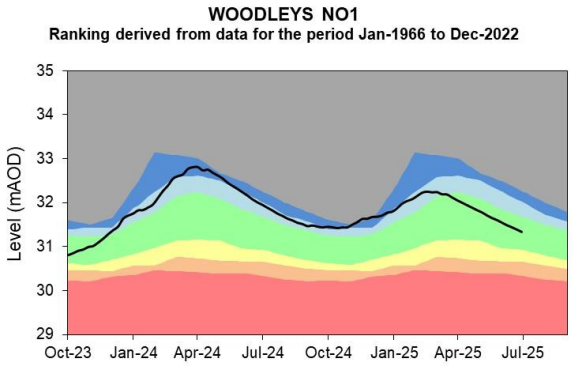
5.2 Groundwater level charts

Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.





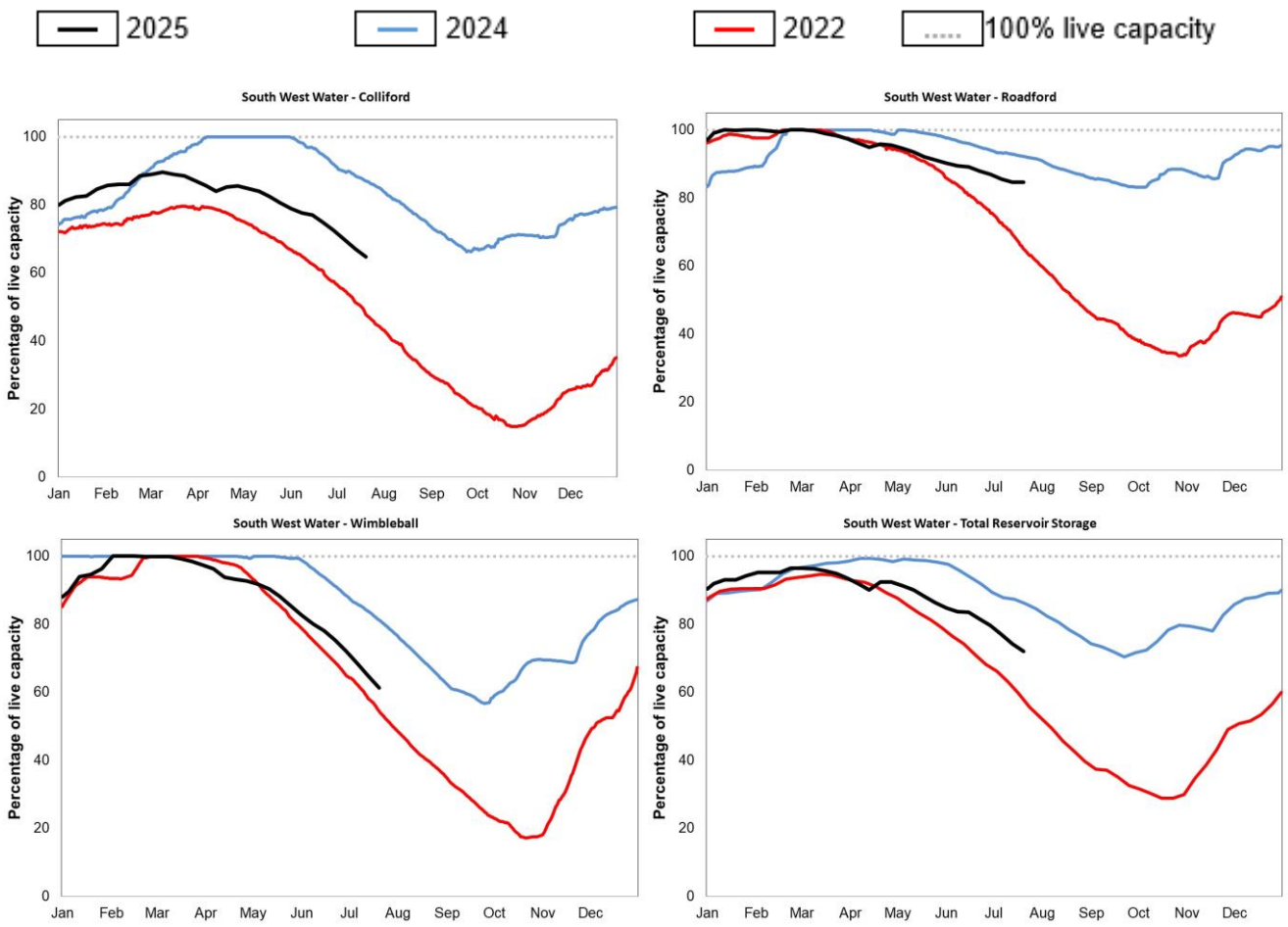




Source: Environment Agency, 2025.

6 Reservoir stocks

Figure 6.1: End of month reservoir storage compared to previous year and a historic drought year. Note: Historic records of individual reservoirs vary in length.



(Source: South West 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 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	Jul 2025 rainfall % of long term average 1991 to 2020	Jul 2025 band	May 2025 to July cumulative band	Feb 2025 to July cumulative band	Aug 2024 to July cumulative band
Avon Dart And Erme	49	Below Normal	Normal	Normal	Normal
Exe	53	Below Normal	Below normal	Below normal	Normal
Fal And St Austell	60	Normal	Normal	Normal	Normal
North Cornwall	64	Normal	Normal	Normal	Normal
Otter Sid Axe And Lim	51	Below Normal	Notably low	Notably low	Normal
Seaton Looe And Fowey	60	Normal	Normal	Normal	Normal
Tamar	53	Below Normal	Normal	Normal	Normal
Taw And North Devon Streams	67	Normal	Normal	Below normal	Normal
Teign And Torbay	68	Normal	Normal	Normal	Normal

Torridge And Hartland Streams	58	Below Normal	Normal	Normal	Normal
West Cornwall	69	Normal	Below normal	Normal	Normal

8.2 River flows table

Site name	River	Catchment	Jul 2025 band	Jun 2025 band
Austins Bridge	Dart	Dart	Above normal	Notably high
Bellever	East Dart	Dart	Above normal	Notably high
Bodmin Dunmere	Camel	Camel	Normal	Above normal
Chudleigh Bridge	Teign	Teign Upper	Above normal	Above normal
Dotton	Otter	Otter	Above normal	Normal
Gunnislake	Tamar	Tamar Lower	Normal	No data
Gwills	Gannel	Gannel	Normal	Normal
Restormel	Fowey	Fowey	Normal	Normal
St Erth	Hayle	Hayle	No data	No data
Thorverton	Exe	Exe Lower	Normal	No data
Torrington	Torridge	Torridge Middle	Normal	Normal
Truro	Kenwyn	Tresillian Trevella Kenwyn	Normal	Above normal
Umberleigh	Taw	Taw Middle	Normal	Above normal
Whitford	Axe	Axe Devon Middle	Notably high	Normal

Groundwater table

Site name	Aquifer	End of Jul 2025 band	End of Jun 2025 band
Branscombe Lane	Dawlish Sandstone	Above normal	Notably high
Bussels No7a	Dawlish Sandstone	Normal	Normal
Coleford Production	Permian Breccias And Sandstones	Normal	Normal
Whitlands	Upper Greensand	Exceptionally high	Exceptionally high
Winnards Perch B.h.	Staddon Formation	Normal	Normal
Woodbury Common No2	Budleigh Salterton Pebble Beds	Normal	Normal
Woodleys No1	Otterton Sandstone Formation	Normal	Normal