Monthly water situation report: Solent and South Downs Area

Summary - July 2026

Solent and South Downs (SSD) had well below average rainfall in July, receiving 1% (0.7mm) of long term average (LTA) of 55.3mm. Monthly mean river flows decreased in July at all indicator sites across SSD, and ranged from exceptionally low to normal. Groundwater levels at all sites continue to recede and ranged from notably low to above normal in July. Soils in all the hydrological areas ended the month drier than average for July. End of month reservoir stocks decreased and were below average at Ardingly Reservoir (Ouse) and at Arlington Reservoir (Cuckmere).

1.1 Rainfall

SSD had well below average rainfall in July, receiving 1% (0.7mm) of the LTA (55.3mm). The lack of rain affected all hydrological areas. East Sussex Chalk areal unit, which received the most rainfall in July, recorded 1.5mm rain; this represents 3% of LTA (57.3mm). The Isle of Wight and the Sussex Coast areal units received the lowest rainfall with only 0.1mm for the whole month, which is less than 1% of the LTA.

In July there were only five wet days, when 1 mm or more of precipitation was recorded at specific rain gauges. These days were 2, 4, 25, 26 and 30 July. The highest daily rainfall totals were recorded at below locations, but even these were below 2mm:

- 1.9mm was recorded at Hastings Newgate, in the Pevensey Levels hydrological area on 26 July
- 1.9mm was recorded at Middle Wallop, west of Winchester, in the Test Chalk hydrological area, on 30 July

For the East Sussex Chalk hydrological area, the monthly rainfall total was the second lowest on record. In the rest of the hydrological areas, the July monthly rainfall totals were the lowest on record. For the SSD as a whole, the July rainfall total was the lowest on record.

The April to July 4-month period has been the fifth driest for the Test Chalk and for the East Sussex Chalk areal unit. It was also the eigth driest on record for the East Hampshire Chalk areal unit and the West Sussex Chalk areal unit.

The March to July 5-month period has been the third driest for the Cuckmere and for the Pevensey Levels areal unit. It was also the fourth driest on record for the Sussex Coast areal unit and the fifth driest for the Ouse areal unit.

All rainfall statistics are based on records going back to 1871.

1.2 Soil moisture deficit and recharge

Soils in all the hydrological areas ended the month drier than average for July due to the lack of rainfall. Soil moisture deficits (SMDs) continue to rise and are higher than the LTA for the end of July for SSD. On 31 July SMD ranged between 159mm and 173mm in the hydrological areas which is well above the LTA of 80mm to 94mm. The combination of very high SMDs and very low rainfall resulted in no recharge across the SSD area.

1.3 River flows

Monthly mean river flows decreased at all indicator sites across SSD, and ranged from exceptionally low to normal in July.

Flows at three sites were classed exceptionally low: on the River Lymington at the Brockenhurst, on the River Wallington at North Fareham and on the River Arun at Alfoldean. These rivers are in predominantly clay catchments with little groundwater input and the flows ranged between 11% and 32% of the LTA.

Flows at three sites were classed below normal: on the River Test at Broadlands, on the River Adur at Sakeham and on the River Cuckmere at Cowbeech. The flows at these sites ranged between 41% and 76% of the LTA.

Flows at the rest of the indicator sites were classed as normal and ranged between 85% and 95% of the LTA. Flows were normal on the River Test at Chilbolton, on the Itchen at Allbrook and Highbridge, on the Meon at Mislingford, on the Medina at Blackwater and on the Rother at Iping Mill. These sites are in predominantly groundwater fed catchments, which means rivers are gaining water from the underlying geology. Flows were also classed as normal on the Ouse at Goldbridge, at this site the augmentation and compensation water releases from the Ardingly reservoir impact flows.

The monthly mean flows for July were the second lowest on record for the River Arun at Alfoldean since 1970. Flows were the third lowest for July for the Wallington at North Fareham and the Lymington at the Brockenhurst, in a record going back to 1976 and 1960, respectively.

1.4 Groundwater levels

End of month groundwater levels for July ranged from notably low to above normal.

Groundwater levels at all sites continue to recede in line with the expected trend for this time of the year. However, reflecting the legacy of the high winter storage, groundwater levels remained healthy at the majority of the indictor sites, despite the dry weather over the recent months.
The majority of the report sites ended July with groundwater levels categorised as normal.
End of month groundwater levels were above normal at Preston Candover (East Hampshire Chalk) and at Youngwoods Copse (Isle of Wight).
End of month groundwater levels were below normal at Carisbrooke Castle (Isle of Wight), at Chilgrove (West Sussex Chalk) and at Houndean Bottom (East Sussex Chalk). End of month groundwater level was notably low at Beeding Hill (West Sussex Chalk).
The groundwater levels were the ninth lowest on record for July at Carisbrooke Castle (Isle of Wight), at Harting Common (Western Rother Greensand), at Beeding Hill (West Sussex Chalk) and at Houndean Bottom (East Sussex Chalk) since 1977, 1984, 1979 and 1977, respectively.

1.5 Reservoir stocks

End of month reservoir stocks decreased and were below average at Ardingly Reservoir (Ouse) and at Arlington Reservoir (Cuckmere). Ardingly Reservoir (Ouse) was at 61.22% of total capacity (LTA 82%) and Arlington Reservoir (Cuckmere) was at 61.4% of total capacity (LTA 73.35%).

1.6 Environmental impact

At the beginning July, there were 12 licence restrictions in place, and by the end of the month the number of restrictions increased to 20. Table available in the appendices for information.

Arun & Western Streams:

- At the beginning of the month there were 3 restrictions in place: one on the River Lod, one on the Western Rother, and one on the River Arun.
- From the second week 3 additional hands off flow (HoF) were triggered, 2 on the River Arun, and one on the Pagham Rife.

All 6 restrictions were in place at the end of the month.

Cuckmere & Pevensey Levels:

- At the beginning of the month there was a restriction in place on abstraction rates for one Public Water Supply (PWS) licence on the Wallers Haven.
- From the second week of July new condition triggered for a PWS on the River Cuckmere.

Both were in place at the end of the month.

East Hampshire:

- There was one HoF in place throughout the month for a licence on the River Meon.

Isle of Wight:

- At the beginning of July there were 2 HoFs in place, both on the River Medina. The PWS Media-Yar transfer scheme is in operation since 23 June.
- From the second week of July 3 additional HoFs were triggered on the River Medina.

All 5 restrictions and the transfer scheme were in place at the end of the month.

New Forest:

- There were four HoFs in place throughout the month, 3 on the Walkford Brook and one on the River Lymington.

Test and Itchen:

- There was no restriction in place in the first part of July.
- From the last week of July there was a new reduced abstraction rate condition triggered on the river Test.

No flood alerts or flood warnings were issued in July.

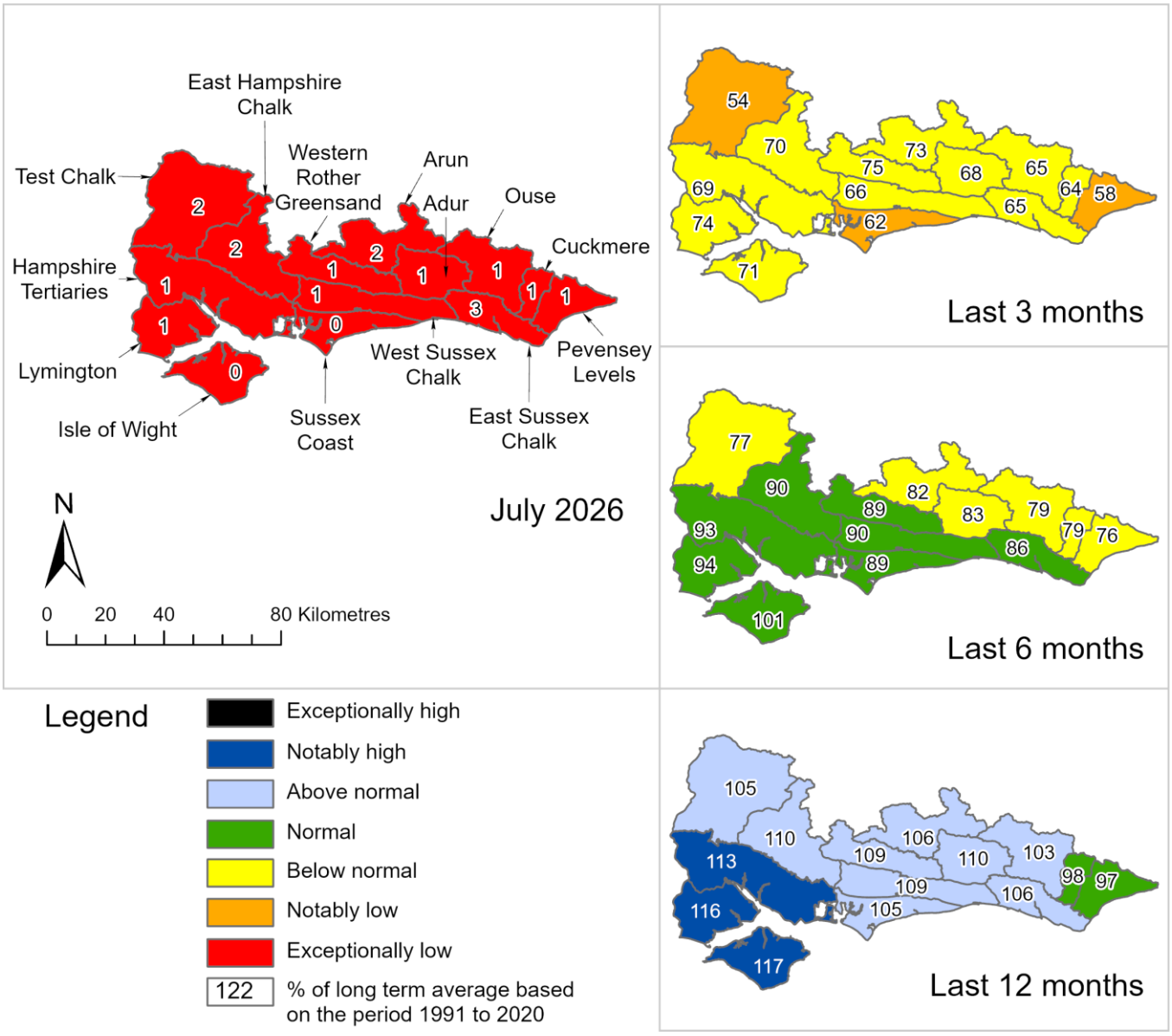
Author: Groundwater, Hydrology and Contaminated Land Team, Solent and South Downs Area

Contact Details: 03708 506 506, HydrologySSD@environment-agency.gov.uk

2. Rainfall

2.1 Rainfall map

Figure 1.1: Total rainfall for hydrological areas for the current month (up to 31 July 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.

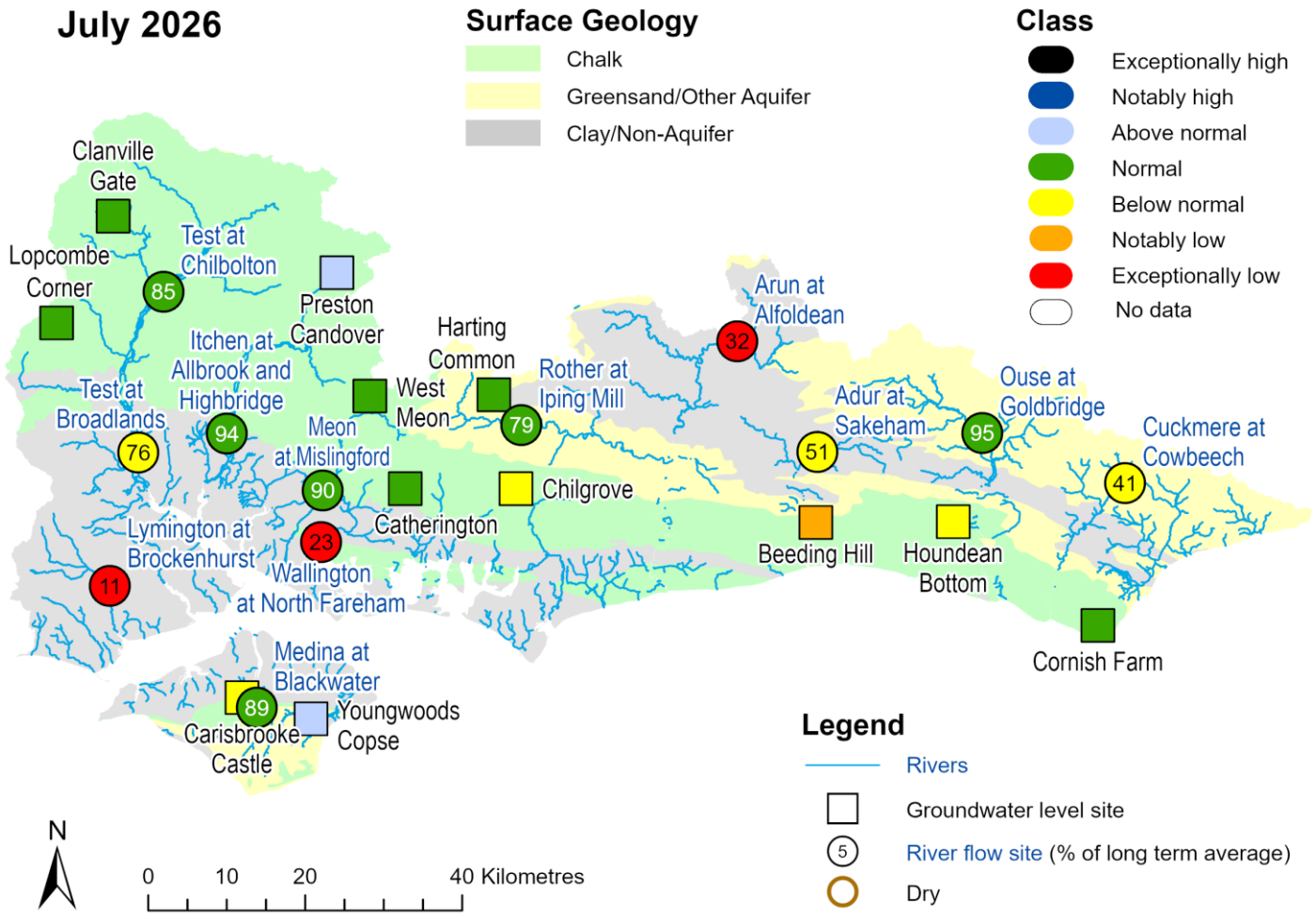


Rainfall data for Jan 2025 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, AC0000807064, 2026). Rainfall data prior to Jan 2025, extracted from Met Office HadUK 1km gridded rainfall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

3 River flows and Groundwater levels

3.1 River flows and Groundwater level map

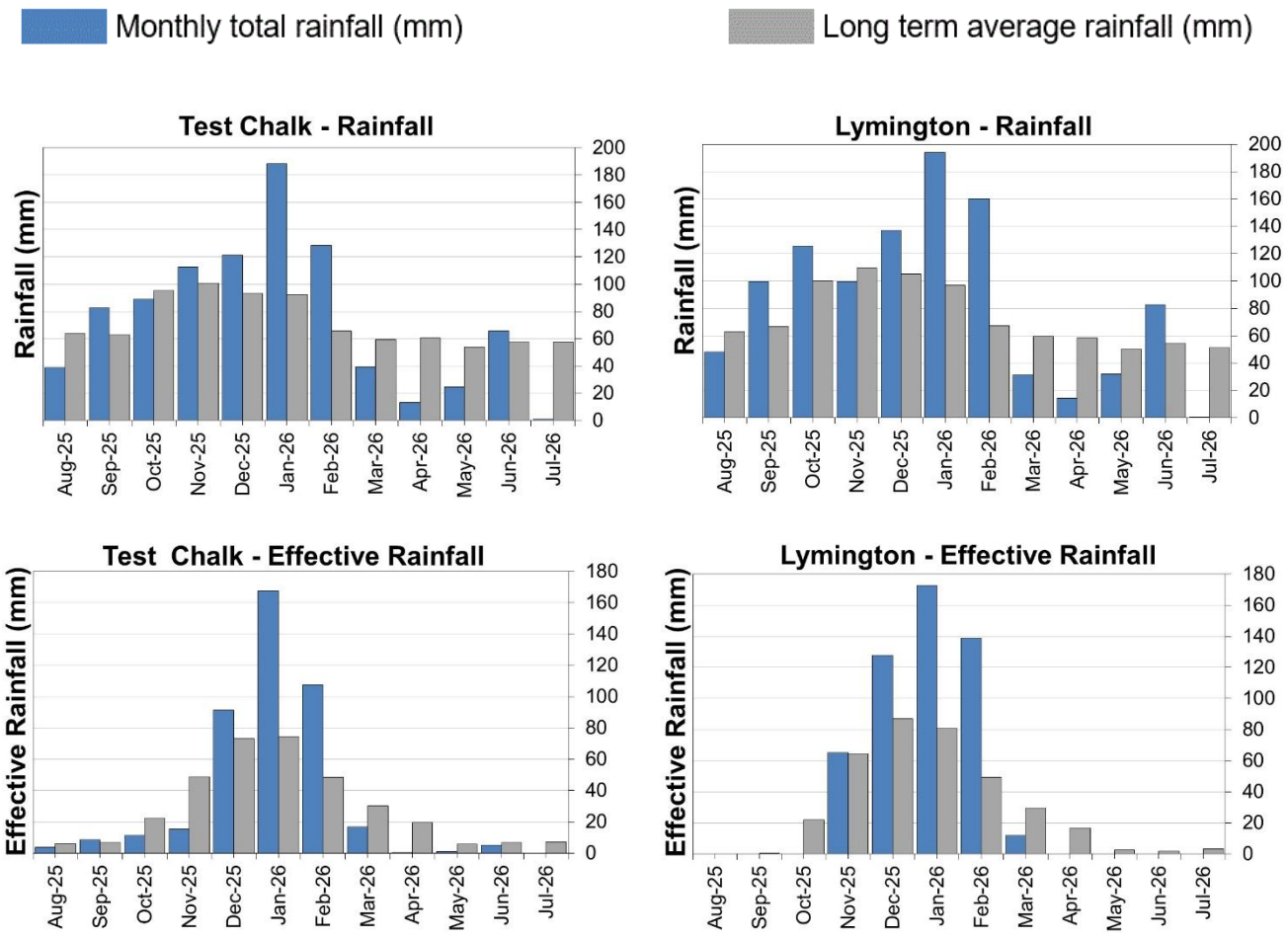
Figure 3.1: Monthly mean river flow and end of month groundwater levels values at our indicator sites for July 2026, expressed as a percentage of the respective long term average and classed relative to an analysis of historic July monthly means. Table available in the appendices with detailed information.



4 West Hampshire

4.1 West Hampshire Rainfall and effective rainfall charts

Figure 4.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.

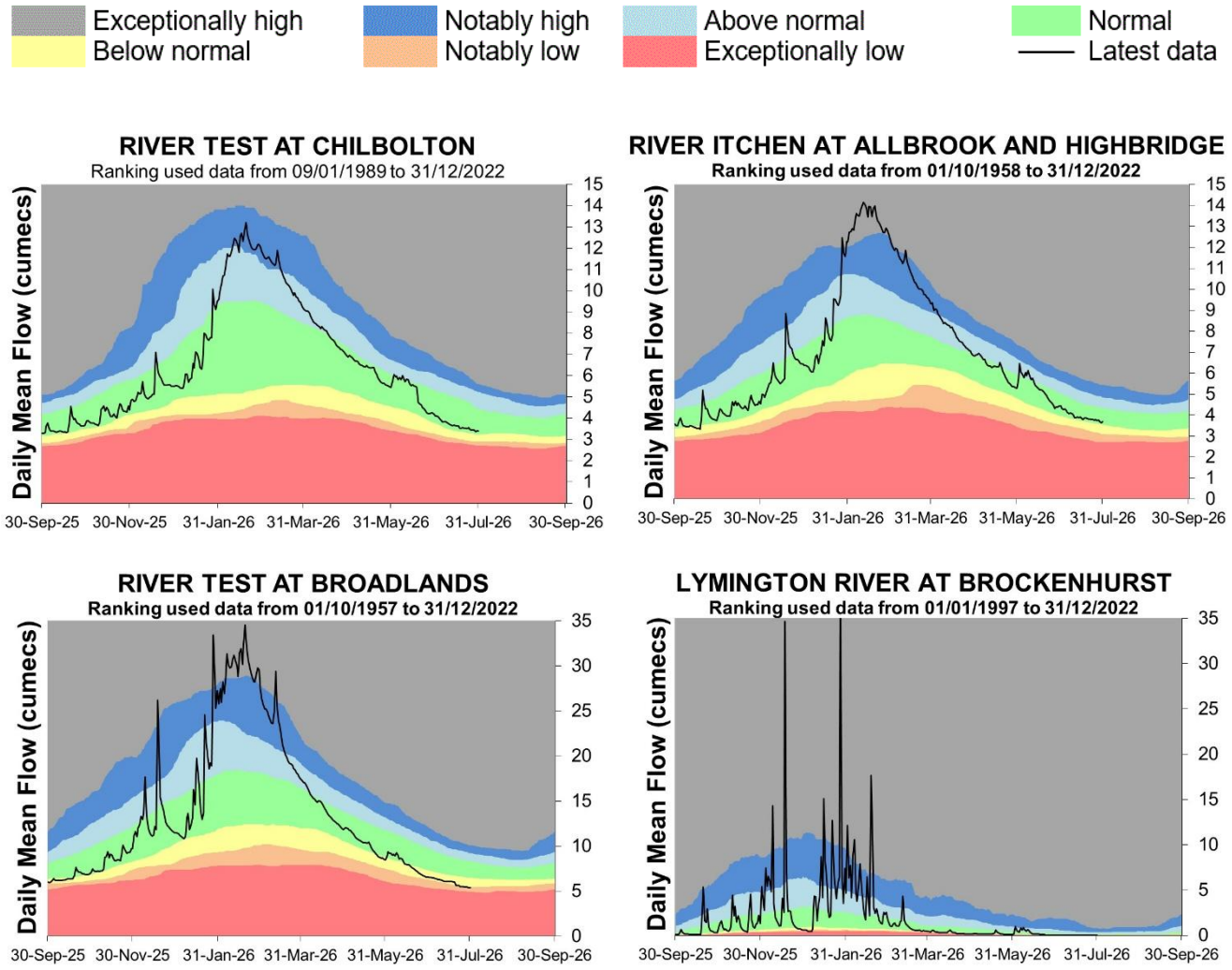


Rainfall data for January 2025 onwards, extracted from Environment Agency (EA) 1km gridded rainfall dataset derived from EA intensity rain gauges. (Source: EA. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived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

EA effective rainfall data (Source: EA Soil Moisture Model 2026).

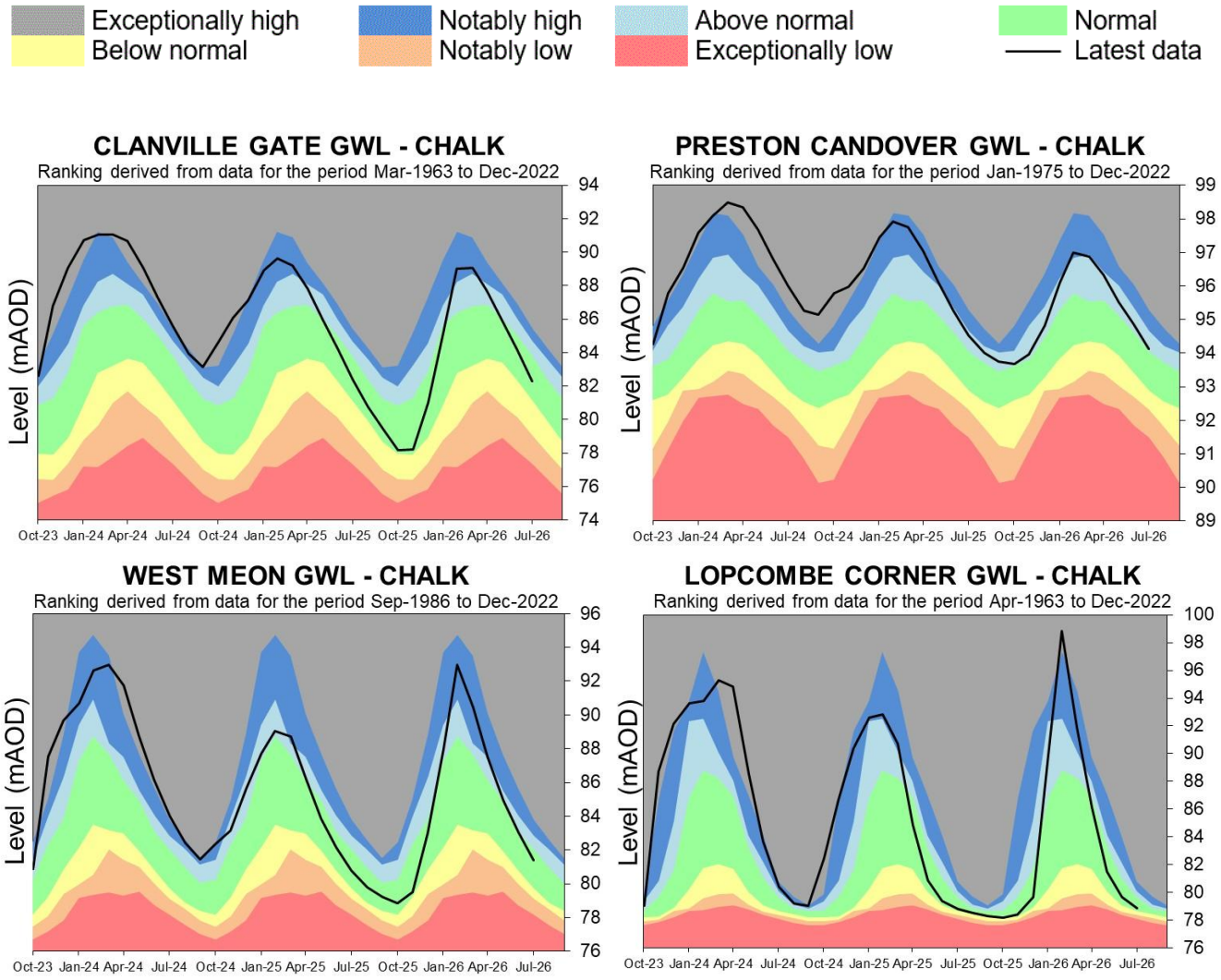
4.2 West Hampshire River flow charts

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



4.3 West Hampshire Groundwater level charts

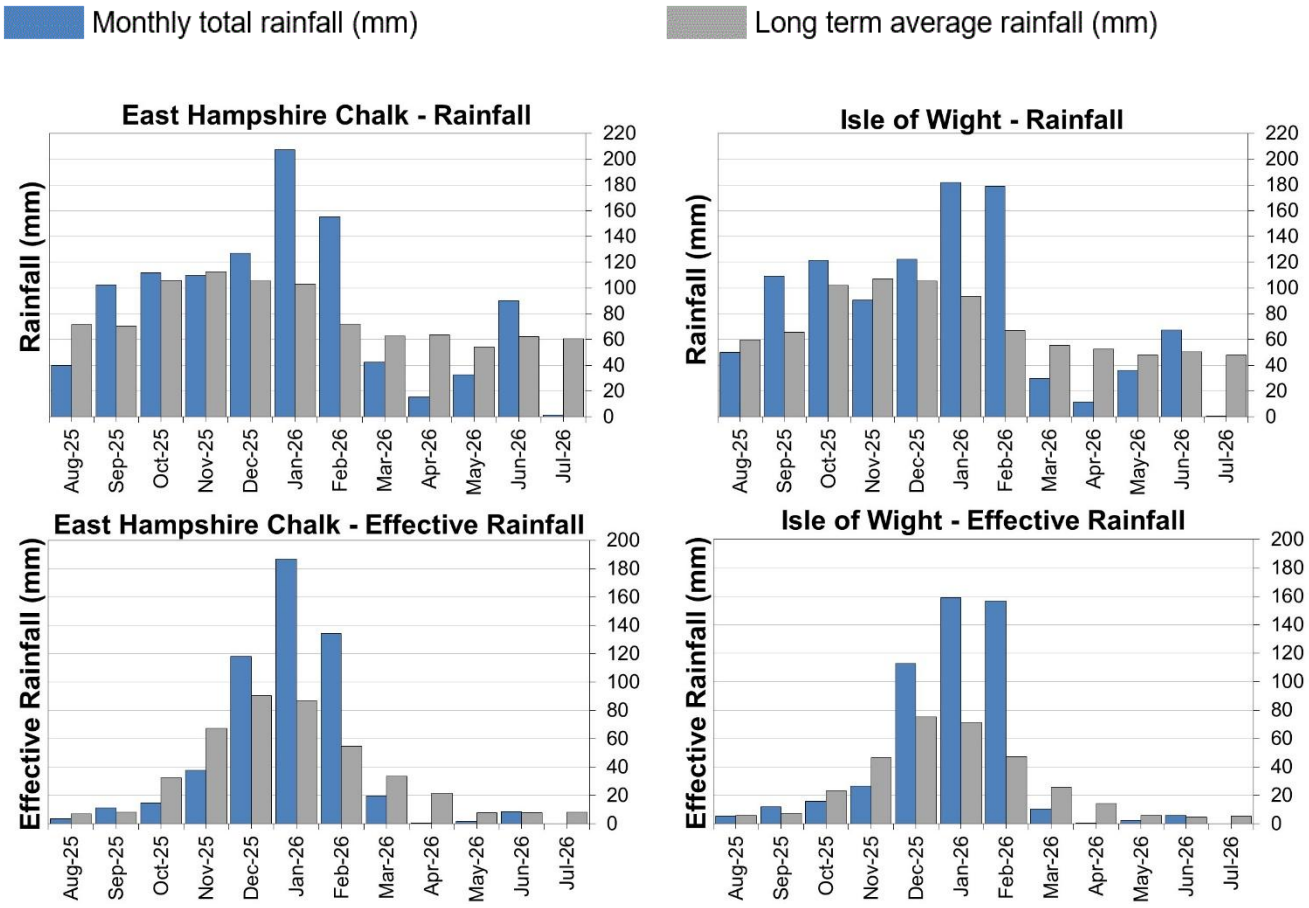
Figure 4.3: End of month groundwater levels at index groundwater level sites for major aquifers. 34 months compared to an analysis of historic end of month levels.



5 East Hampshire and Isle of Wight

5.1 East Hampshire and Isle of Wight Rainfall and Effective rainfall charts

Figure 5.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.

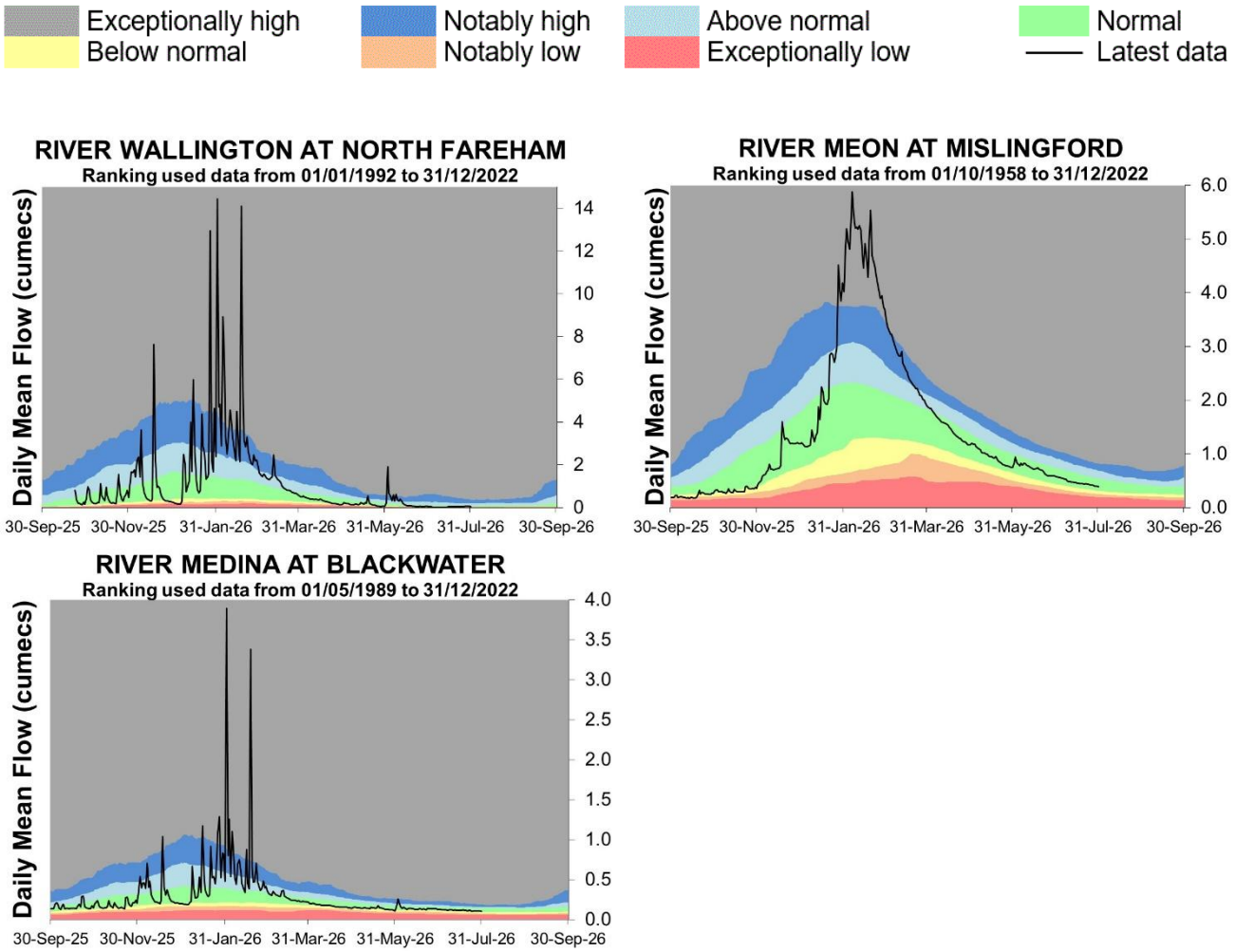


Rainfall data for January 2025 onwards, extracted from Environment Agency (EA) 1km gridded rainfall dataset derived from EA intensity rain gauges. (Source: EA. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived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

EA effective rainfall data (Source: EA Soil Moisture Model 2026).

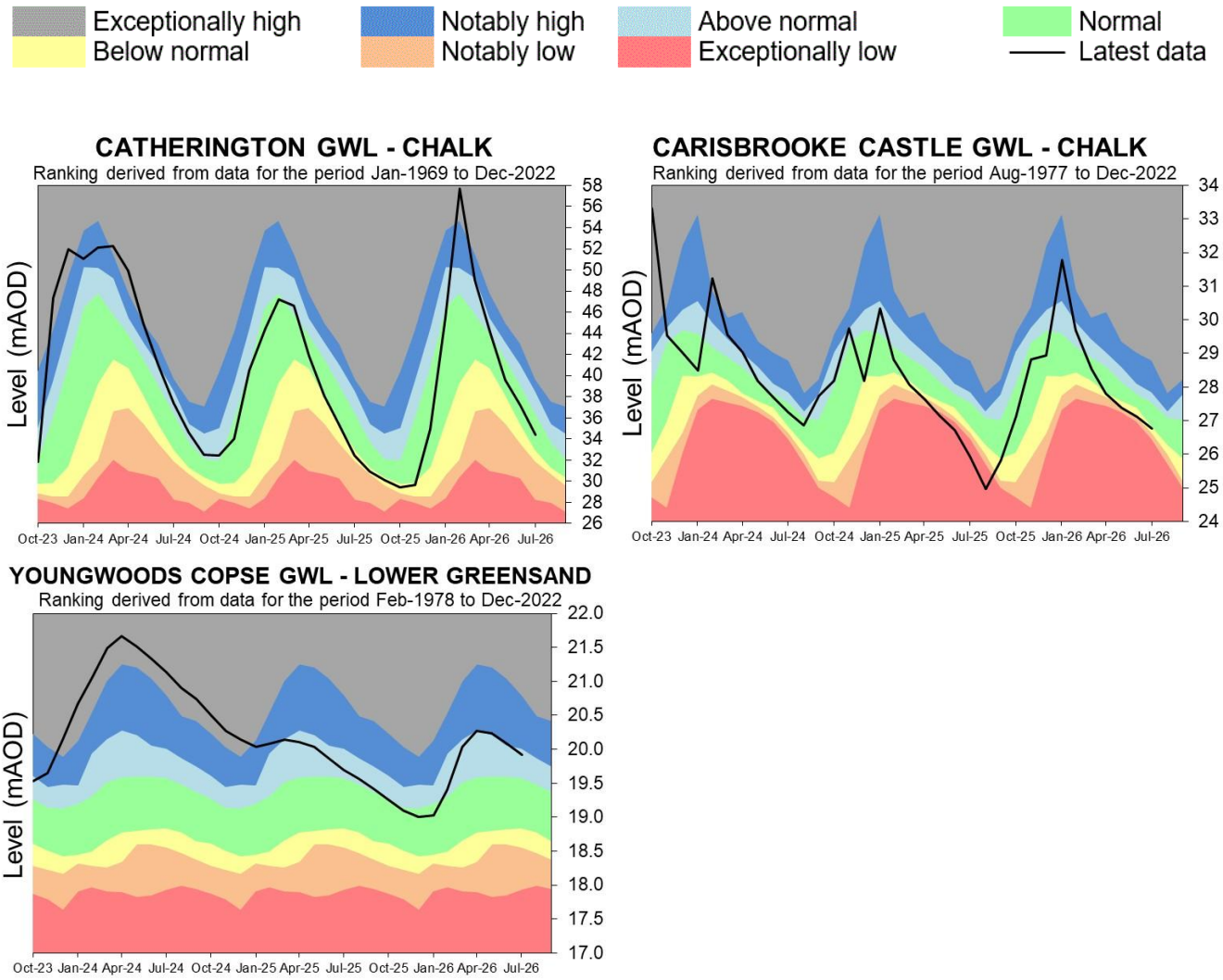
5.2 East Hampshire and Isle of Wight River flow charts

Figure 5.2 Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows.



5.3 East Hampshire and Isle of Wight Groundwater level charts

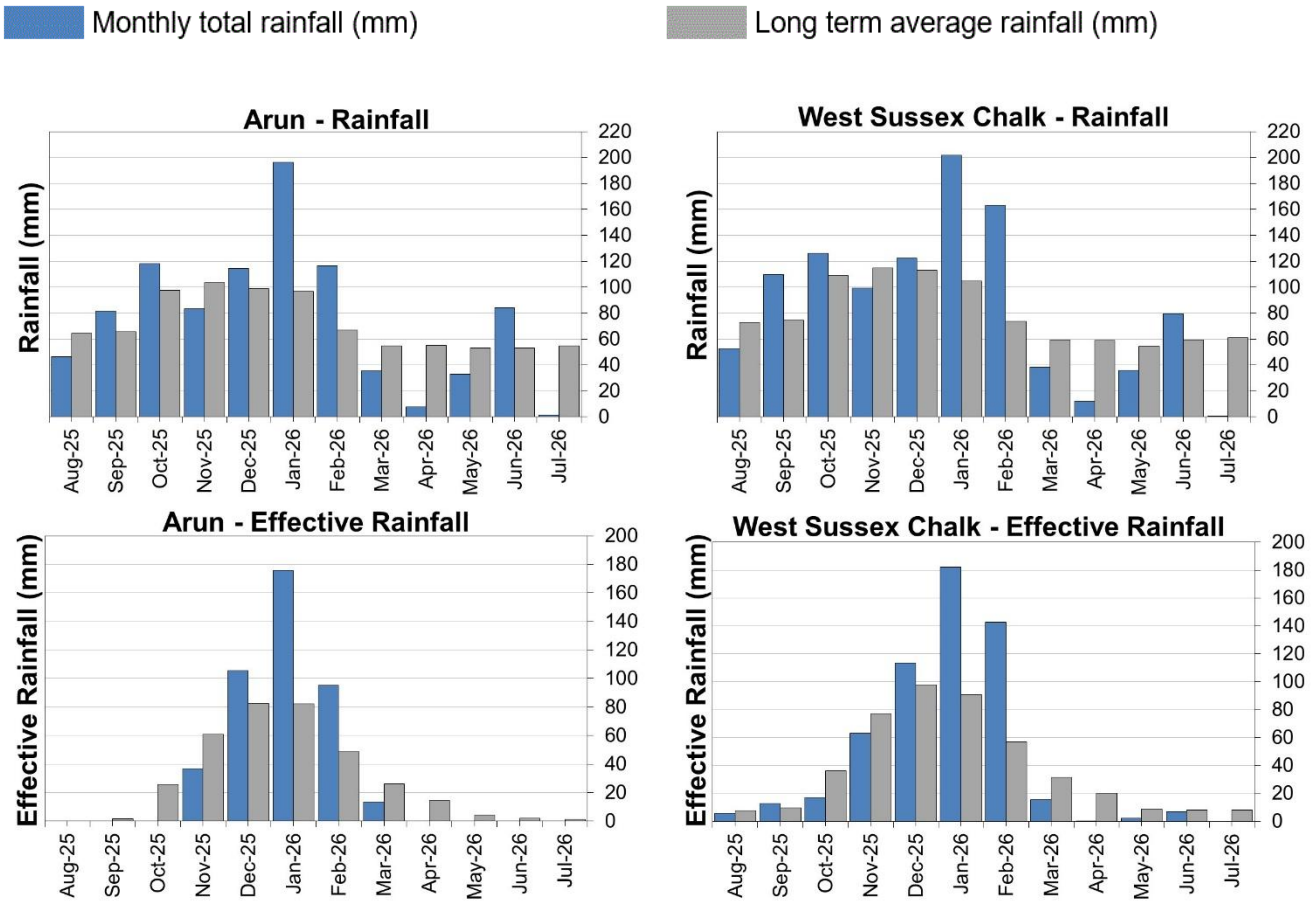
Figure 5.3: End of month groundwater levels at index groundwater level sites for major aquifers. 34 months compared to an analysis of historic end of month levels.



6 West Sussex

6.1 West Sussex Rainfall and Effective Rainfall charts

Figure 6.1: Monthly rainfall and effective rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average.

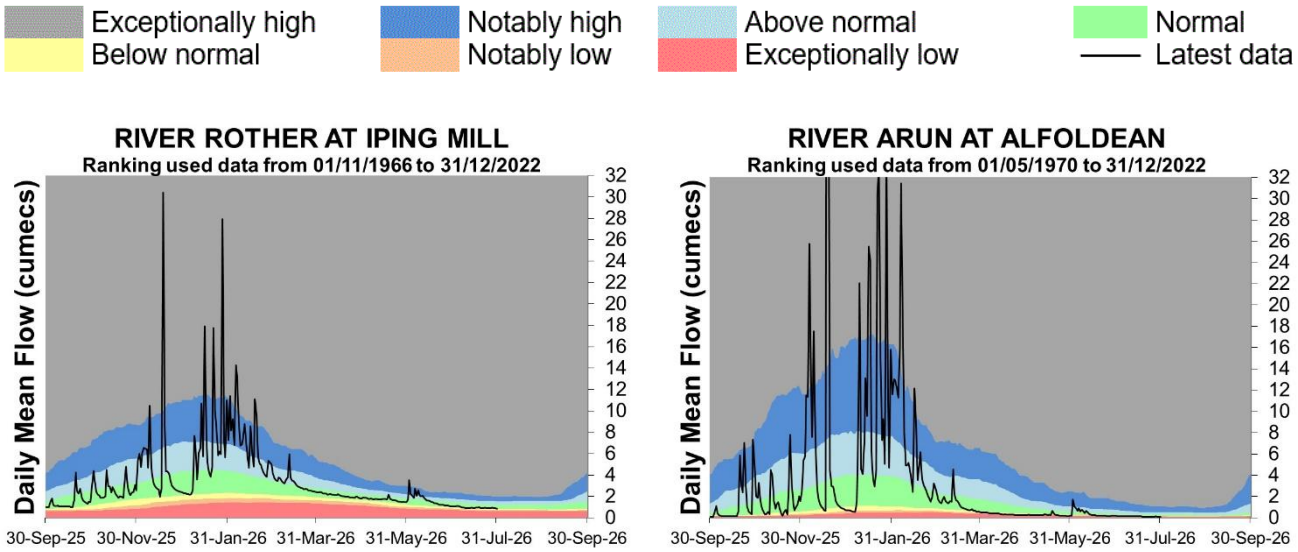


Rainfall data for January 2025 onwards, extracted from Environment Agency (EA) 1km gridded rainfall dataset derived from EA intensity rain gauges. (Source: EA. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived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

EA effective rainfall data (Source: EA Soil Moisture Model 2026).

6.2 West Sussex River flow charts

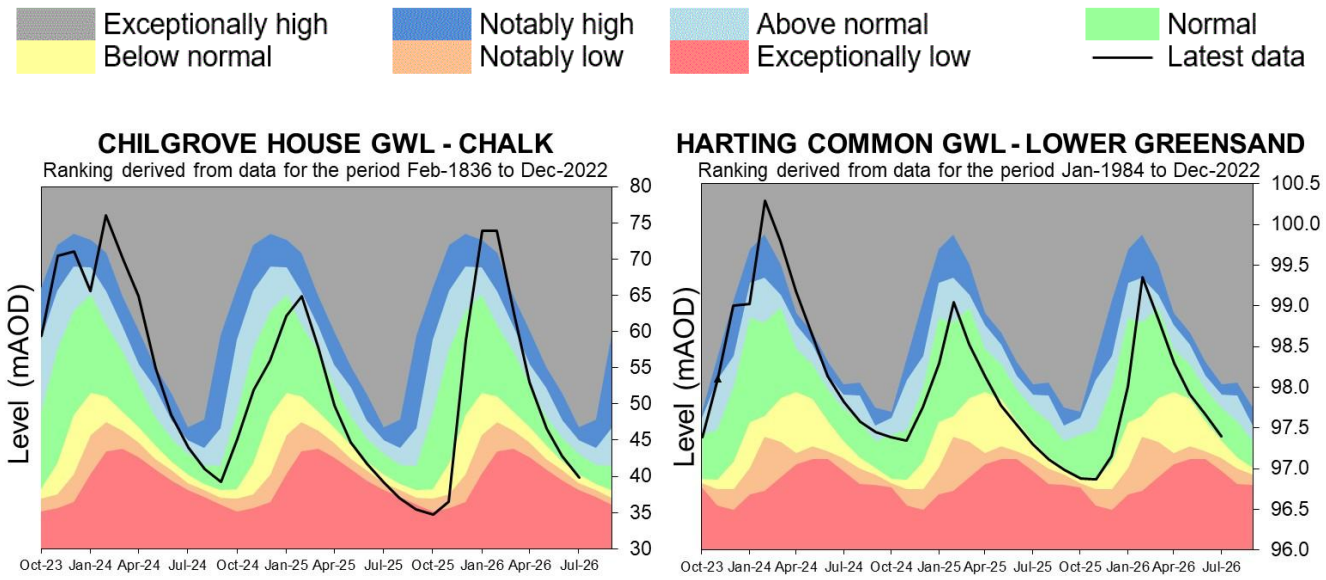
Figure 6.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows.



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

6.3 West Sussex Groundwater level charts

Figure 6.3: 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.

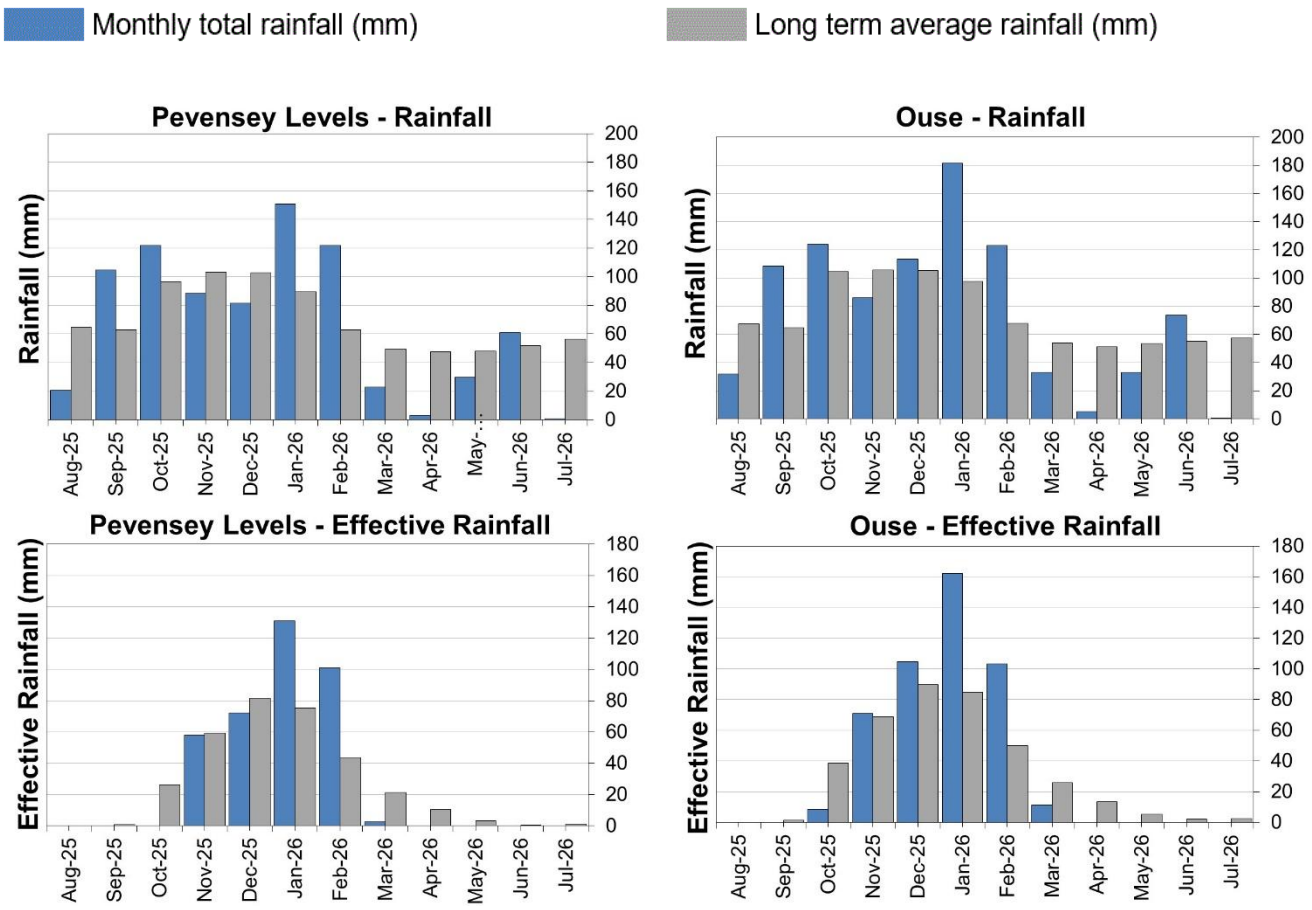


Source: Environment Agency, Crown copyright. All rights reserved. EA, AC0000807064, 2026.

7 East Sussex

7.1 East Sussex Rainfall and Effective Rainfall charts

Figure 7.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.

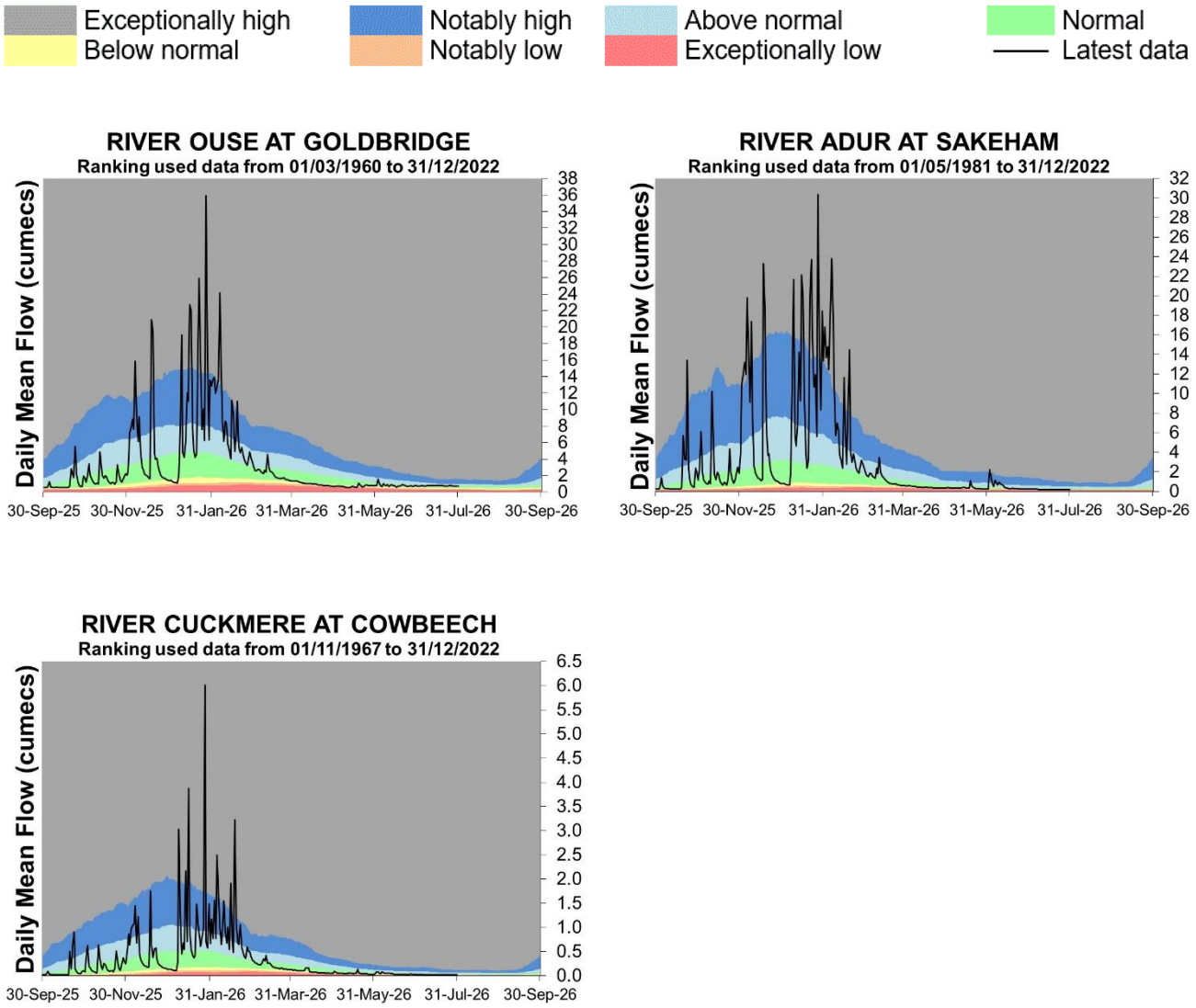


Rainfall data for January 2025 onwards, extracted from Environment Agency (EA) 1km gridded rainfall dataset derived from EA intensity rain gauges. (Source: EA. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived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

EA effective rainfall data (Source: EA Soil Moisture Model 2026).

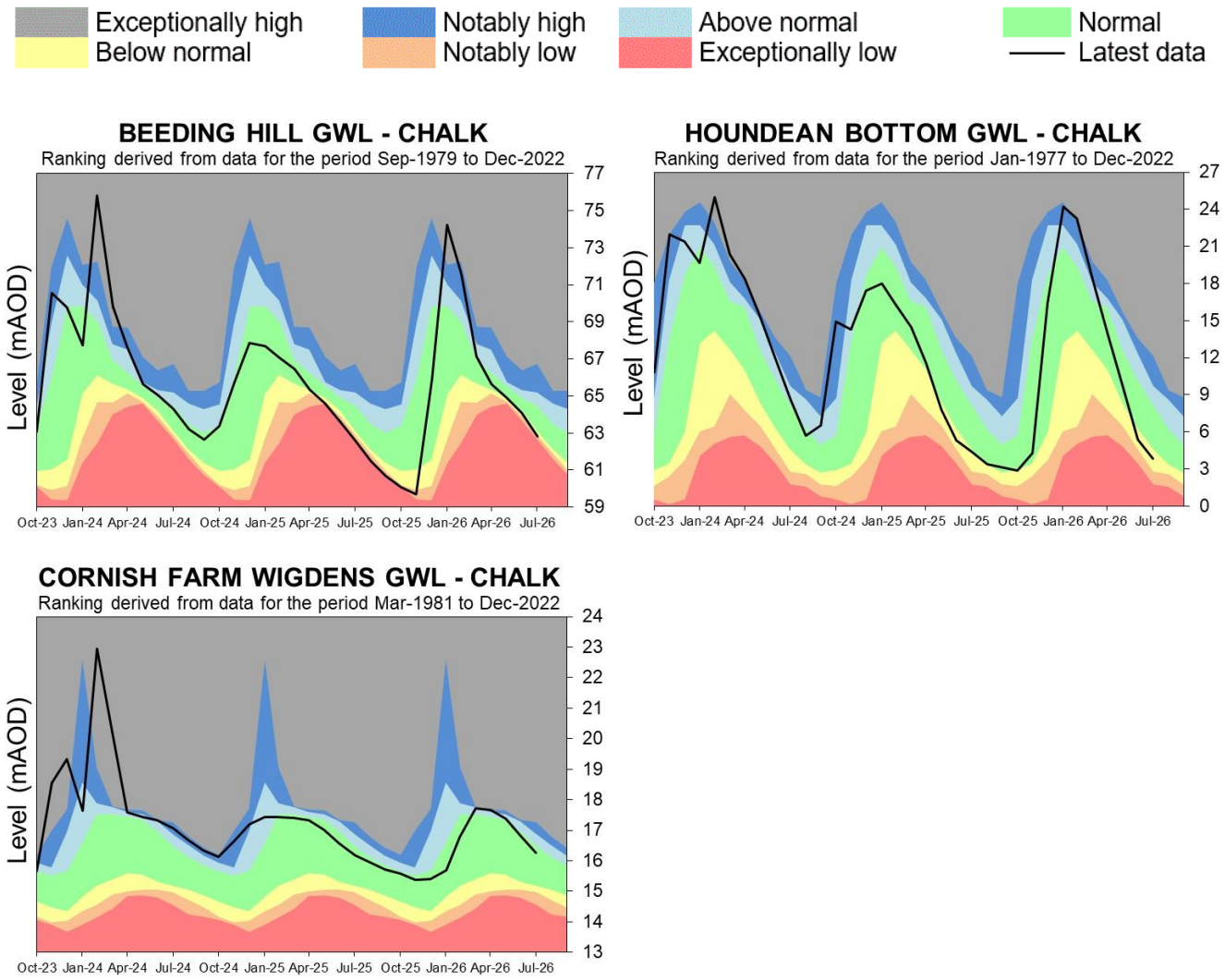
7.2 East Sussex River flow charts

Figure 7.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows.



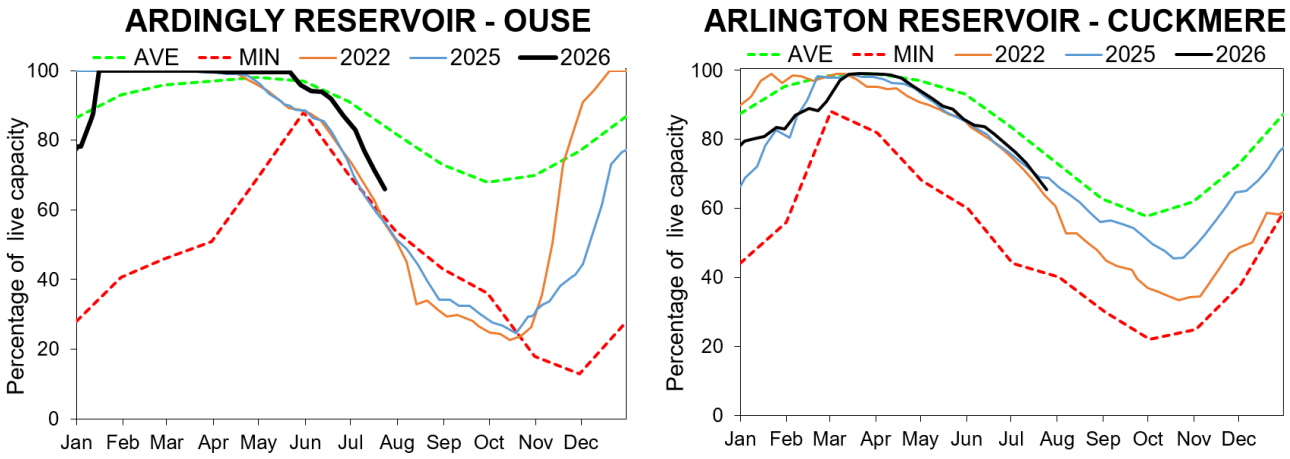
7.3 East Sussex Groundwater level charts

Figure 7.3: 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.



8 Reservoir stocks

Figure 8.1: End of month reservoir stocks compared to long term minimum and average stocks.



(Source: South East Water).

9 Glossary

9.1 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^3/s).

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 1 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).

9.2 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 Appendices

10.1 Rainfall, effective rainfall and soil moisture deficit table

Figure 10.1: This is areal rainfall, effective rainfall (percolation or runoff) and soil moisture deficit for the hydrological areas across the SSD. There may be significant variation within each area which must be considered when interpreting these data. When additional meteorological data is available estimates are revised which will affect the period totals in section 10.2

Hydrological area	Rainfall total (mm) July	Rainfall July as %LTA	Effective rainfall total (mm) July	Effective rainfall July as %LTA	Soil moisture deficit (SMD) July	SMD End of July LTA
Test Chalk	1.0	2%	0	0%	173	87
East Hampshire Chalk	1.2	2%	0	0%	162	84
West Sussex Chalk	0.6	1%	0	0%	160	83
East Sussex Chalk	1.5	3%	0	0%	160	86
Isle of Wight	0.1	0%	0	0%	167	94
Western Rother Greensand	0.8	1%	0	0%	159	84
Hampshire Tertiaries	0.4	1%	0	0%	167	88
Lymington	0.3	1%	0	0%	162	84
Sussex Coast	0.1	0%	0	0%	171	93
Arun	1.1	2%	0	0%	161	84
Adur	0.5	1%	0	0%	161	83
Ouse	0.4	1%	0	0%	159	80
Cuckmere	0.7	1%	0	0%	159	80
Pevensey Levels	0.7	1%	0	0%	163	85
SSD Average	0.7	1%	0	0%	163	85

Rainfall data for Jan 2025 onwards, 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 Jan 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

EA effective rainfall and soil moisture deficit data (Source EA Soil Moisture Model 2026).

10.2 Seasonal summary table of rainfall and effective rainfall

Summer season: 01/04/2026 to 30/09/2026

Hydrological area	Seasonal rainfall total (mm) April 2026 to July 2026	Seasonal rainfall as % LTA	Seasonal effective rainfall total (mm) April 2026 to July 2026	Seasonal effective rainfall as % LTA
Test Chalk	105	46%	7	17%
East Hampshire Chalk	140	58%	11	24%
West Sussex Chalk	128	55%	10	22%
East Sussex Chalk	111	52%	9	26%
Isle of Wight	115	58%	9	29%
Western Rother Greensand	144	61%	12	24%
Hampshire Tertiaries	122	57%	0	0%
Lymington	129	61%	0	0%
Sussex Coast	97	50%	0	0%
Arun	125	58%	0	0%
Adur	116	54%	0	0%
Ouse	112	52%	0	0%
Cuckmere	107	51%	0	0%
Pevensey Levels	94	46%	0	0%
SSD Average	117	54%	4	14%

Rainfall data for Jan 2025 onwards, 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 Jan 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

EA effective rainfall data (Source: EA Soil Moisture Model 2026).

10.3 Rainfall banding table

Hydrological area	July 2026 band	May 2026 to July 2026 cumulative band	February 2026 to July 2026 cumulative band	August 2025 to July 2026 cumulative band
Test Chalk	Exceptionally low	Notably low	Below normal	Above normal
East Hampshire Chalk	Exceptionally low	Below normal	Normal	Above normal
West Sussex Chalk	Exceptionally low	Below normal	Normal	Above normal
East Sussex Chalk	Exceptionally low	Below normal	Normal	Above normal
Isle of Wight	Exceptionally low	Below normal	Normal	Notably high
Western Rother Greensand	Exceptionally low	Below normal	Normal	Above normal
Hampshire Tertiaries	Exceptionally low	Below normal	Normal	Notably high
Lymington	Exceptionally low	Below normal	Normal	Notably high
Sussex Coast	Exceptionally low	Notably low	Normal	Above normal
Arun	Exceptionally low	Below normal	Below normal	Above normal
Adur	Exceptionally low	Below normal	Below normal	Above normal
Ouse	Exceptionally low	Below normal	Below normal	Above normal
Cuckmere	Exceptionally low	Below normal	Below normal	Normal
Pevensey Levels	Exceptionally low	Notably low	Below normal	Normal

10.4 River flows table

Site name	River	Catchment	July 2026 band	June 2026 band
Alfoldean Gs	Arun	Arun	Exceptionally low	Normal
Allbrook Gs+ Highbridge	Itchen (so)	Itchen	Normal	Normal
Blackwater	Medina	Isle of Wight	Normal	Normal
Broadlands	Test	Test Lower	Below normal	Below normal
Brockenhurst GS	Lymington	New Forest	Exceptionally low	Normal
Chilbolton GS	Test	Test Upper	Normal	Normal
Cowbeech Gs	Cuckmere	Cuckmere	Below normal	Normal
Goldbridge Gs	Ouse [so]	Ouse Sussex	Normal	Normal
Iping Mill Gs	Rother	West Rother	Normal	Above normal
Mislingford GS	Meon	Meon	Normal	Normal
North Fareham GS	Wallington	Wallington	Exceptionally low	Above normal
Sakeham GS	Adur	Adur	Below normal	Above normal

10.5 Groundwater table

Site name	Aquifer	End of July 2026 band	End of June 2026 band
Carisbrooke Castle	Isle Of Wight Central Downs Chalk	Below normal	Below normal
Youngwoods Copse	Isle of Wight Lower Greensand	Above normal	Notably high
Clanville Gate Gwl	River Test Chalk	Normal	Normal
Lopcombe Corner Gwl	River Test Chalk	Normal	Normal
Preston Candover	River Itchen Chalk	Above normal	Above normal
West Meon Hut Gwl	River Itchen Chalk	Normal	Normal
Catherington	River Meon Chalk	Normal	Normal
Chilgrove House Gwl	Chichester-Worthing-Portsdown Chalk	Below normal	Normal
Beeding Hill Gwl	Brighton Chalk Block	Notably low	Below normal
Houndean Bottom Gwl	Brighton Chalk Block	Below normal	Below normal
Harting Common Down	Western Rother Lower Greensand	Normal	Normal
Cornish Wigdens Gwtr	Eastbourne Chalk Block	Normal	Normal

10.6 Abstraction licence flow constraints

Number of flow constraints in force between 1 to 6 July 2026	Number of flow constraints in force between 7 to 13 July 2026	Number of flow constraints in force between 14 to 20 July 2026	Number of flow constraints in force between 21 to 27 July 2026	Number of flow constraints in force between 28 to 31 July 2026
12	16	19	19	20

10.7 Solent and South Downs hydrological areas map

10.8 SSD Areal Rainfall Monthly Long Term Averages

Hydrological area	Jan LTA mm	Feb LTA mm	Mar LTA mm	Apr LTA mm	May LTA mm	Jun LTA mm	Jul LTA mm	Aug LTA mm	Sep LTA mm	Oct LTA mm	Nov LTA mm	Dec LTA mm
Test Chalk	92.6	65.7	59.4	60.5	53.7	57.8	57.5	63.8	62.8	95.3	100.9	93.1
East Hampshire Chalk	102.7	72.1	62.7	63.5	54.4	62.1	60.5	71.4	70.2	105.8	112.8	105.3
West Sussex Chalk	104.6	73.7	59.5	59.1	54.4	59.4	60.9	73.0	74.4	108.8	114.8	113.2
East Sussex Chalk	96.4	66.9	53.8	49.9	51.2	55.6	57.3	67.6	65.3	101.2	110.6	106.9
Isle of Wight	93.5	66.9	55.4	52.6	47.9	50.6	47.8	59.7	65.9	102.2	107.4	105.6
Western Rother Greensand	110.6	77.5	61.9	64.1	56.4	59.6	57.9	73.1	73.7	111.7	118.1	115.1
Hampshire Tertiaries	95.4	66.7	58.1	57.8	49.8	56.3	51.2	64.7	65.2	97.3	105.1	99.4
Lymington	96.7	67.4	59.6	58.2	50.1	54.5	51.2	62.9	66.6	100.1	109.5	105.3
Sussex Coast	86.8	59.1	48.5	49.6	45.3	50.6	48.8	59.3	59.9	89.3	95.3	93.3
Arun	96.8	67.1	54.7	55.3	53.2	53.3	54.7	64.6	65.8	97.7	103.4	98.9
Adur	94.7	65.6	52.7	52.8	53.5	52.5	53.8	65.1	63.5	99.4	102.9	100.2
Ouse	97.7	67.7	53.9	51.2	53.4	54.9	57.5	67.4	64.7	104.6	105.9	105.4
Cuckmere	94.4	65.8	51.0	49.0	50.5	55.8	56.8	68.7	65.4	101.9	106.8	105.5
Pevensey Levels	89.5	62.7	49.5	47.6	48.1	51.8	56.3	64.6	62.9	96.3	103.0	102.9
SSD Average	96.8	67.7	56.9	56.5	52.0	56.0	55.3	66.0	66.2	100.5	106.6	102.4