Monthly water situation report: Wessex Area

1 Summary - January 2025

January was a return to wetter weather following the dry end to 2024 with an average of 137mm of rainfall across Wessex, 154% of the long term average (LTA). Rain largely fell over a few days at either end of the month. Soil moisture deficit (SMD) remained close to zero during January. In most river catchments on the Chalk, recorded monthly mean flows were above normal and sites in the north of Wessex varied between normal and exceptionally high. Groundwater sites monitoring the Chalk varied between normal and exceptionally high at the end of January while all other monitoring sites reported notably high groundwater levels. Reservoirs ended the month at approximately 99% capacity for both Wessex Water and Bristol Water. For both water companies this was similar to levels in January 2024.

1.1 Rainfall

In January an average of 137mm (154% LTA) of rain fell across Wessex. Hydrological areas to the south of Wessex received notably high rainfall while areas to the north mostly received between above normal and notably high rainfall. The West Somerset Streams area was the only area to receive normal rainfall. Rainfall during January was largely restricted to two periods at either end of the month: 36% of rain fell between 1 and 5 January and 49% between 23 and 27 January during Storm Éowyn and Storm Herminia.

In the last 3 months, most hydrological areas have received normal rainfall on average with 3 areas receiving above normal rainfall. In the last 6 months, most hydrological areas in Wessex received between above normal and notably high rainfall with two hydrological areas to the east receiving exceptionally high rainfall and the West Somerset Streams the west receiving normal rainfall. Over the past 12 months almost all areas of Wessex received exceptionally high rainfall.

1.2 Soil moisture

Soil moisture deficit (SMD) in Wessex remained close to zero on average throughout January. SMD at the end of the month was near zero on average across all areas of Wessex. SMD at the end of January was within 5mm of the LTA across all hydrological areas of Wessex.

1.3 River flows

Amongst sites within Chalk catchments, the majority reported above normal mean monthly flows. The exception was Sydling Water at Sydling St Nicholas which recorded normal flows. Amongst sites outside of Chalk catchments, four sites towards the centre of Wessex reported exceptionally high monthly mean flows while the remaining sites reported between normal and above normal monthly mean flows in January.

Daily mean flows in January peaked twice during the month after each period of higher rainfall. At the end of January, the majority of reporting sites across Wessex recorded between above normal and exceptionally high daily mean flows.

1.4 Groundwater levels

The majority of groundwater monitoring sites across Wessex ended January reporting notably high levels. All four exceptions were sites monitoring the Chalk aquifer. Delcombe and Kingston Russell Road to the south of Wessex recorded normal levels at the end of the month while Chitterne Down and Oakley Industrial Estate were both exceptionally high. At the end of January, groundwater levels across all sites apart from Didmarton and Overcompton were increasing.

1.5 Reservoir stocks

Wessex Water reservoir levels remained close to 100% capacity throughout January. Overall, Bristol Water reservoir levels increased slightly, having begun the month at approximately 94% capacity and ending January at approximately 99% capacity. The current combined levels for both Wessex Water and Bristol Water are similar to those recorded this time last year and those in January 1995.

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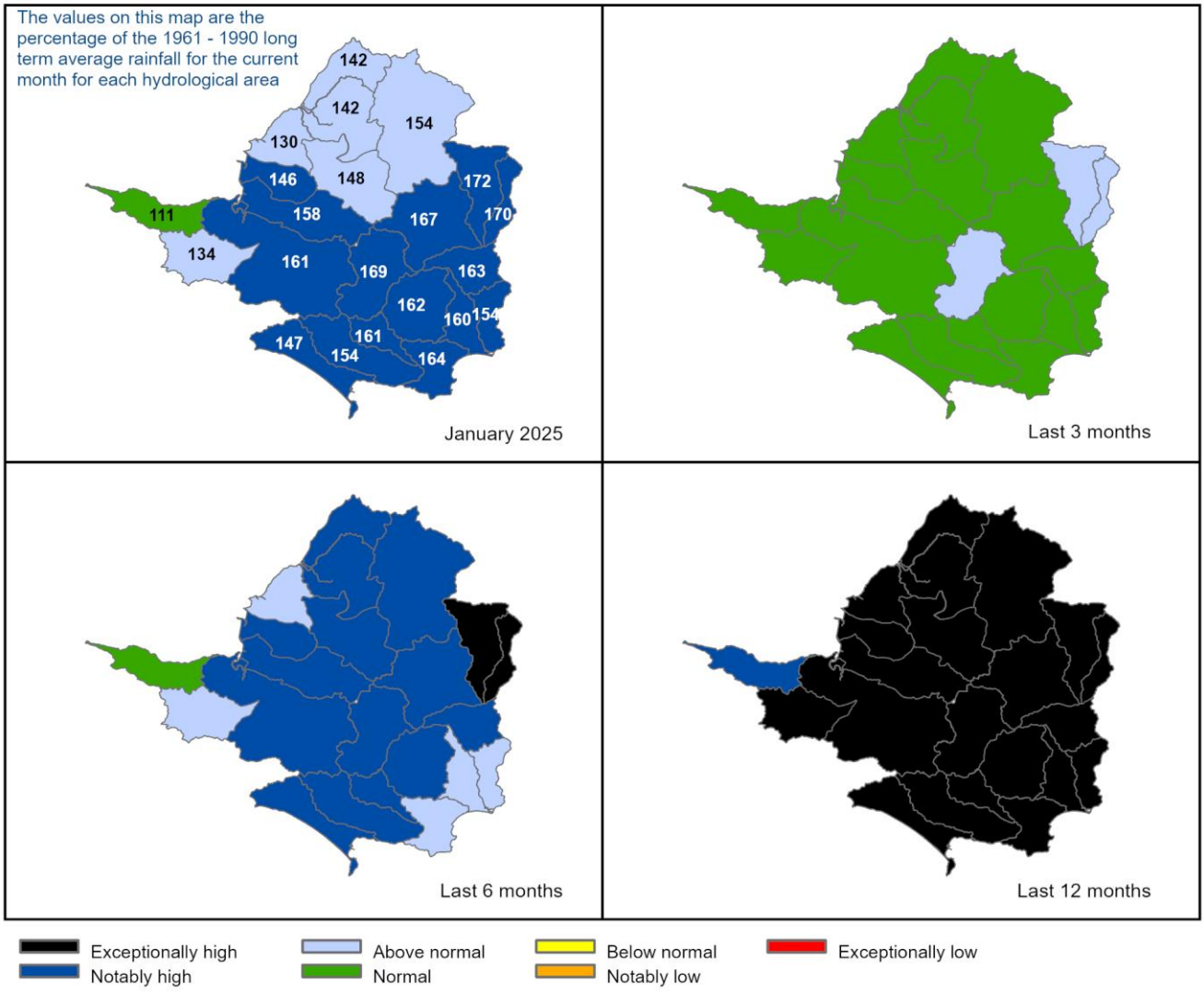
2 Rainfall

2.1 Rainfall map

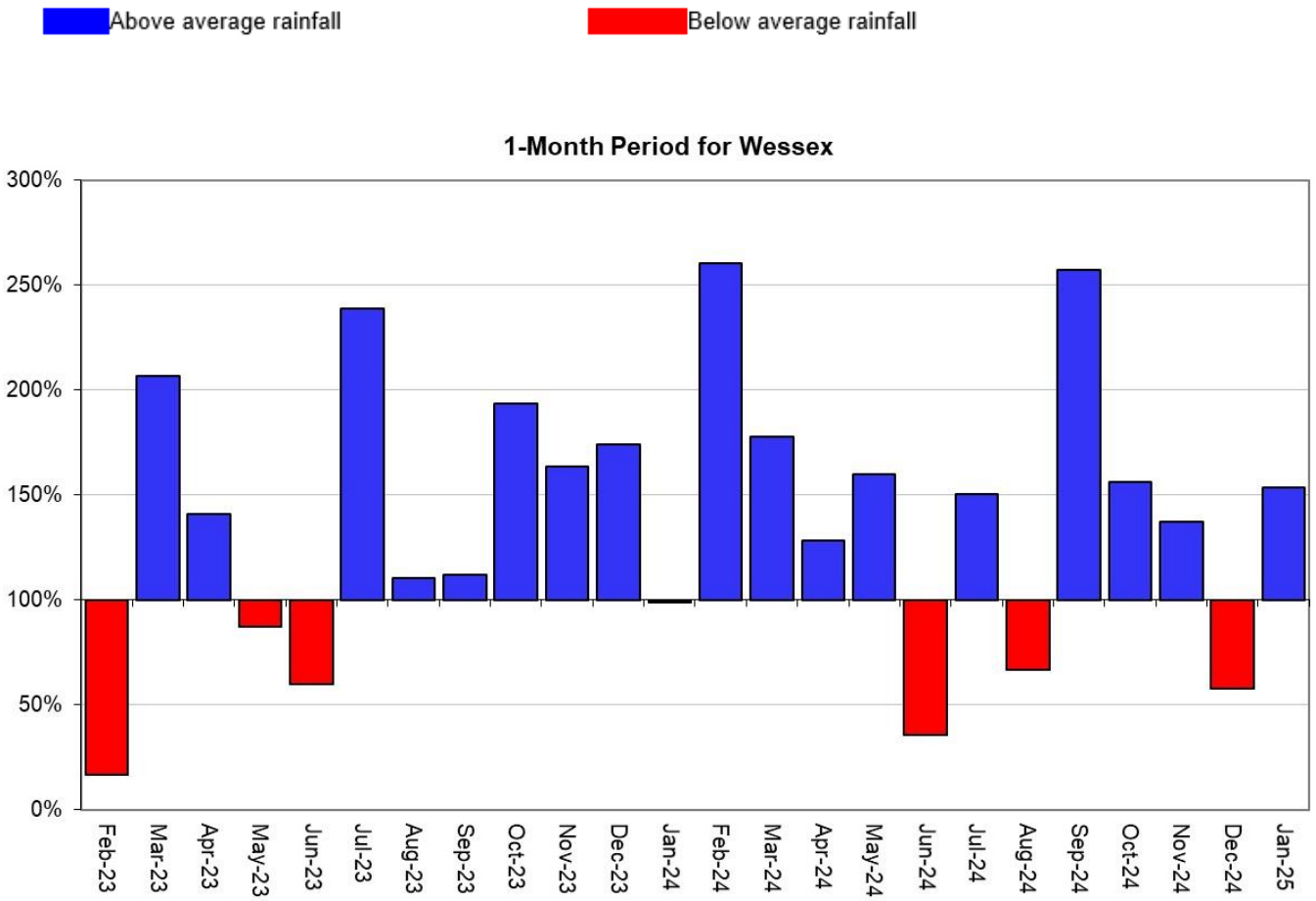
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 31 January 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



Rainfall data for 2024 and 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 October 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2025).

2.2 Rainfall charts

Figure 2.2: Monthly rainfall totals for the past 24 months as a percentage of the 1961 to 1990 long term average for each region and for England.

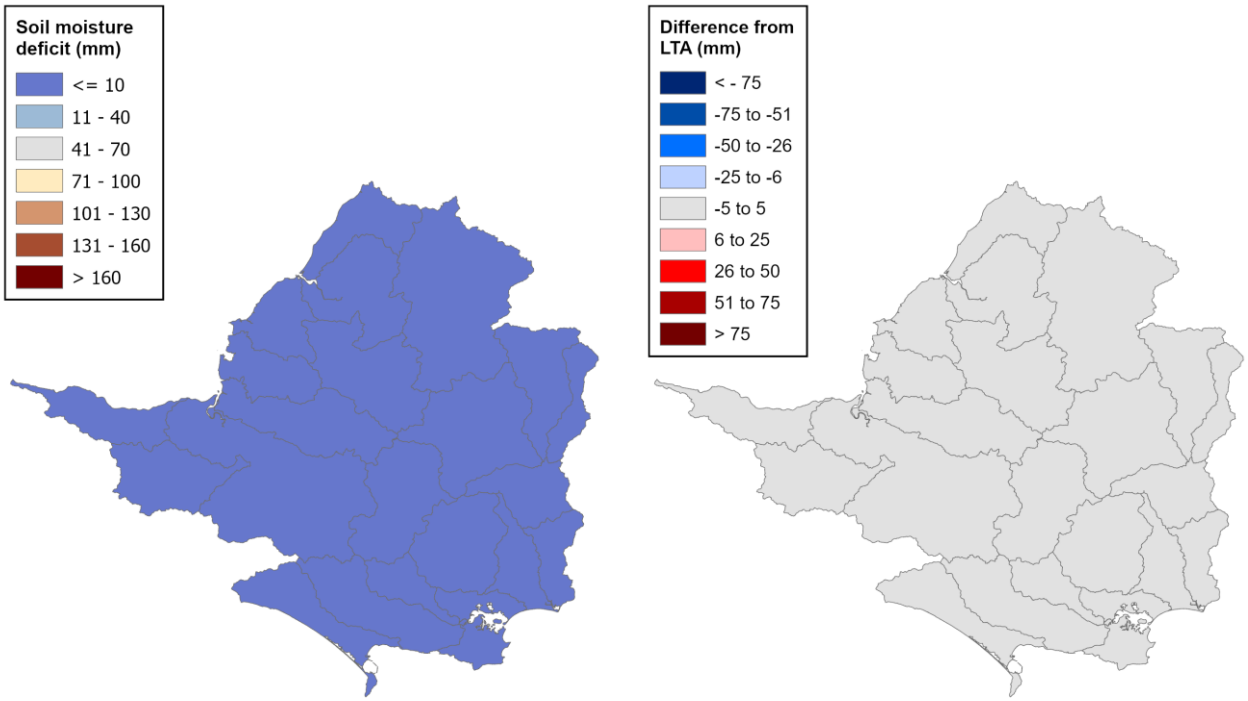


Rainfall data for 2023, 2024 and 2025, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to October 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

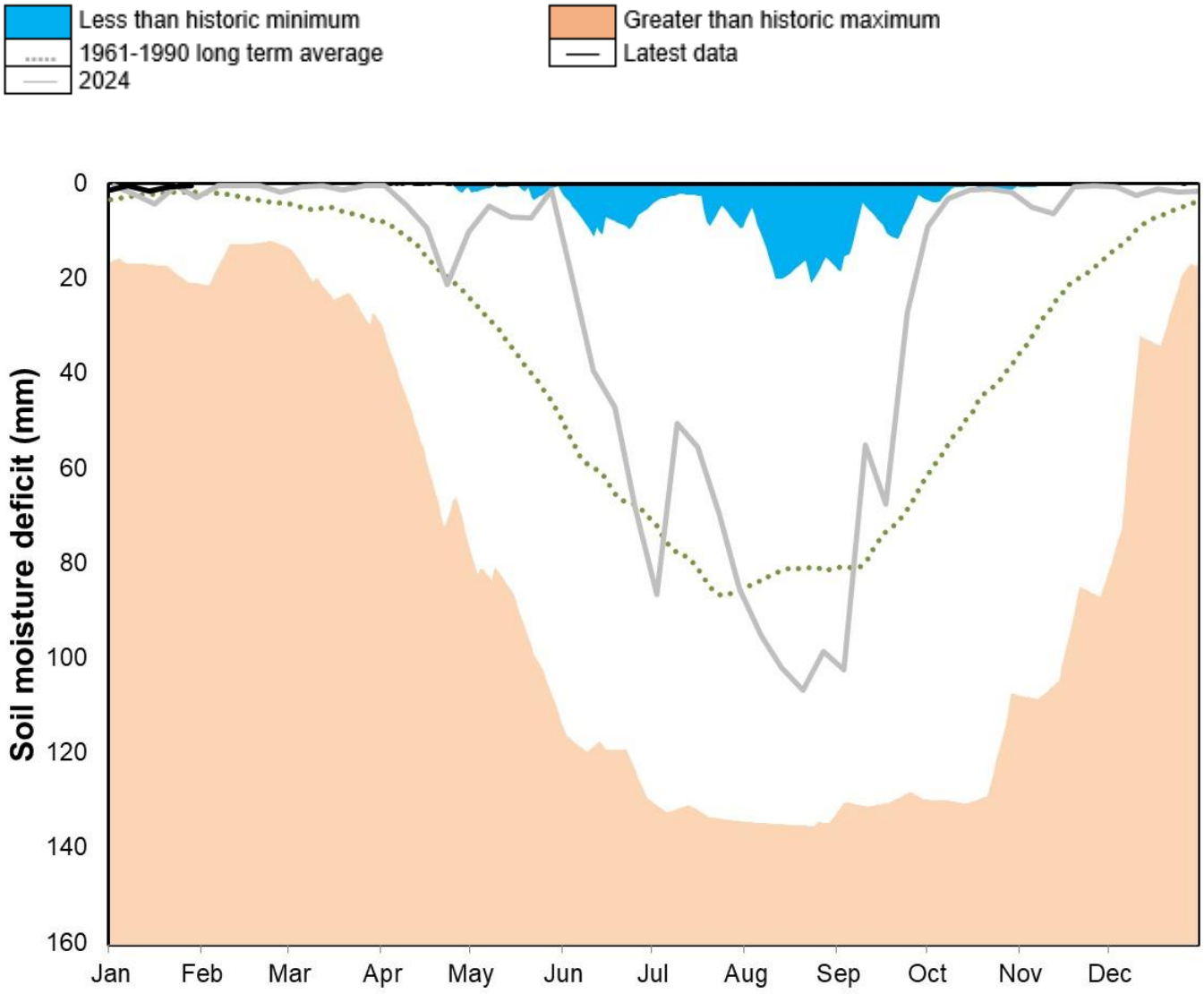
3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for weeks ending 31 January 2025. Shows the difference (mm) of the actual soil moisture deficit from the 1961 to 1990 long term average soil moisture deficits. MORECS data for real land use.



3.2 Soil moisture deficit charts

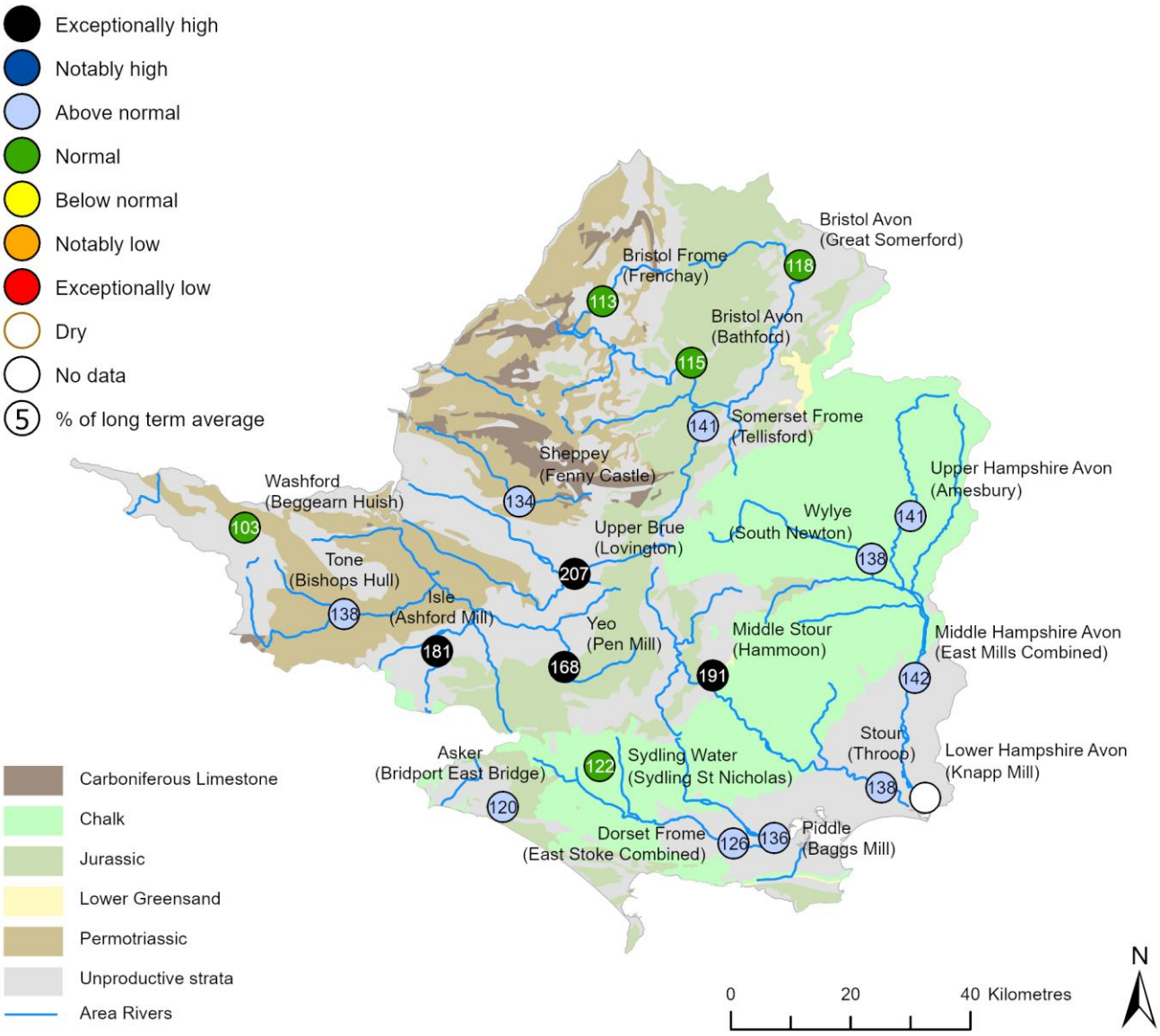
Figure 3.2: Latest soil moisture deficit compared to previous year, maximum, minimum, and 1961 to 1990 long term average. Weekly MORECS data for real land use.



4 River flows

4.1 River flows map

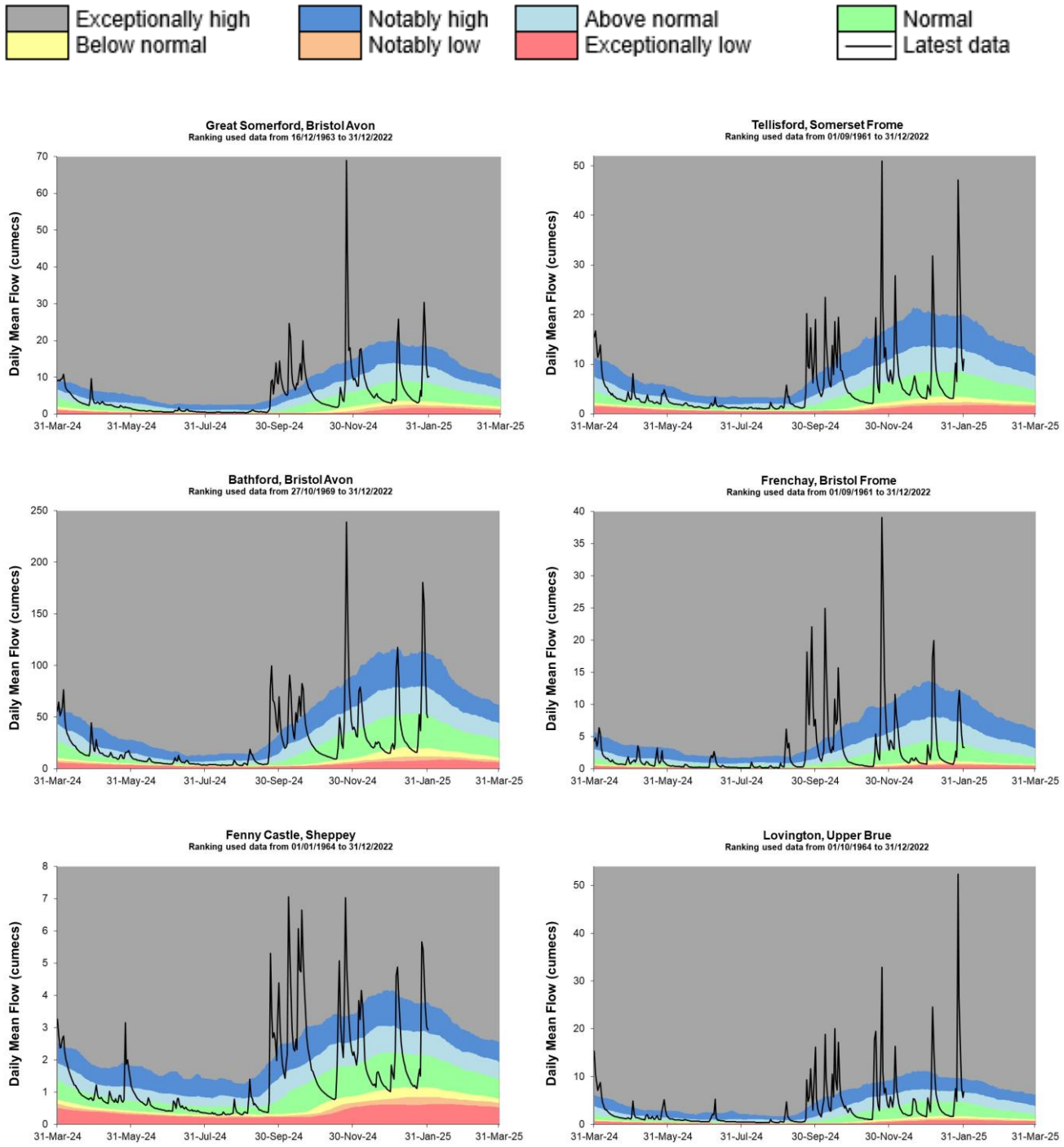
Figure 4.1: Monthly mean river flow for indicator sites for January 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic January monthly means Table available in the appendices with detailed information.



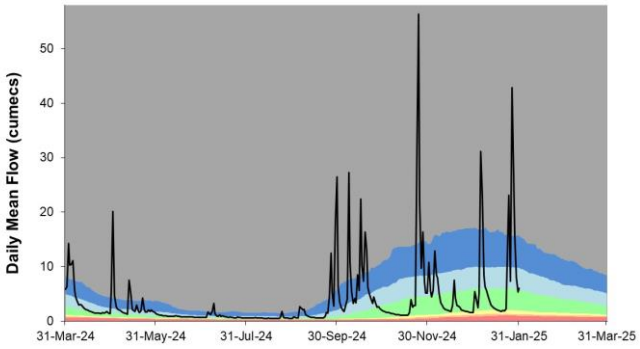
(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, 100024198, 2025. The Dorset Stour at Throop, Dorset Frome at East Stoke Combined and Asker at Bridport East Bridge should be treated with caution due to data issues.

4.2 River flow charts

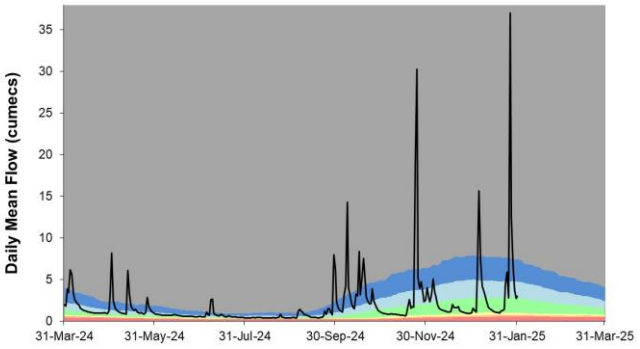
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows.



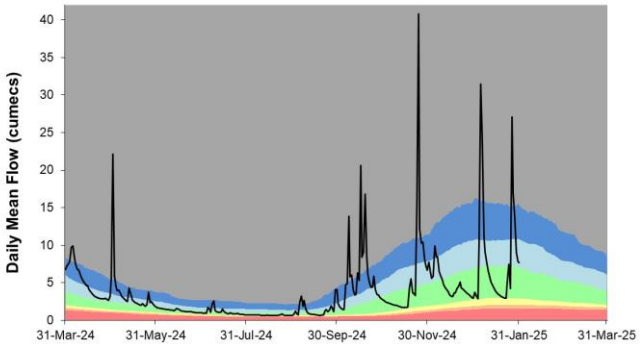
Pen Mill, Somerset Yeo
Ranking used data from 31/10/1963 to 31/12/2022



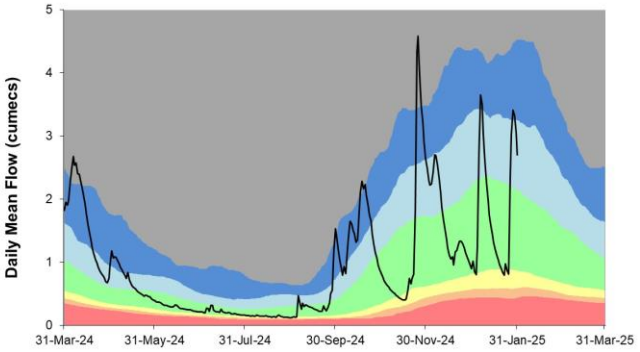
Ashford Mill, River Isle
Ranking used data from 01/10/1962 to 31/12/2022



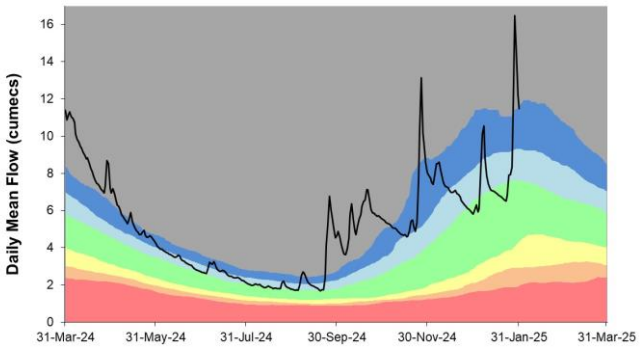
Bishops Hull, River Tone
Ranking used data from 01/02/1961 to 31/12/2022



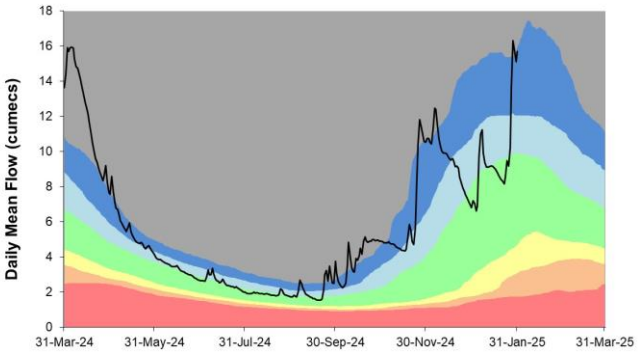
Beggearn Huish, Washford River
Ranking used data from 01/01/1967 to 31/12/2022



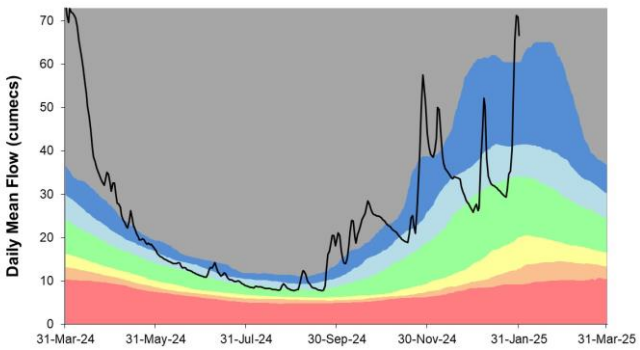
Amesbury, Upper Hampshire Avon
Ranking used data from 01/02/1965 to 31/12/2022



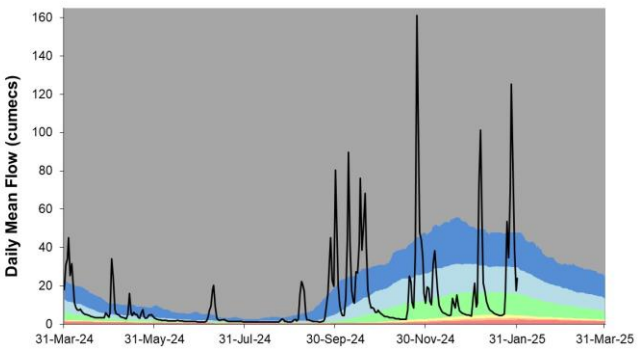
South Newton, River Wylye
Ranking used data from 01/01/1967 to 31/12/2022

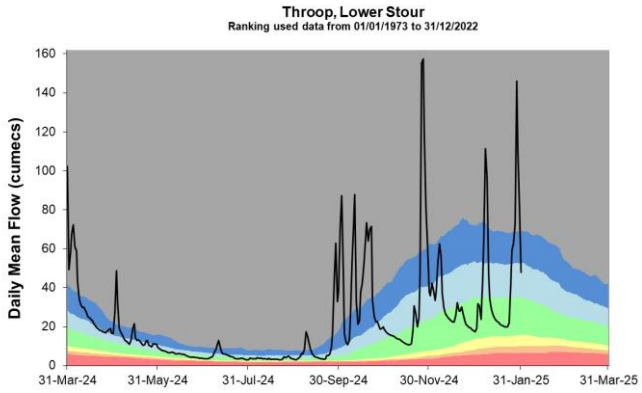


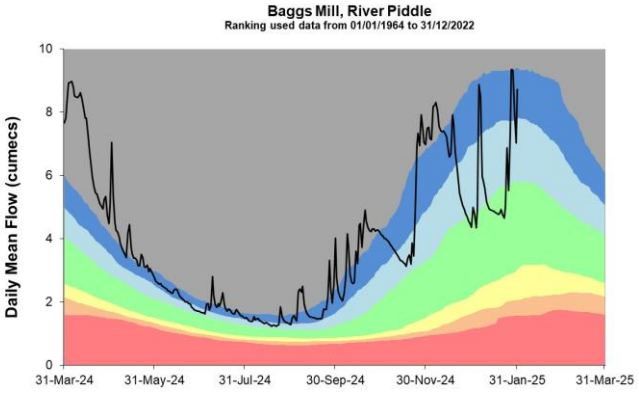
East Mills Combined, Middle Hampshire Avon
Ranking used data from 01/11/1965 to 31/12/2022

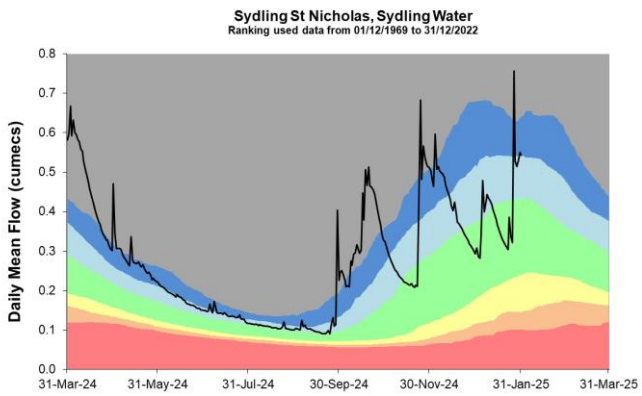


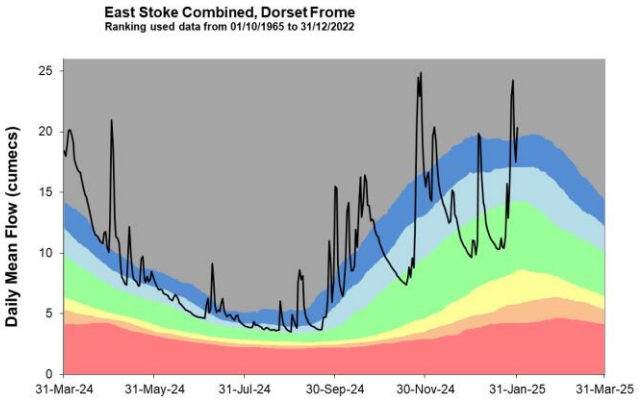
Hammoon, Middle Stour
Ranking used data from 01/03/1968 to 31/12/2022

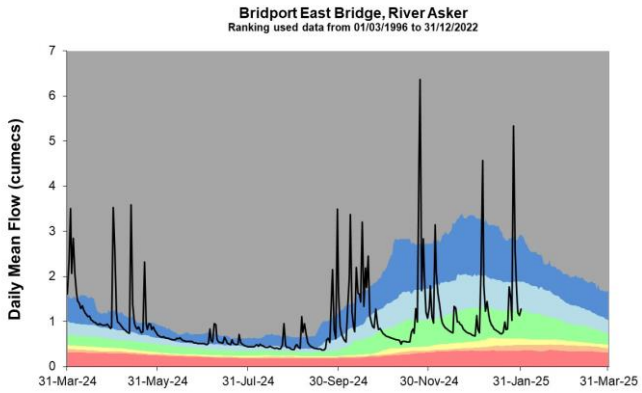










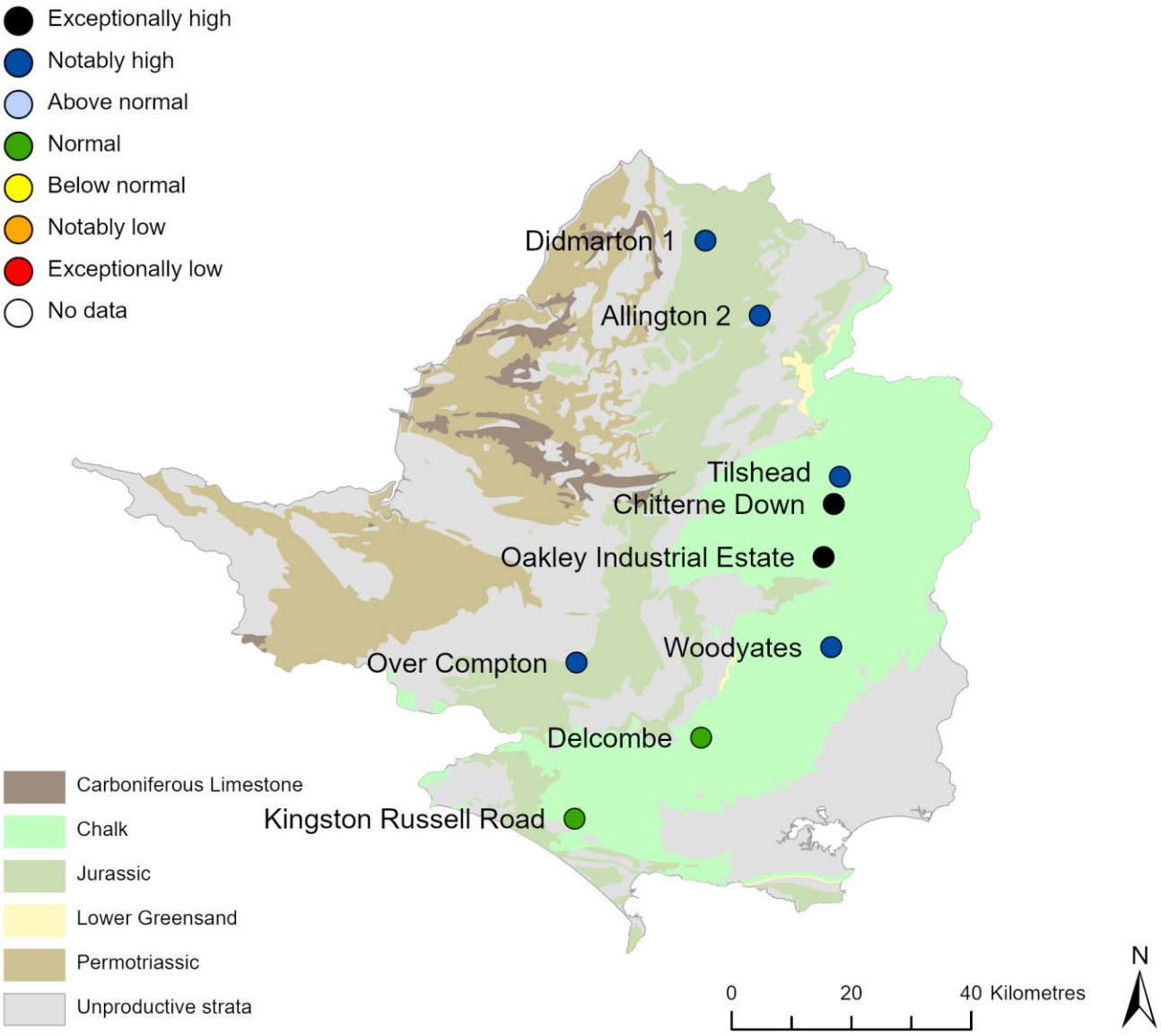


Source: Environment Agency, 2025. The Dorset Stour at Throop, Dorset Frome at East Stoke Combined and Asker at Bridport East Bridge should be treated with caution due to data issues.

5 Groundwater levels

5.1 Groundwater levels map

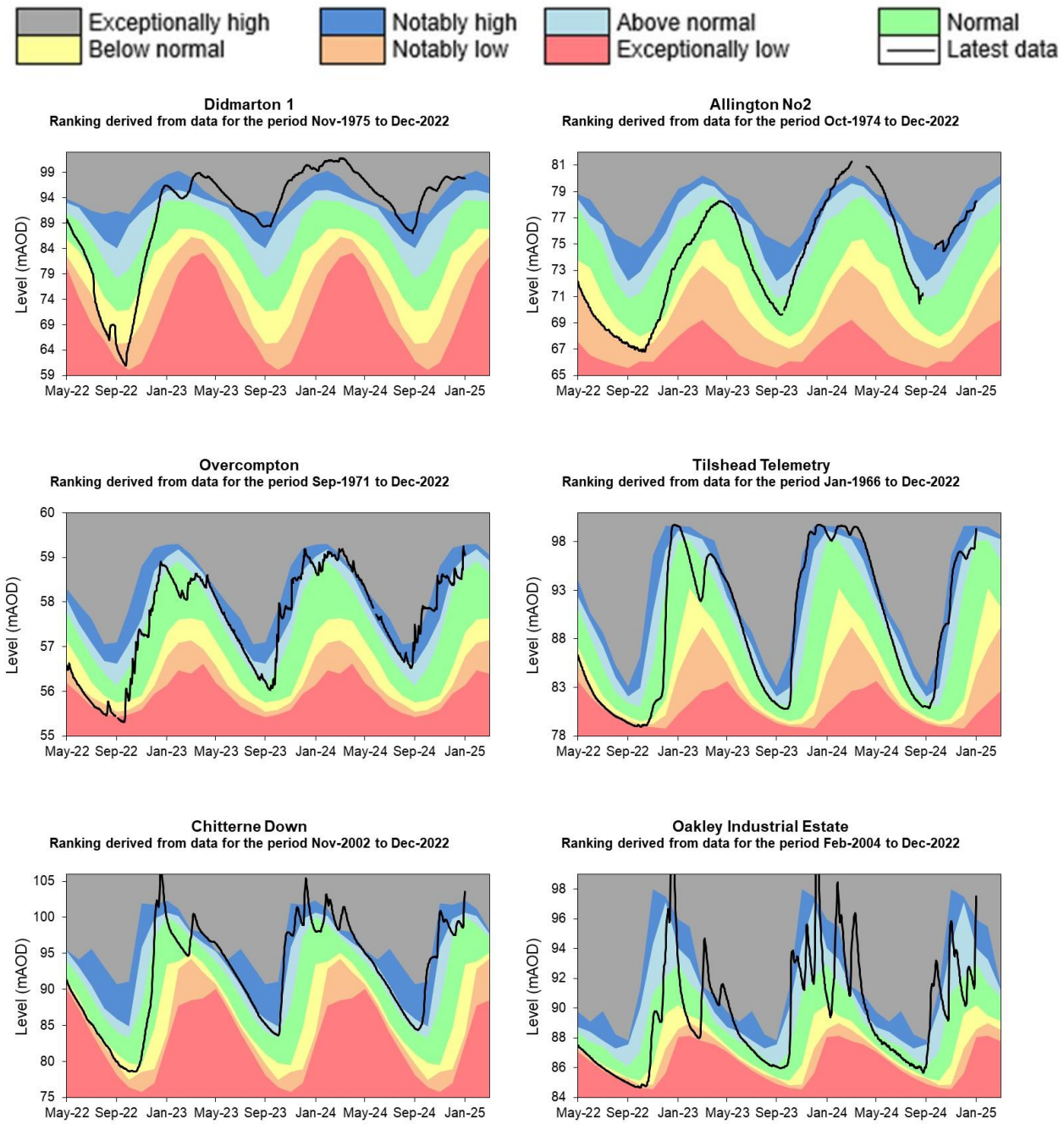
Figure 5.1: Groundwater levels for indicator sites at the end of January 2025, classed relative to an analysis of respective historic January levels. Table available in the appendices with detailed information.

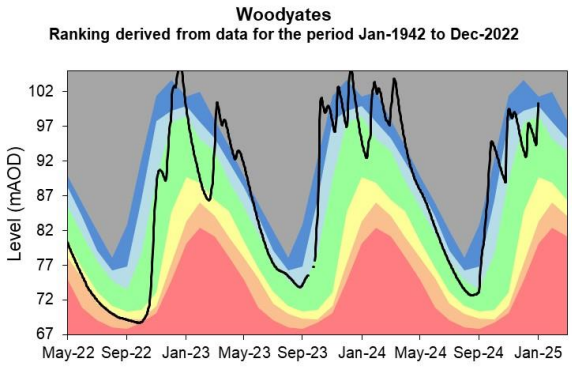


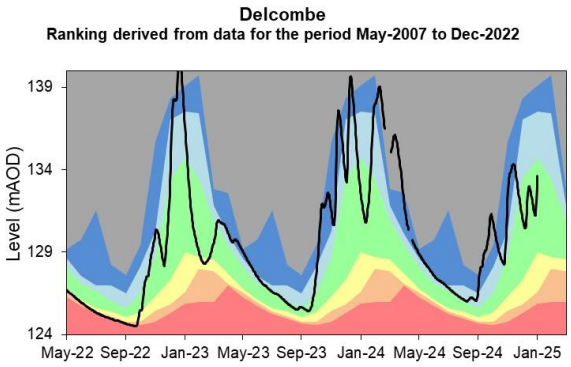
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025. Allington should be treated with caution due to ongoing data issues.

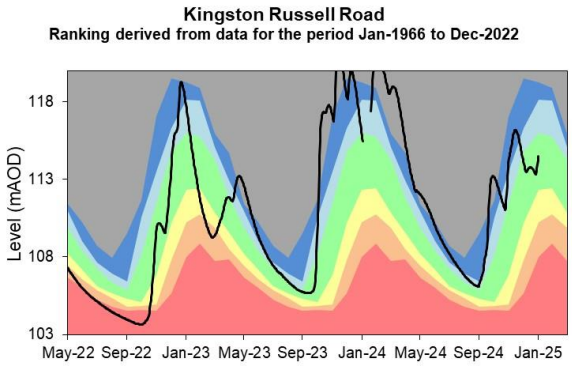
5.2 Groundwater level charts

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.





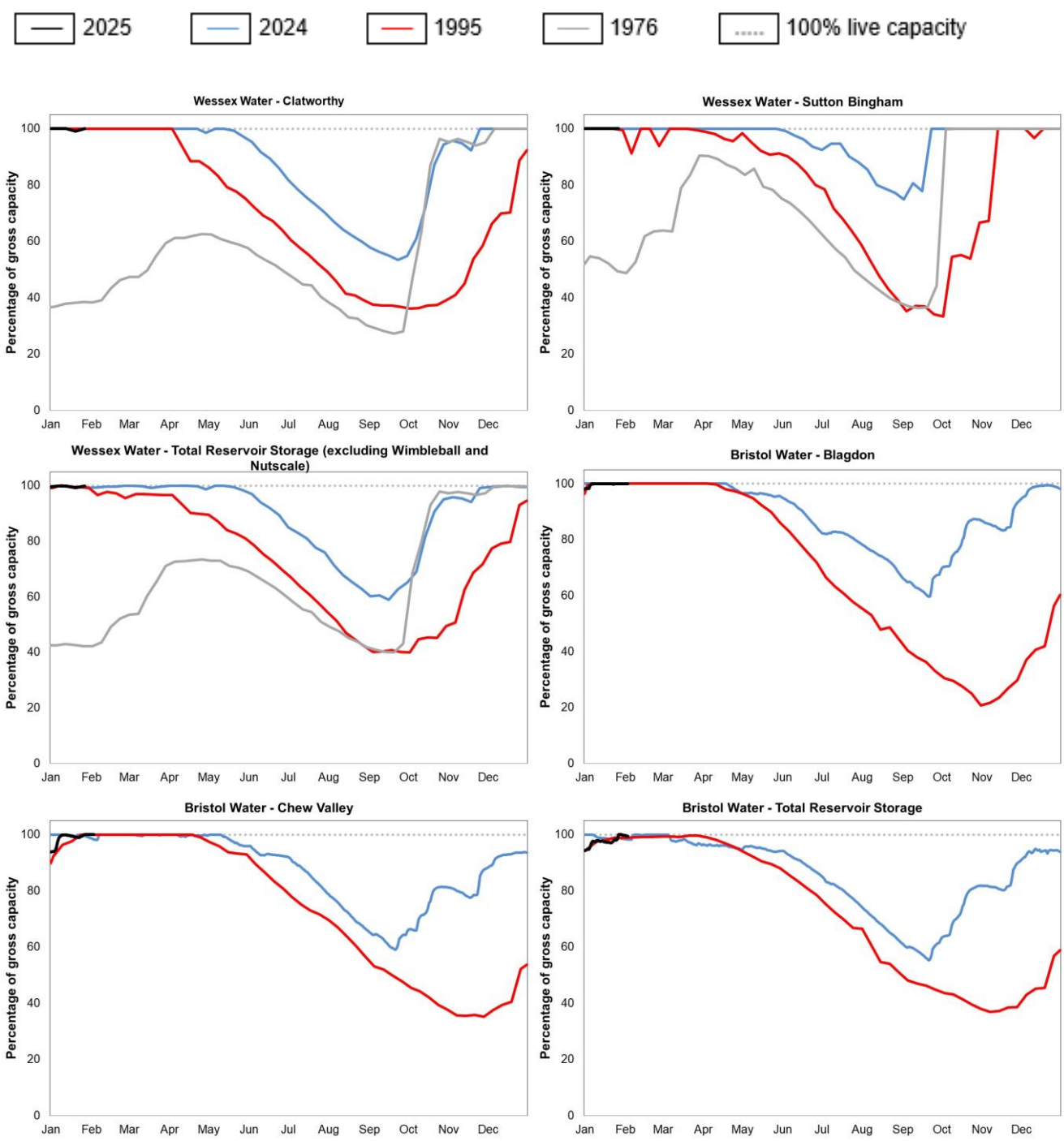




Source: Environment Agency, 2025. Allington should be treated with caution due to ongoing data issues

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to the previous year, and if available, also a comparison to reservoir stocks in 1995 and 1976.



(Source: Wessex Water and Bristol Water).

7 Flood alerts and warnings

7.1 Flood alerts

Table 1: Fluvial, coastal and groundwater flood alerts issued during January

Area	Number of fluvial flood alerts in January	Number of coastal flood alerts in January	Number of groundwater flood alerts in January
North Wessex	38	3	0
South Wessex	36	11	5*

*3 groundwater flood alerts issued prior to January remained in force

7.2 Flood warnings

Table 2: Fluvial, coastal and groundwater flood warnings issued during January

Area	Number of fluvial flood warnings in January	Number of coastal flood warnings in January	Number of groundwater flood warnings in January
North Wessex	28	0	0
South Wessex	31	7	6

7.3 Severe flood warnings

Table 3: Fluvial, coastal and groundwater severe flood warnings issued during January

Area	Number of fluvial severe flood warnings in January	Number of coastal severe flood warnings in January	Number of groundwater severe flood warnings in January
North Wessex	0	0	0
South Wessex	0	0	0

8 Stream support

8.1 Sites providing stream support

Table 4: End of January status for stream support sites.

Catchment	River	Stream support site	Gauging station	End of January status
Bristol Avon	Chalfield Brook	South Wraxall	Great Chalfield (Wessex Water)	Off
Bristol Avon	Chalfield Brook	Little Chalfield	Great Chalfield (Wessex Water)	Off
Bristol Avon	Charlton Stream	Charlton	Crabb Mill	Off
Bristol Avon	Gauze Brooke	Hullavington	Rodbourne	Off
Bristol Avon	Horscombe Stream	Tucking Mill	No Gauge	Off
Bristol Avon	Luckington Brook	Luckington	Fossway	Off
Bristol Avon	Rodbourne Brook	Lower Stanton St. Quinton	Startley	Off
Bristol Avon	Semington Brook	Easterton	No Gauge	Off
Bristol Avon	Sherston Avon	Stanbridge	Fossway	Off
Bristol Avon	Tetbury Avon	Tetbury	Brokenborough	Off
Dorset Frome	South Winterbourne	Winterbourne Abbas	Winterbourne Steepleton	Off

Dorset Frome	Watergates Stream	Watergates	No Gauge	On
Piddle	Devil's Brook	Dewlish	Dewlish Woodsdown Cross	Off
Piddle	Piddle	Alton Mill	South House & Little Puddle	Off
Piddle	Piddle	Morningwell	South House & Little Puddle	Off
Piddle	Piddle	Briantspuddle	Briantspuddle	Off
Dorset Stour	Crichel Stream	Long Crichel	No Gauge	Off
Dorset Stour	Gussage Stream	Gussage All Saints	Bowerswain	Off
Dorset Stour	Allen	Wyke Down	All Hallows	Off
Dorset Stour	Pimperne Stream	Pimperne	No Gauge	Off
Hampshire Avon	Bourne	Porton	Salisbury Bourne	Off
Hampshire Avon	Chitterne Brook	Codford Road	Codford	Off
Hampshire Avon	Wylye	Brixton Deverill	Brixton Deverill & Heytesbury	Off
Hampshire Avon	Wylye	Kingston Deverill	Brixton Deverill & Heytesbury	Off

9 Abstraction licences subject to restrict or cease

9.1 Abstraction licences subject to restrict or cease

Table 5: Number of licences at restrict or cease at the end of January.

Catchment	Number of licences at restrict at the end of January	Number of licences at cease at the end of January
Bristol Avon	0	0
Dorset	0	0
Hampshire Avon	0	0
Somerset	0	0

10 Glossary

10.1 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 1961 to 1990. 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).

10.2 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.

10.3 Rainfall Areas Map

Figure 6.2 Rainfall catchments in Wessex.

11 Appendices

11.1 Rainfall table

Hydrological area	Jan 2025 rainfall % of long term average 1961 to 1990	Jan 2025 band	Nov 2024 to January cumulative band	Aug 2024 to January cumulative band	Feb 2024 to January cumulative band
Axe	146	Notably High	Normal	Notably high	Exceptionally high
Brue	158	Notably High	Normal	Notably high	Exceptionally high
Little Avon	142	Above Normal	Normal	Notably high	Exceptionally high
Lower Bristol Avon And Bristol Frome	142	Above Normal	Normal	Notably high	Exceptionally high
Lower Dorset Stour And River Crane	160	Notably High	Normal	Above normal	Exceptionally high
Lower Hampshire Avon	154	Notably High	Normal	Above normal	Exceptionally high
Mendips And River Chew	148	Above Normal	Normal	Notably high	Exceptionally high
Middle And Upper Bristol Avon	154	Above Normal	Normal	Notably high	Exceptionally high

Middle Dorset Stour	162	Notably High	Normal	Notably high	Exceptionally high
Middle Hampshire Avon	163	Notably High	Normal	Notably high	Exceptionally high
Parrett	161	Notably High	Normal	Notably high	Exceptionally high
Poole Harbour And Purbeck	165	Notably High	Normal	Above normal	Exceptionally high
River Bourne	170	Notably High	Above normal	Exceptionally high	Exceptionally high
River Frome	154	Notably High	Normal	Notably high	Exceptionally high
River Piddle	161	Notably High	Normal	Notably high	Exceptionally high
Tone	134	Above Normal	Normal	Above normal	Exceptionally high
Upper Dorset Stour	169	Notably High	Above normal	Notably high	Exceptionally high
Upper Hampshire Avon	172	Notably High	Above normal	Exceptionally high	Exceptionally high
West Dorset Streams	147	Notably High	Normal	Notably high	Exceptionally high

West Somerset Streams	111	Normal	Normal	Normal	Notably high
Wylye And Nadder	167	Notably High	Normal	Notably high	Exceptionally high
Yeo And Kenn	131	Above Normal	Normal	Above normal	Exceptionally high

11.2 River flows table

Site name	River	Catchment	Jan 2025 band	Dec 2024 band
Amesbury	Upper Hampshire Avon	Hampshire Avon	Above normal	Notably high
Ashford Mill	Isle	Parrett	Exceptionally high	Normal
Baggs Mill	Piddle	Piddle	Above normal	Notably high
Bathford	Bristol Avon	Bristol Avon	Normal	Normal
Beggearn Huish	Washford	Washford River	Normal	Normal
Bishops Hull	Tone	Tone	Above normal	Normal
Bridport East Bridge	Asker	Asker	Above normal	Normal
Fenny Castle	Sheppey	Brue	Above normal	Normal
East Mills Combined	Middle Hampshire Avon	Hampshire Avon	Above normal	Notably high
East Stoke Combined	Dorset Frome	Dorset Frome	Above normal	Above normal
Frenchay	Bristol Frome	Bristol Frome	Normal	Normal
Great Somerford	Bristol Avon	Bristol Avon	Normal	Normal

Hammoon	Middle Stour	Dorset Stour	Exceptionally high	Normal
Knapp Mill	Lower Hampshire Avon	Hampshire Avon	Data unavailable	Data unavailable
Lovington	Upper Brue	Brue	Exceptionally high	Normal
Pen Mill	Yeo	Parrett	Exceptionally high	Normal
South Newton	River Wylye	Hampshire Avon	Above normal	Notably high
Sydling St Nicholas	Sydling Water	Dorset Frome	Normal	Notably high
Tellisford	Somerset Frome	Bristol Avon	Above normal	Normal
Throop	Lower Stour	Dorset Stour	Above normal	Normal

11.3 Groundwater table

Site name	Aquifer	End of Jan 2025 band	End of Dec 2024 band
Allington No2	Upper Bristol Avon Great Oolite	Notably high	Notably high
Chitterne Down	Upper Hampshire Avon Chalk	Exceptionally high	Above normal
Delcombe	Dorset Frome And Piddle Chalk/upper Greensand	Normal	Normal
Didmarton 1	Upper Bristol Avon Inferior Oolite	Notably high	Exceptionally high
Kingston Russell Road	Dorset Frome Chalk	Normal	Normal
Overcompton	Somerset Yeo Bridport Sand	Notably high	Above normal
Tilshead	Upper Hampshire Avon Chalk	Notably high	Above normal
Woodyates	Dorset Stour Chalk	Notably high	Normal
Oakley Industrial Estate	Upper Hampshire Avon Chalk	Exceptionally high	Normal