Monthly water situation report: Wessex Area

1 Summary - February 2025

During February an average of 76mm of rain fell across Wessex. This was 116% of the long term average (LTA). The majority of rain fell during the latter half of the month. Soil moisture deficit (SMD) remained close to zero throughout February. In river catchments on the Chalk, most monthly mean flows were above normal except for on the Hampshire Avon where mean flows were notably high. Monthly mean flows in most other catchments were normal. Most groundwater sites monitoring the Chalk reported levels between normal and above normal while sites in the north monitoring the great and inferior Oolite recorded notably high levels. Reservoirs ended February at close to 100% capacity for both Wessex Water and Bristol Water. For both water companies this was similar to levels in February 2024.

1.1 Rainfall

In February an average of 76mm (116% LTA) of rain fell across Wessex. All hydrological areas in Wessex received normal rainfall except for three areas to the east of Wessex which received above normal rainfall. Most rainfall in February was during the latter half of the month: 73% of rain fell between 19 and 26 February. Daily rainfall was highest on 23 February when 32% of the whole month's rain fell.

In the last 3 months, most hydrological areas have received normal rainfall on average with two areas to the east receiving above normal rainfall. In the last 6 months, most hydrological areas received notably high rainfall except in the north east of Wessex where several areas received exceptionally high rainfall. In the last 12 months, hydrological areas across most of Wessex received notably high rainfall except for several areas in the south and east which received exceptionally high rainfall. In both the last 6 and 12 months, all hydrological areas received at least above normal rainfall. Of the last 24 months, 18 had above average rainfall. This has resulted in the wettest 24 month period (March to February) since records began in 1891.

1.2 Soil moisture

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

1.3 River flows

The majority of sites within Chalk catchments reported above normal mean monthly flows. Amongst sites outside of Chalk catchments, most reported normal mean monthly flows. The only sites to record notably high mean monthly flows in February were Amesbury and East

Mills Combined on the Hampshire Avon. Reporting sites in Chalk catchments typically recorded higher flows than in other geologies as flows are supported by strong baseflow from the aquifer.

Daily mean flows in February initially fell in February during the period of low rainfall at the start of February. For most sites, daily mean flows during February peaked towards the end of the month in response to rainfall during the last week of the month.

1.4 Groundwater levels

The majority of groundwater monitoring sites across the south of Wessex, including sites monitoring the Chalk aquifer ended February reporting between normal and above normal levels. The only exception was Woodyates which recorded notably high levels. In the north of Wessex, both Allington and Didmarton (monitoring the great and inferior Oolite respectively) also recorded notably high levels in February. At the end of the month, groundwater levels across all sites apart from Didmarton and Overcompton were increasing.

1.5 Reservoir stocks

Both Wessex Water and Bristol Water reservoir levels remained close to 100% capacity throughout February. The current combined levels for both Wessex Water and Bristol Water are similar to those recorded this time last year. Current reservoir levels for Bristol Water are also similar to those recorded in February 1995. For Wessex Water, current reservoir levels are slightly higher than those from February 1995.

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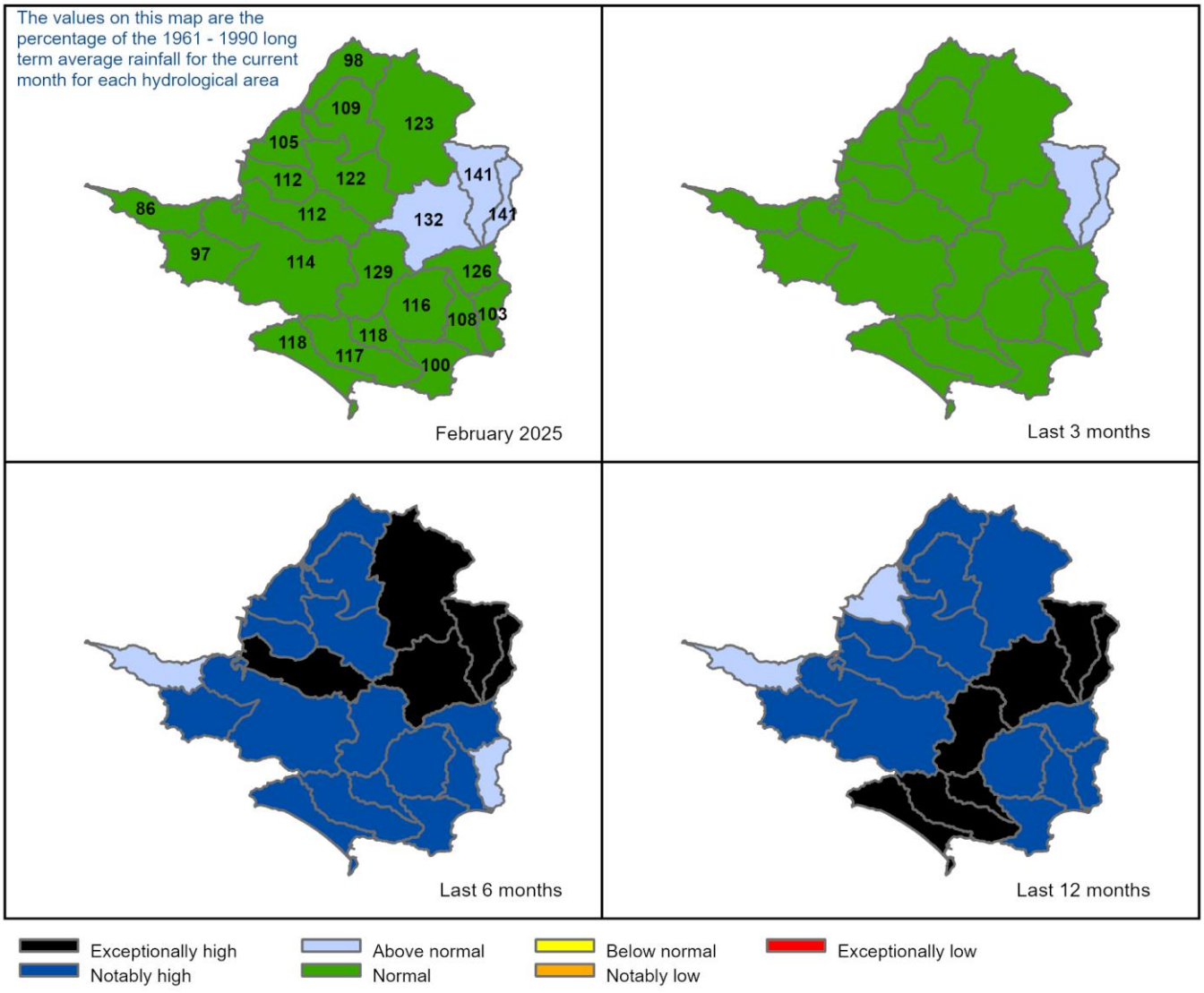
2 Rainfall

2.1 Rainfall map

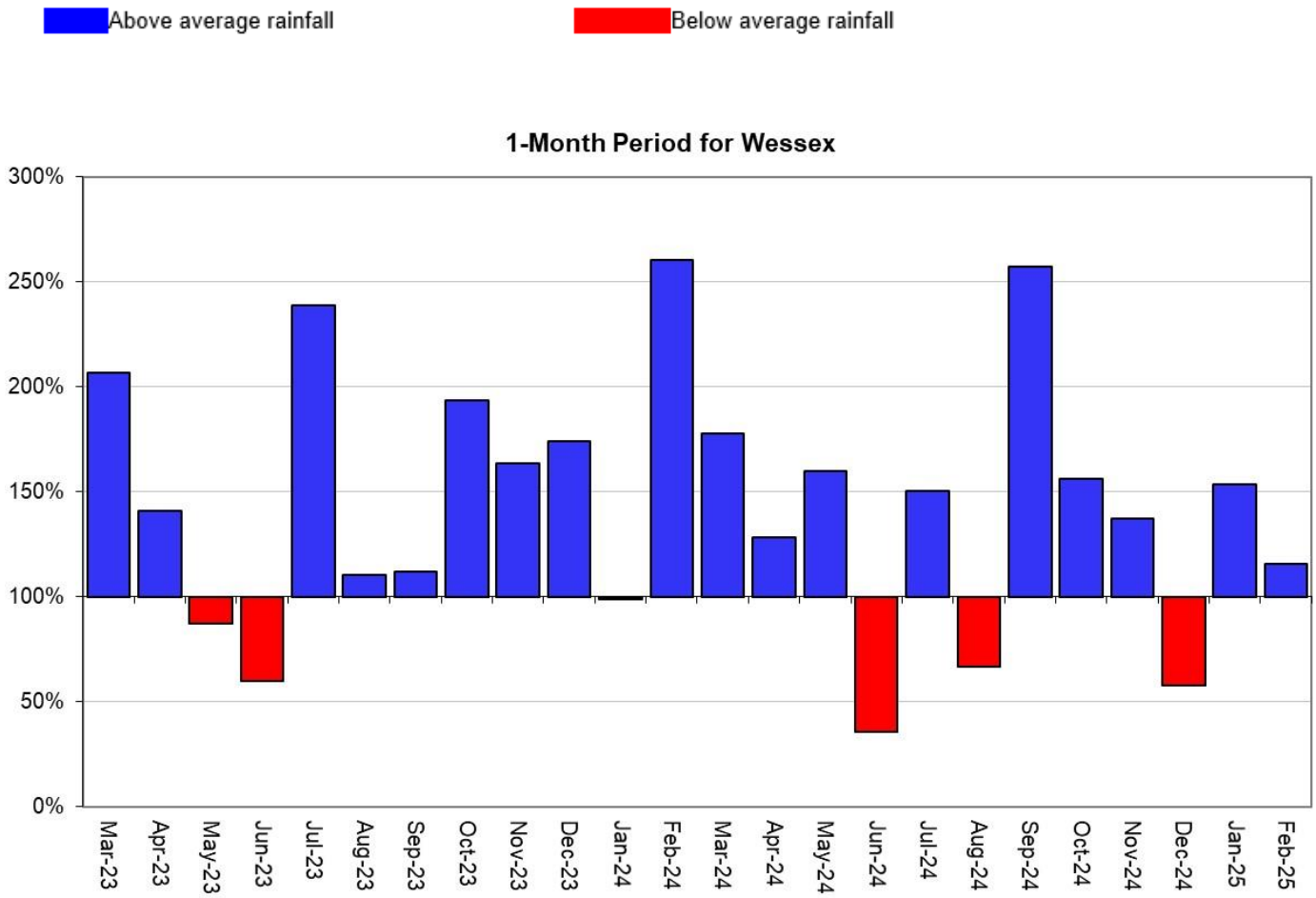
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 28 February 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



Rainfall data for 2023 and 2024, 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).

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.

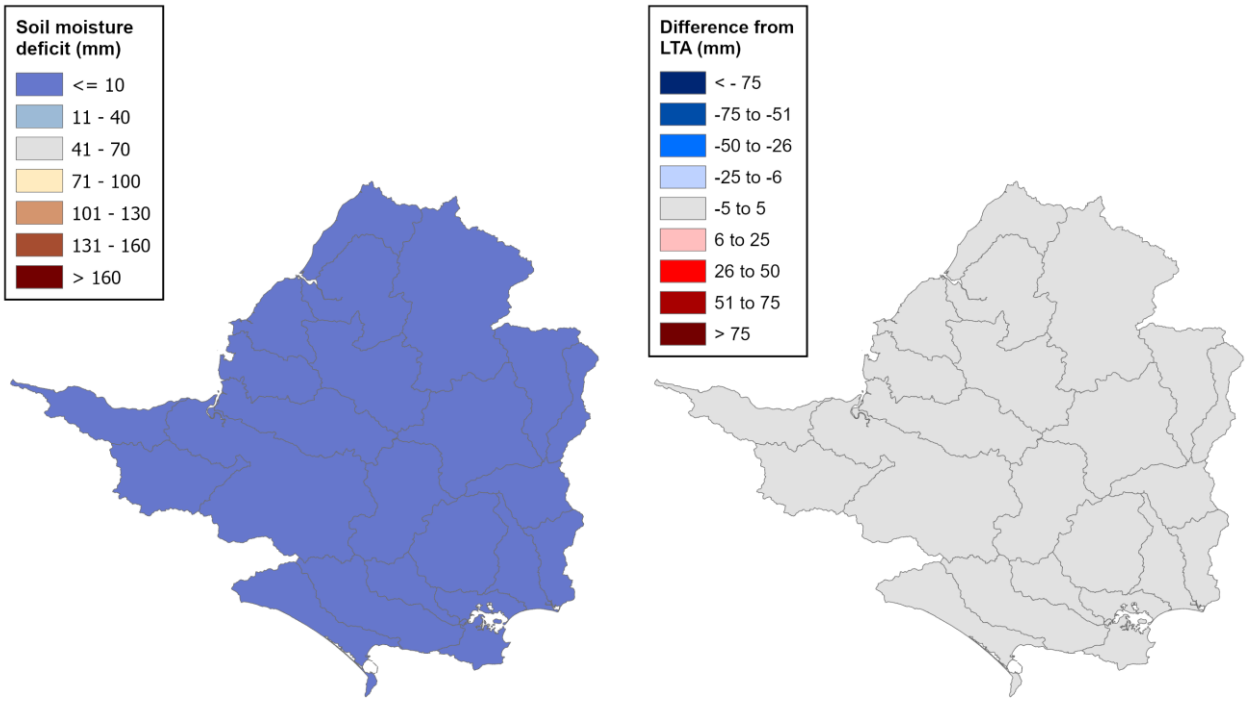


Rainfall data for 2023 and 2024, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to 2023, extracted from Met Office HadUK 1km gridded rainfall dataset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

3 Soil moisture deficit

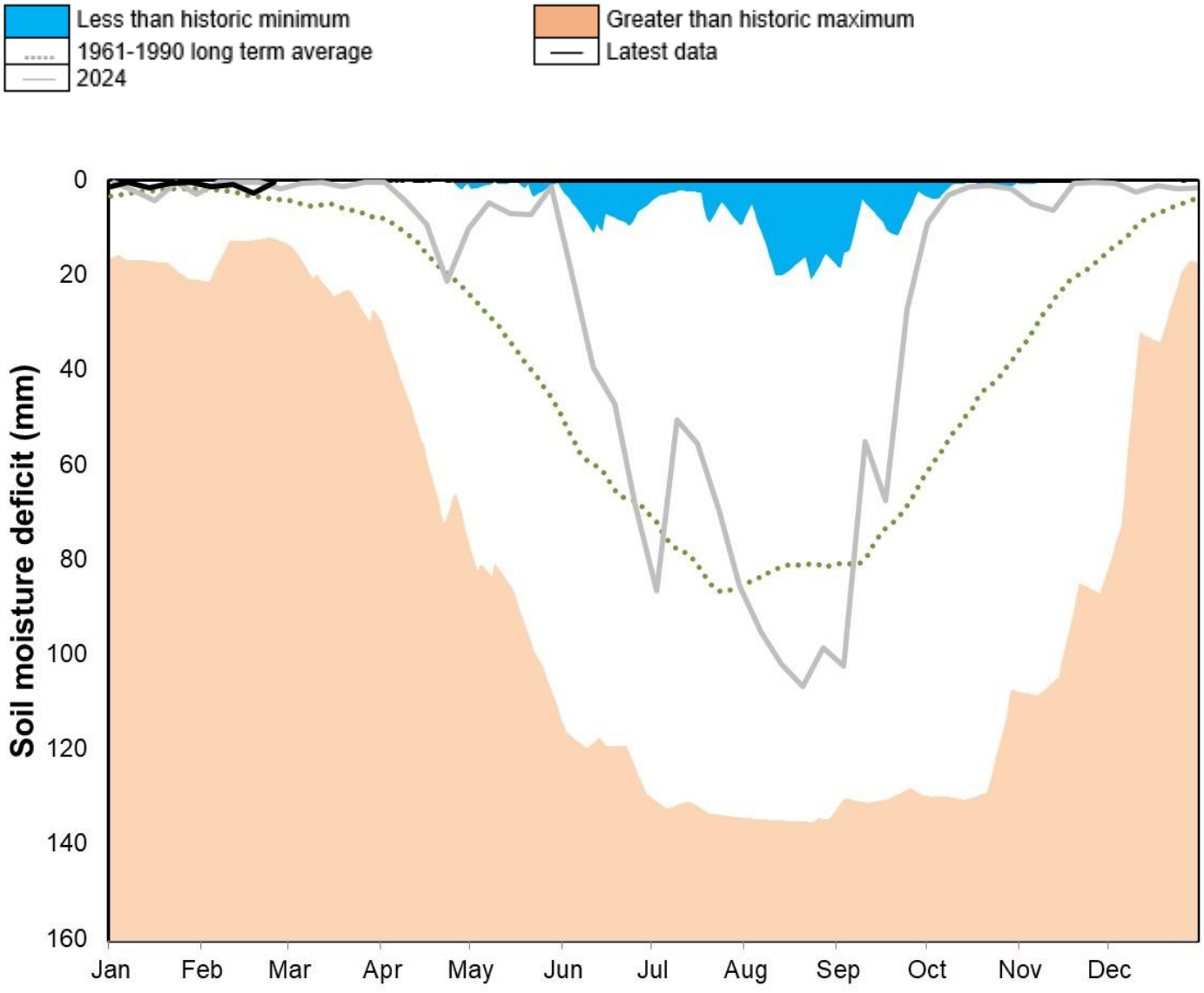
3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for weeks ending 28 February 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

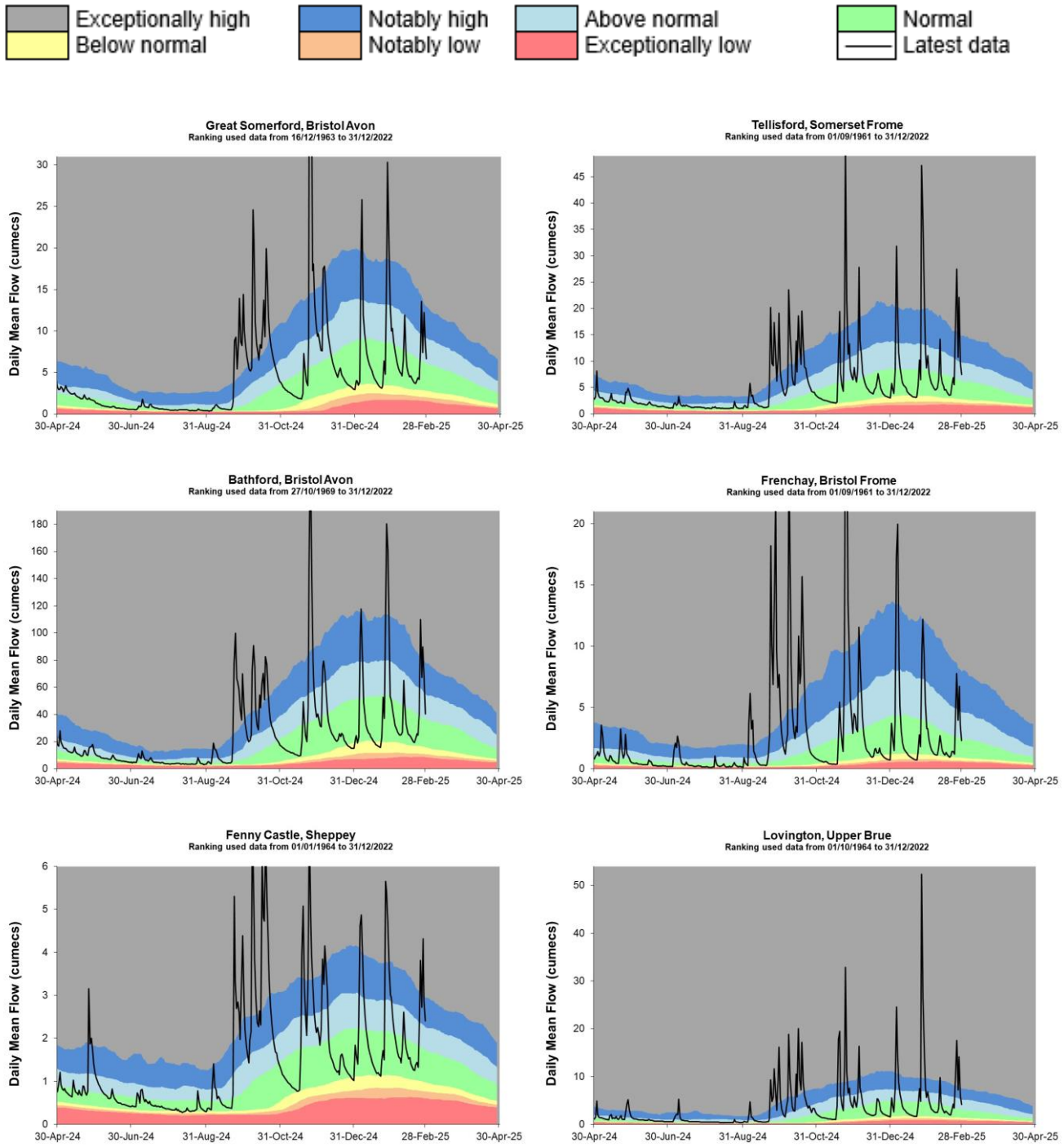
4.1 River flows map

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

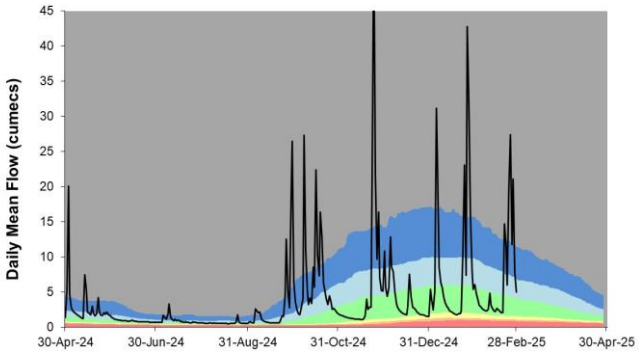
(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, 100024198, 2025. The Dorset Stour at Throop and Dorset Frome at East Stoke Combined should be treated with caution due to data issues.

4.2 River flow charts

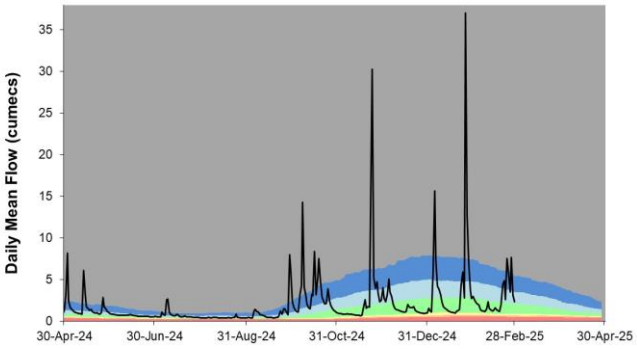
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows.



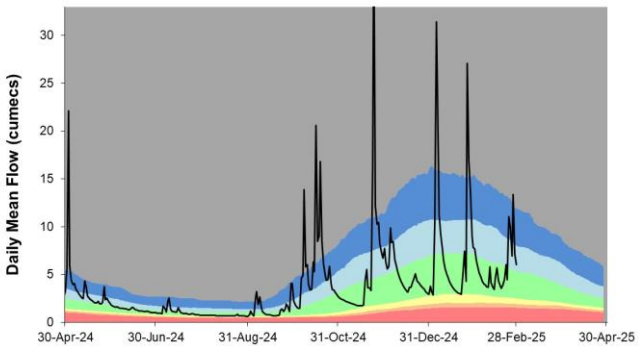
Pen Mill, Somerset Yeo
Ranking used data from 31/10/1963 to 31/12/2022



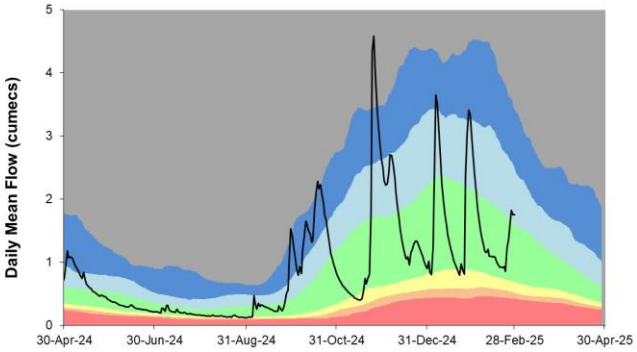
Ashford Mill, River Isle
Ranking used data from 01/10/1962 to 31/12/2022



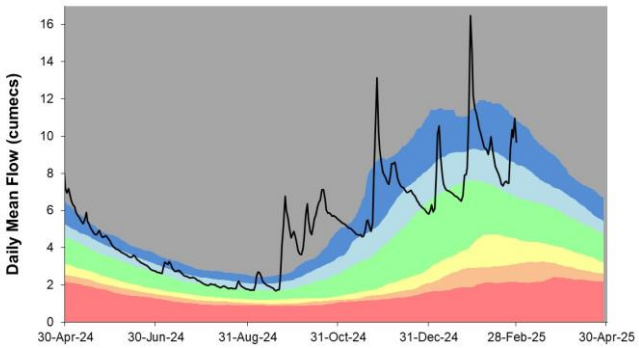
Bishops Hull, River Tone
Ranking used data from 01/02/1961 to 31/12/2022



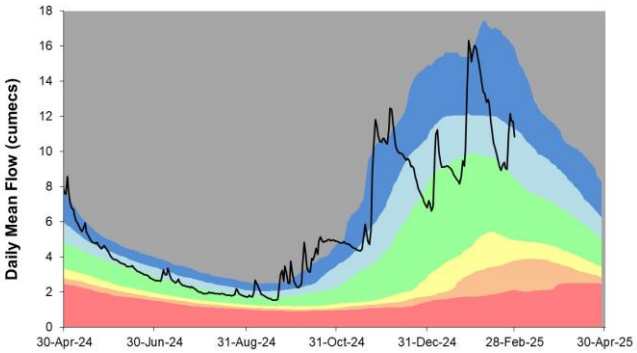
Beggearn Huish, Washford River
Ranking used data from 01/01/1967 to 31/12/2022



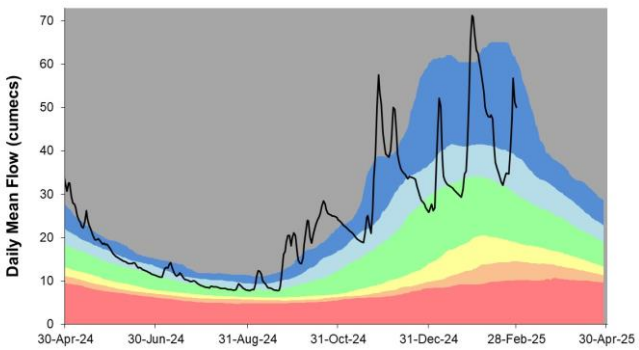
Amesbury, Upper Hampshire Avon
Ranking used data from 01/02/1965 to 31/12/2022



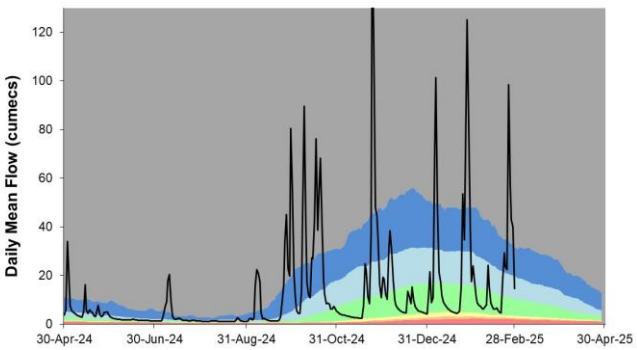
South Newton, River Wylye
Ranking used data from 01/01/1967 to 31/12/2022

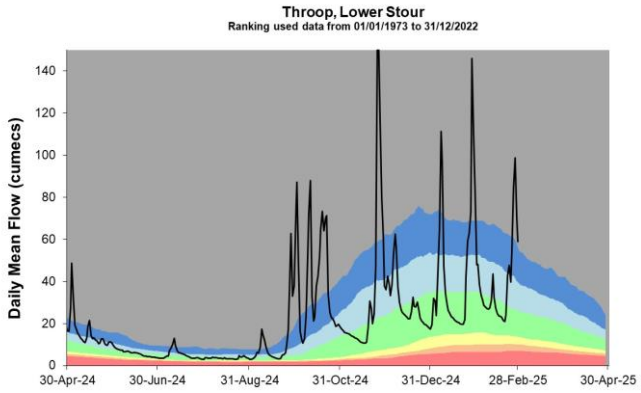


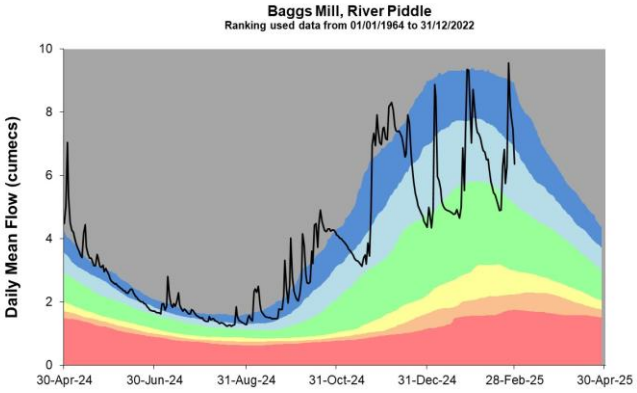
East Mills Combined, Middle Hampshire Avon
Ranking used data from 01/11/1965 to 31/12/2022

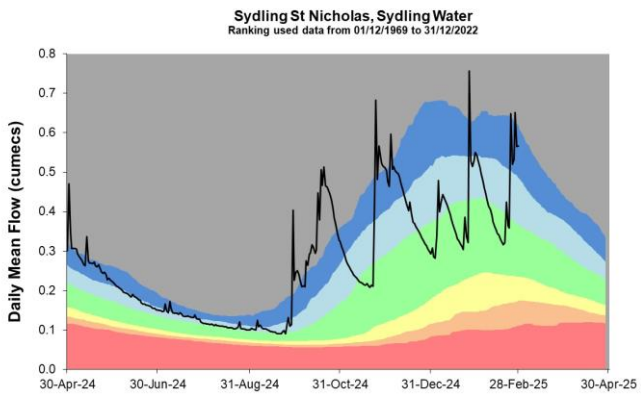


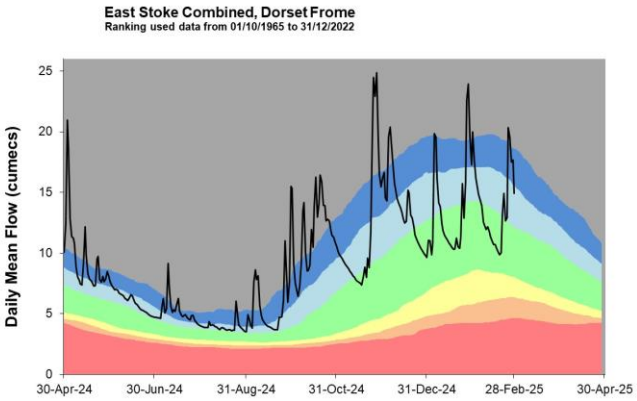
Hammoon, Middle Stour
Ranking used data from 01/03/1968 to 31/12/2022

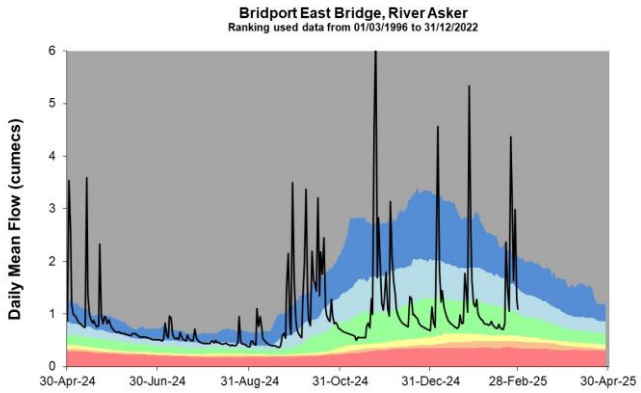










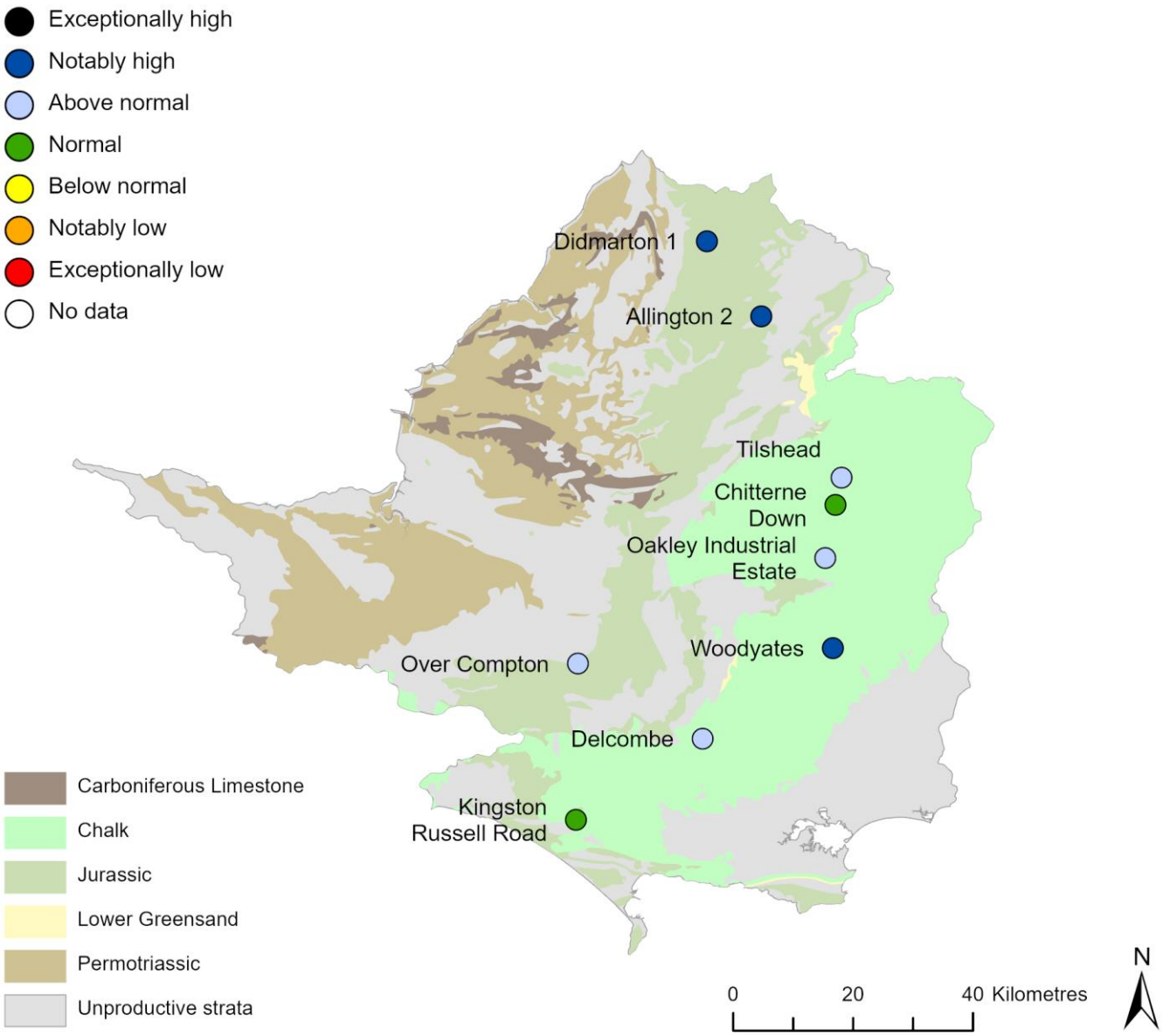


Source: Environment Agency, 2025. The Dorset Stour at Throop and Dorset Frome at East Stoke Combined should be treated with caution due to data issues.

5 Groundwater levels

5.1 Groundwater levels map

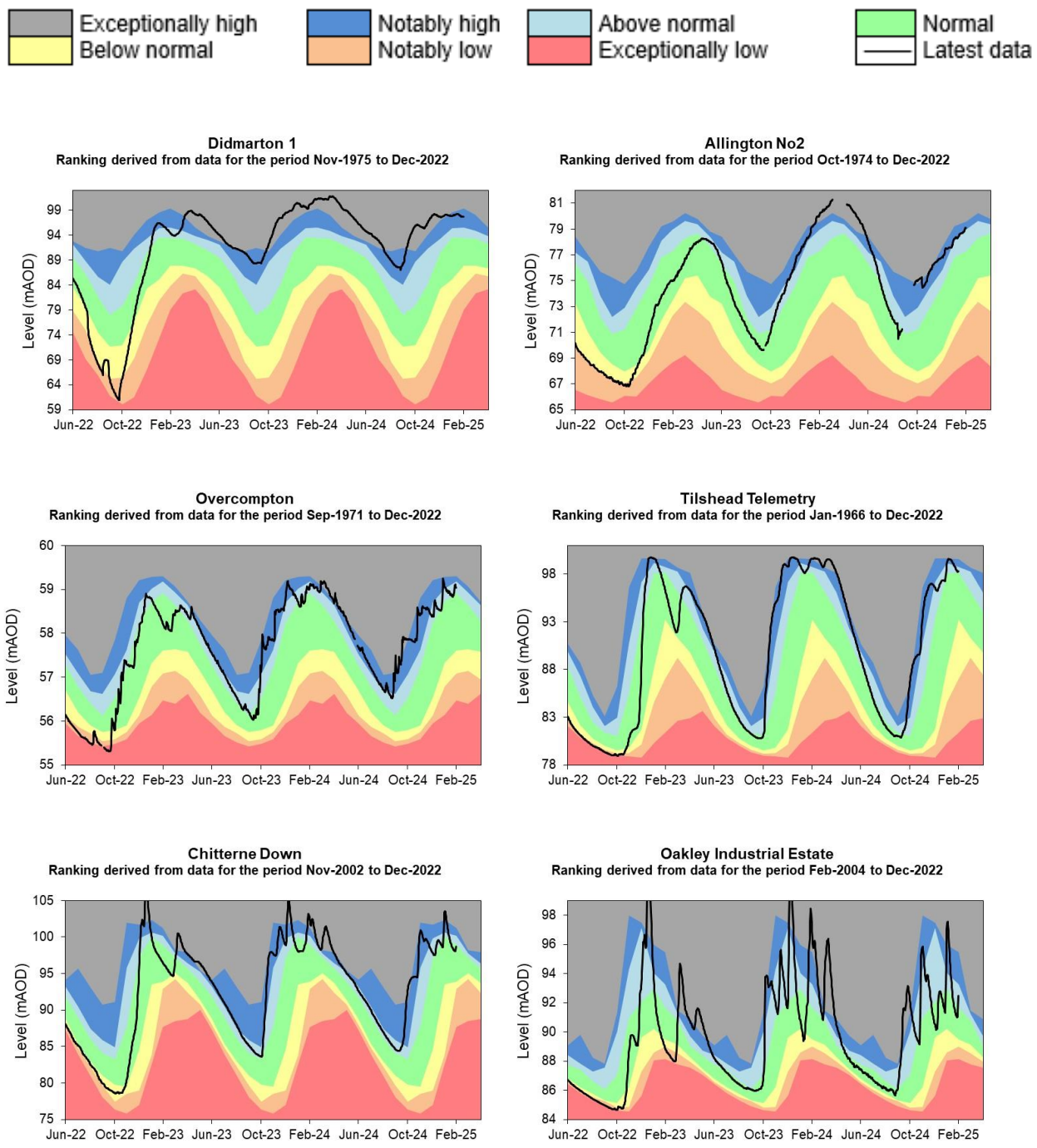
Figure 5.1: Groundwater levels for indicator sites at the end of February 2025, classed relative to an analysis of respective historic February levels. Table available in the appendices with detailed information.

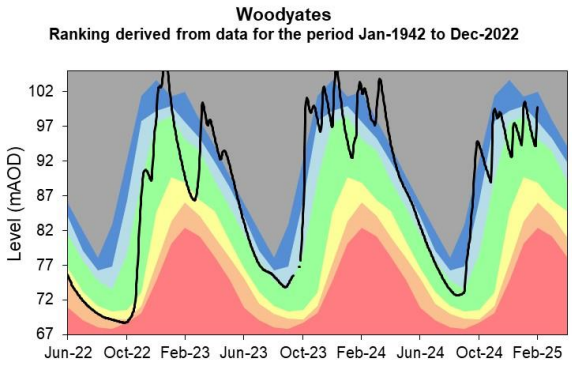


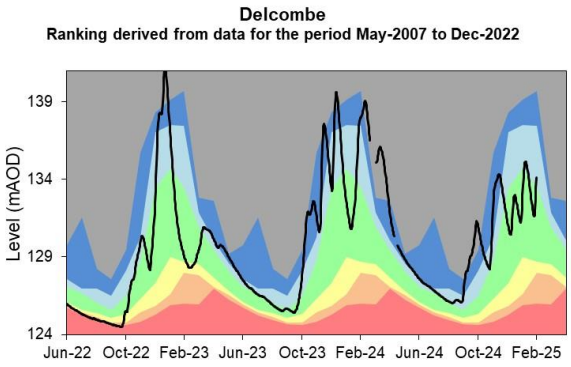
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025. Allington should be treated with caution due to data issues.

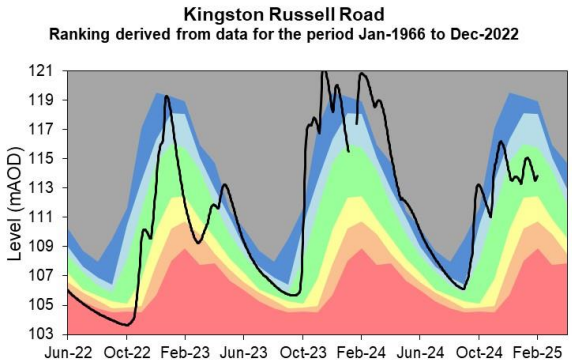
5.2 Groundwater level charts

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.





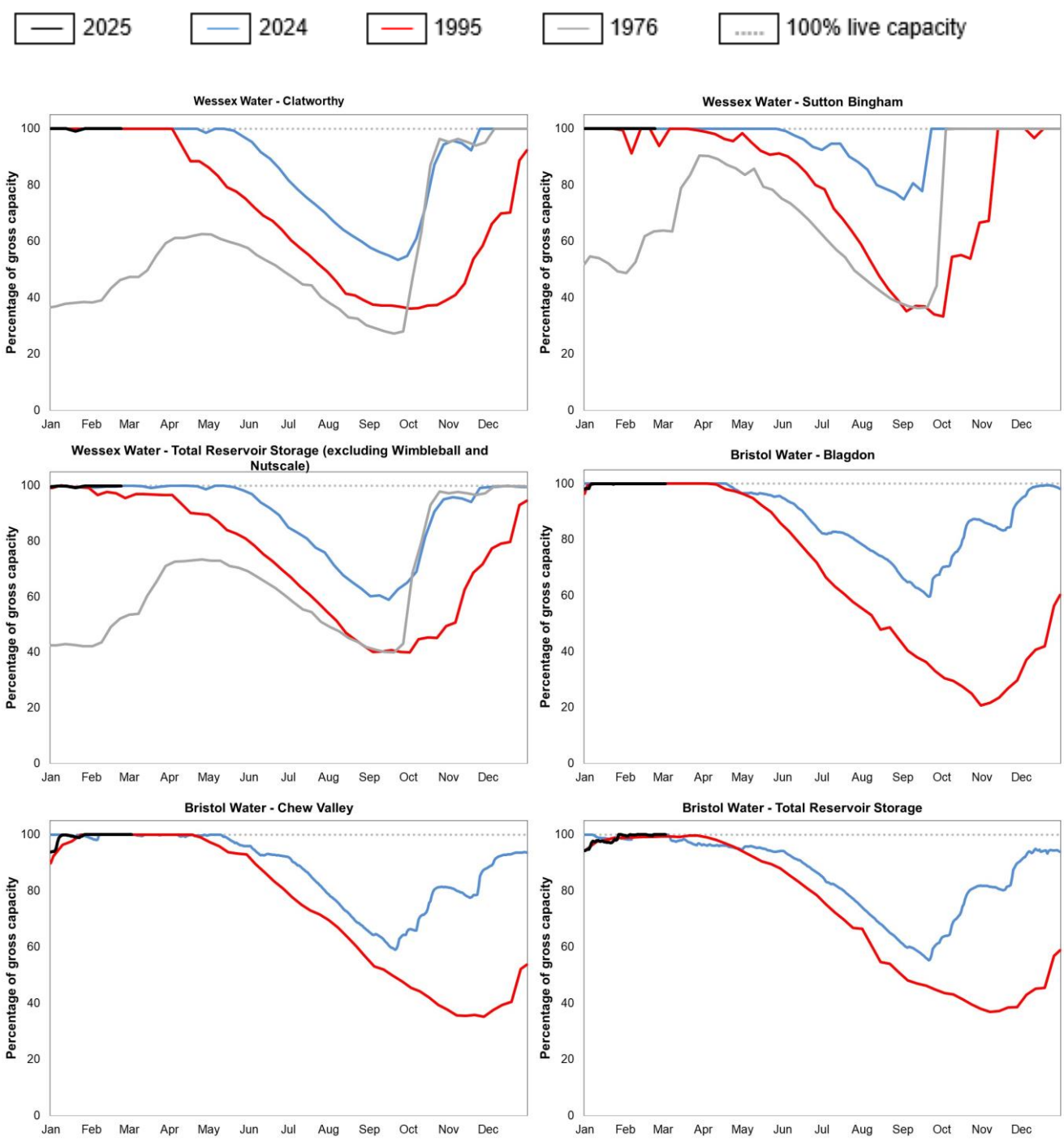




Source: Environment Agency, 2025. Allington should be treated with caution due to data issues.

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 February

Area	Number of fluvial flood alerts in February	Number of coastal flood alerts in February	Number of groundwater flood alerts in February
North Wessex	16	1	0
South Wessex	22	0	0*

*3 groundwater flood alerts issued prior to February remained in force through part of the month

7.2 Flood warnings

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

Area	Number of fluvial flood warnings in February	Number of coastal flood warnings in February	Number of groundwater flood warnings in February
North Wessex	4	0	0
South Wessex	15	0	1*

*4 groundwater flood warnings issued prior to February remained in force through part of the month

7.3 Severe flood warnings

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

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

8 Stream support

8.1 Sites providing stream support

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

Catchment	River	Stream support site	Gauging station	End of February 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 February.

Catchment	Number of licences at restrict at the end of February	Number of licences at cease at the end of February
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	Feb 2025 rainfall % of long term average 1961 to 1990	Feb 2025 band	Dec 2024 to February cumulative band	Sep 2024 to February cumulative band	Mar 2024 to February cumulative band
Axe	112	Normal	Normal	Notably high	Notably high
Brue	112	Normal	Normal	Exceptionally high	Notably high
Little Avon	98	Normal	Normal	Notably high	Notably high
Lower Bristol Avon And Bristol Frome	109	Normal	Normal	Notably high	Notably high
Lower Dorset Stour And River Crane	109	Normal	Normal	Notably high	Notably high
Lower Hampshire Avon	103	Normal	Normal	Above normal	Notably high
Mendips And River Chew	122	Normal	Normal	Notably high	Notably high
Middle And Upper Bristol Avon	123	Normal	Normal	Exceptionally high	Notably high
Middle Dorset Stour	116	Normal	Normal	Notably high	Notably high

Middle Hampshire Avon	126	Normal	Normal	Notably high	Notably high
Parrett	114	Normal	Normal	Notably high	Notably high
Poole Harbour And Purbeck	100	Normal	Normal	Notably high	Notably high
River Bourne	141	Above Normal	Above normal	Exceptionally high	Exceptionally high
River Frome	118	Normal	Normal	Notably high	Exceptionally high
River Piddle	118	Normal	Normal	Notably high	Exceptionally high
Tone	97	Normal	Normal	Notably high	Notably high
Upper Dorset Stour	129	Normal	Normal	Notably high	Exceptionally high
Upper Hampshire Avon	141	Above Normal	Above normal	Exceptionally high	Exceptionally high
West Dorset Streams	118	Normal	Normal	Notably high	Exceptionally high
West Somerset Streams	86	Normal	Normal	Above normal	Above normal
Wylye And Nadder	132	Above Normal	Normal	Exceptionally high	Exceptionally high

Yeo And Kenn	105	Normal	Normal	Notably high	Above normal

11.2 River flows table

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

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

11.3 Groundwater table

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