

# Monthly water situation report: Solent and South Downs Area

## Summary - May 2026

Solent and South Downs (SSD) had below average rainfall in May, receiving 63% (32mm) of long term average (LTA) of 52mm. Monthly mean river flows for May ranged from exceptionally low to normal across SSD. End of month groundwater levels for May ranged from notably low to notably high. Soils across SSD ended the month drier than the LTA for May. End of month reservoir stocks were below average at Ardingly Reservoir (Ouse) and at Arlington Reservoir (Cuckmere).

### 1.1 Rainfall

SSD had below average rainfall in May receiving only 63% (32mm) of LTA (52mm). The lowest monthly total rainfall was in the Test Chalk areal unit with 25mm, 46% of LTA (54mm). The Isle of Wight areal unit received the highest monthly rainfall with 36mm, 75% of LTA (48mm).

Apart from 2 May the early part of the month was mostly dry. 10 to 19 May had showery conditions with the highest daily rainfall total, 23.1mm, recorded on 18 May, at Plumpton (East Sussex Chalk). The remainder of the month was very warm and dry.

The April-May 2-month period has been the seventh driest April-May period on record for the SSD as a whole and the fourth driest for the Test Chalk areal unit.

In contrast, the January to May 5-month period has been the twelfth wettest on record for SSD as a whole. The 5-month total was the seventh highest on record for East Hampshire Chalk, areal unit.

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

### 1.2 Soil moisture deficit and recharge

Soil moisture deficits (SMDs) are greater than LTA for May. Soils across SSD ended the month drier than average for May.

### 1.3 River flows

Monthly mean river flows for May ranged from exceptionally low to normal across SSD.

Flows were exceptionally low on the:

- River Lymington at Brockenhurst

Flows were notably low on the:

- River Arun at Alfoldean
- River Ouse at Goldbridge

Flows were below normal on the:

- River Adur at Sakeham
- River Cuckmere at Cowbeech
- River Medina at Blackwater
- River Wallington at North Fareham

Flows were normal on the:

- River Test at Chilbolton
- River Test at Broadlands
- River Meon at Mislingford
- River Rother at Iping Mill
- River Itchen at Allbrook and Highbridge

The monthly mean flows for May ranked the fourth lowest for the River Lymington at Brockenhurst since 1960.

## **1.4 Groundwater levels**

End of month groundwater levels for May ranged from notably low to notably high.

Groundwater levels were notably low at:

- Carisbrooke Castle (Isle of Wight)

Groundwater levels were normal at:

- Lopcombe Corner (Test Chalk)
- Clanville Gate (Test Chalk)
- Harting Common (Western Rother Greensand)
- Beeding Hill (West Sussex Chalk)
- Houndean Bottom (East Sussex Chalk)
- Catherington (East Hampshire Chalk)
- Chilgrove (West Sussex Chalk)

Groundwater levels were above normal at:

- Preston Candover (East Hampshire Chalk)
- West Meon (East Hampshire Chalk)
- Cornish Farm (East Sussex Chalk)

Groundwater levels were notably high at:

- Youngwoods Copse (Isle of Wight)

The groundwater level at Carisbrooke Castle was the fifth lowest on record for May since 1977.

## 1.5 Reservoir stocks

End of month reservoir stocks were below average at Ardingly Reservoir (Ouse) and at Arlington Reservoir (Cuckmere). Ardingly Reservoir was at 95.5% of total capacity (LTA 97%) and Arlington Reservoir was at 86% of total capacity (LTA 93.2%).

## 1.6 Environmental impact

In May there were two licence restrictions in force throughout the month:

- Cessation of abstraction for one licence on the Loxwood Stream (Arun and Western Streams)
- Restriction on abstraction rates for one licence on the River Meon (East Hampshire) which reduced to cessation later in the month.

In the third week of May there were additional restrictions in Arun and Western Stream and the New Forest which remained in force until the end of the month.

No flood alerts or flood warnings were issued in May.

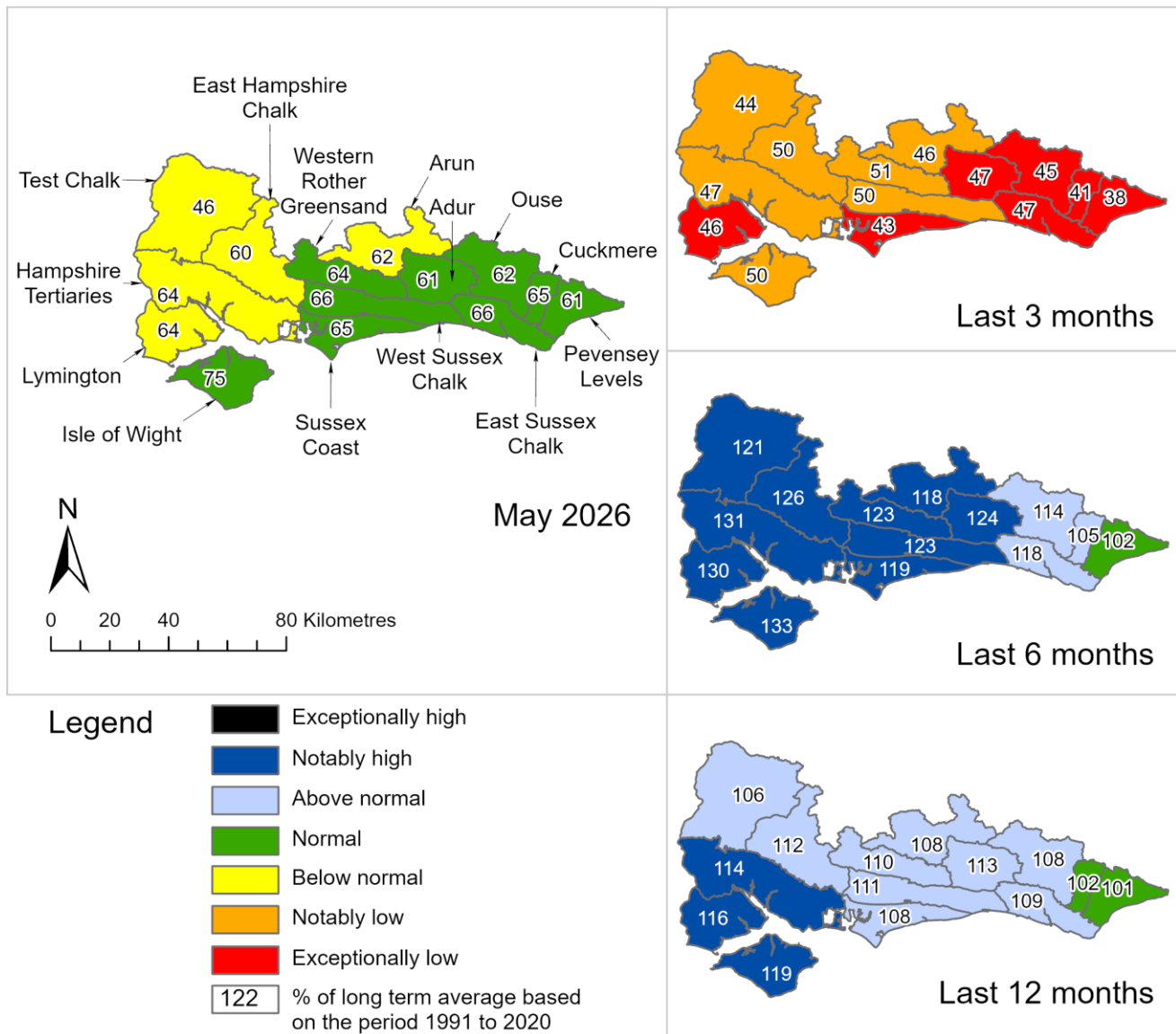
Author: [HydrologySSD@environment-agency.gov.uk](mailto:HydrologySSD@environment-agency.gov.uk)

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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 May 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.

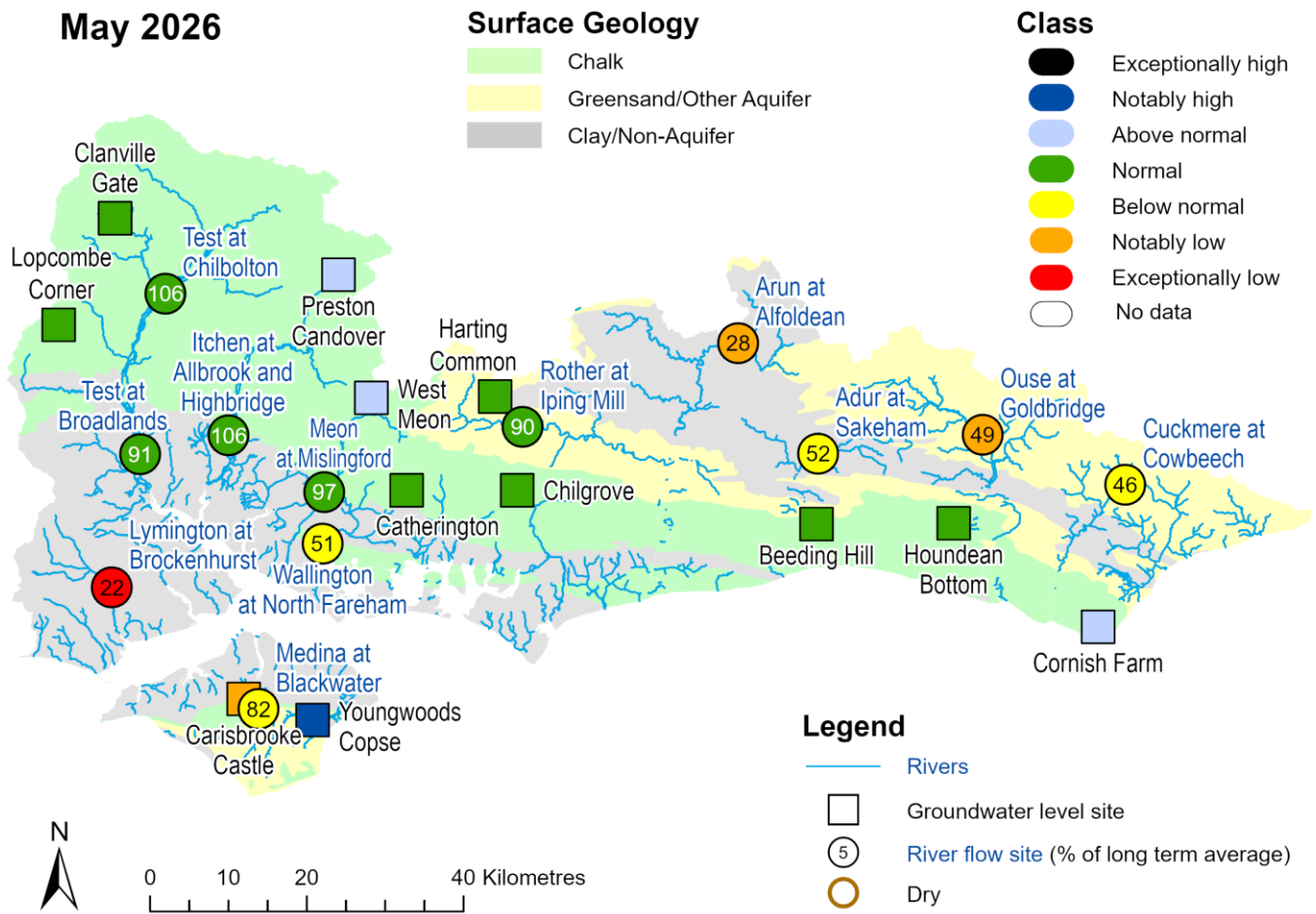


Rainfall data for January 2025 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

# 3 River flows and Groundwater levels

## 3.1 River flows and Groundwater level map

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

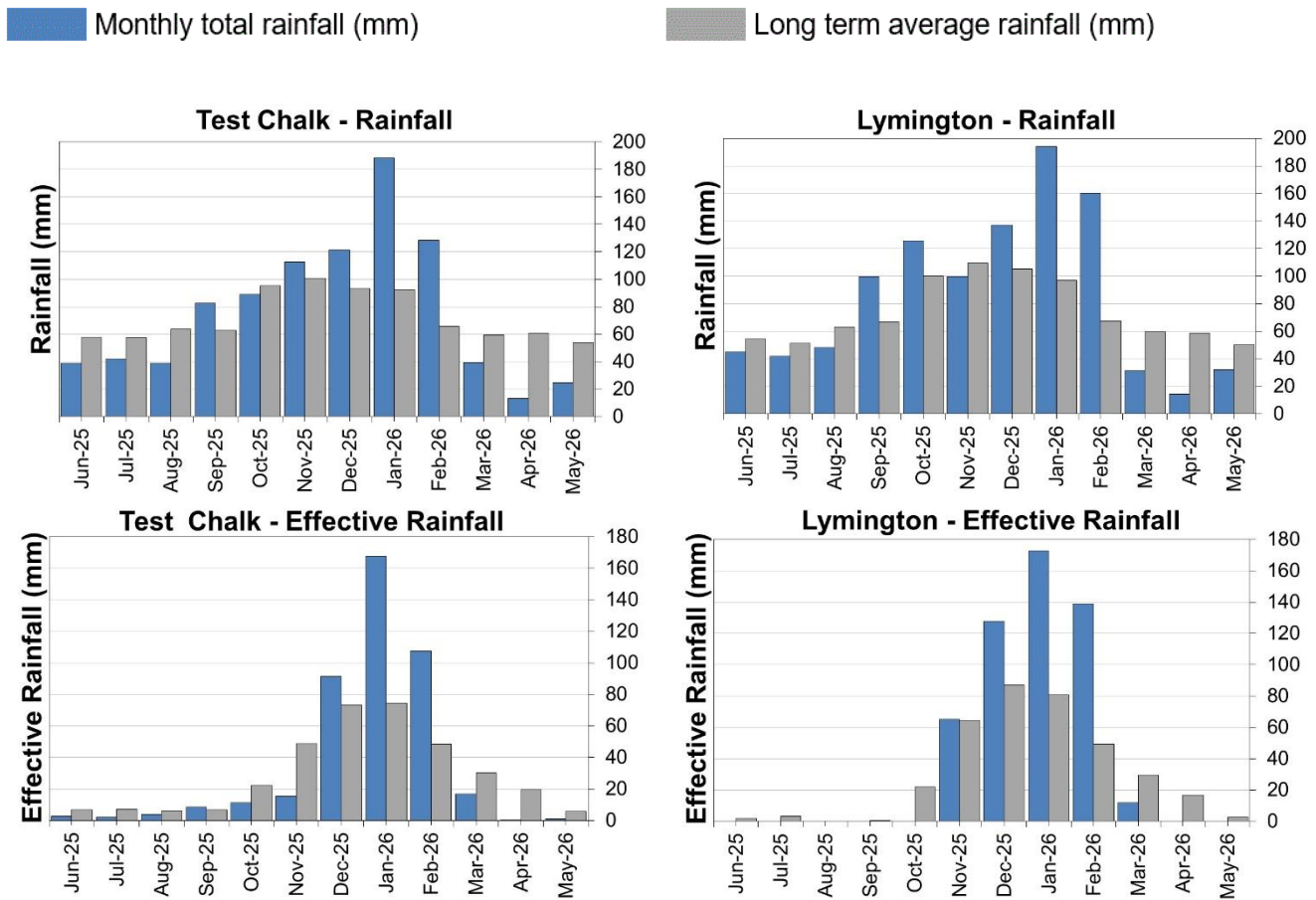


(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, 100024198, 2026. Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2026.

# 4 West Hampshire

## 4.1 West Hampshire Rainfall and effective rainfall charts

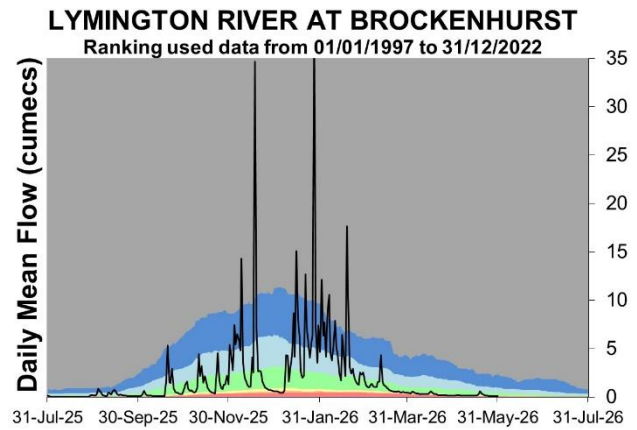
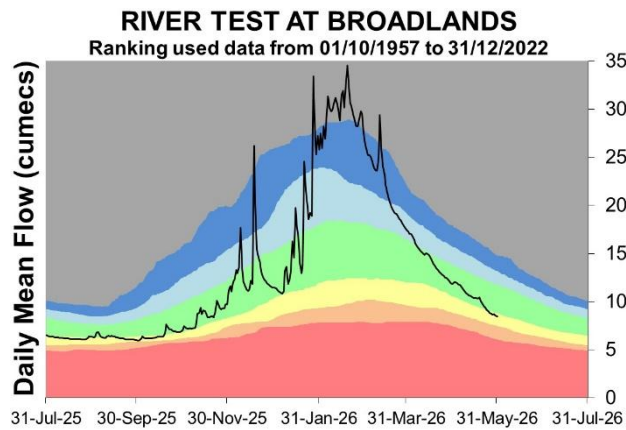
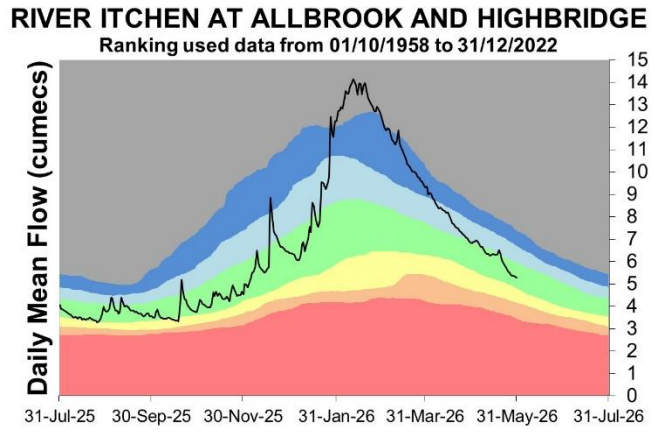
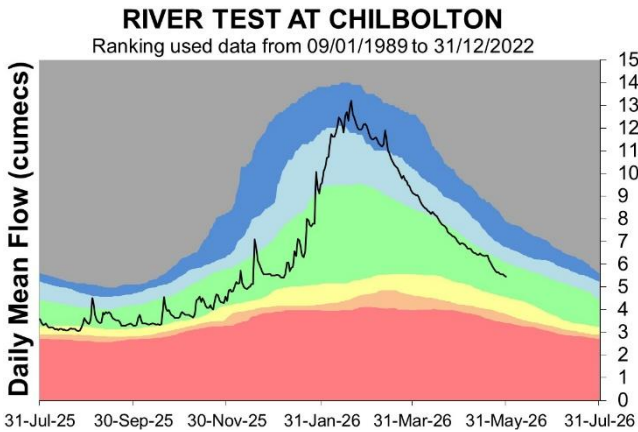
Figure 4.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.



HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

## 4.2 West Hampshire River flow charts

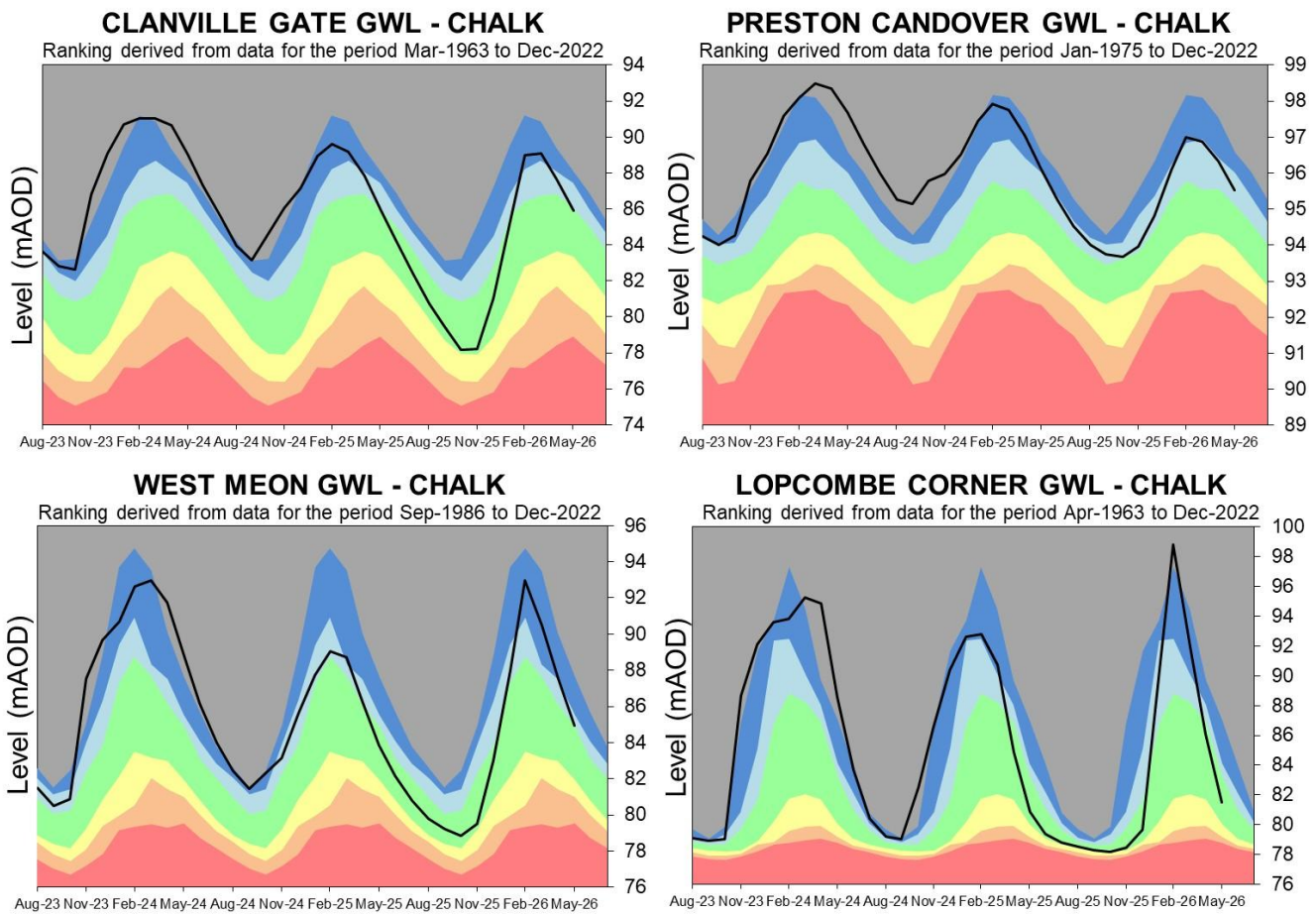
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



Source: Environment Agency, 2026.

### 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 and long term maximum and minimum levels.

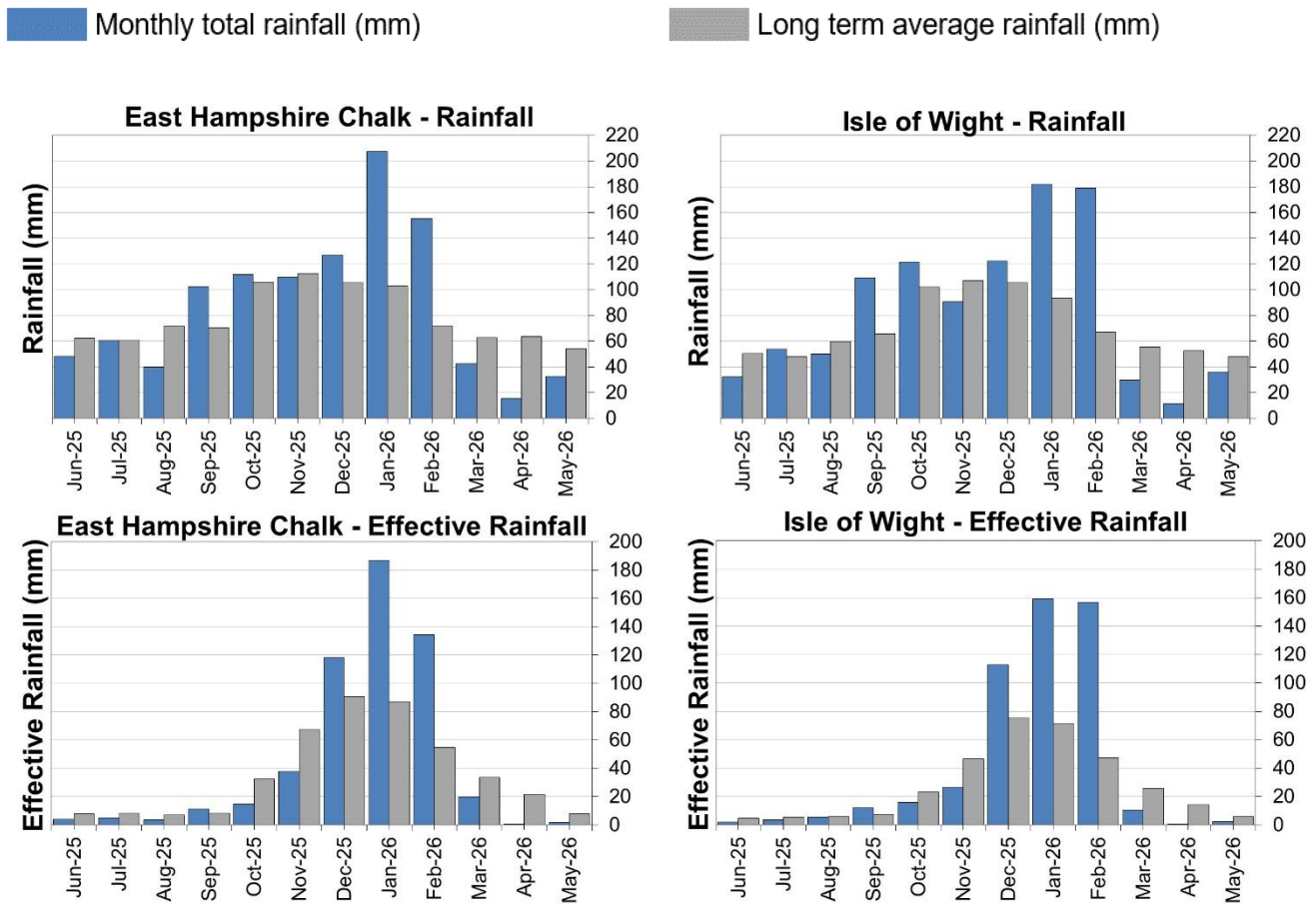


Source: Environment Agency, 2026.

## 5 East Hampshire and Isle of Wight

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

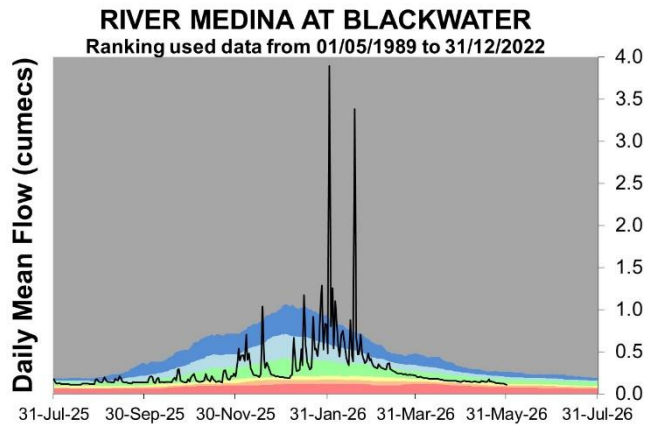
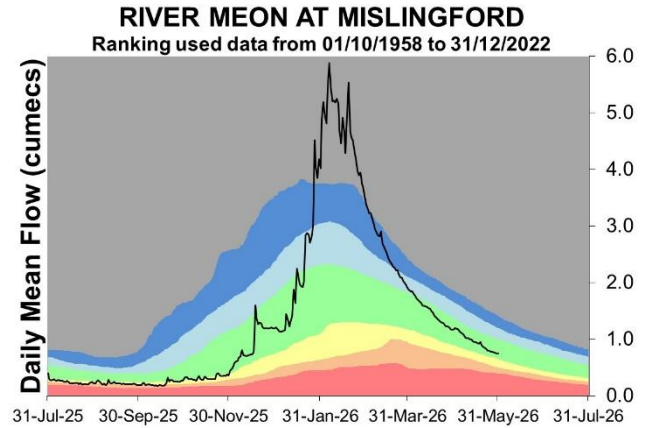
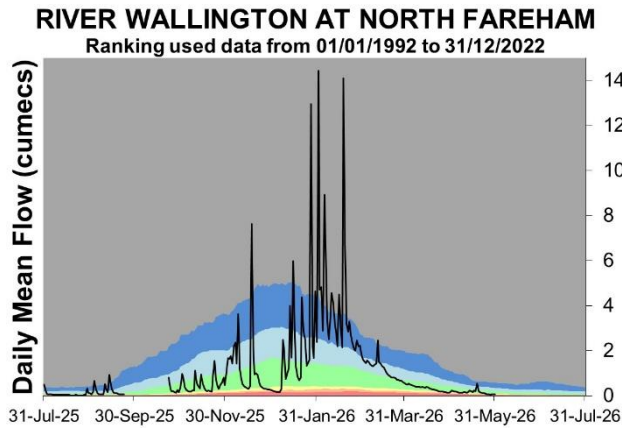
Figure 5.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.



HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

## 5.2 East Hampshire and Isle of Wight River flow charts

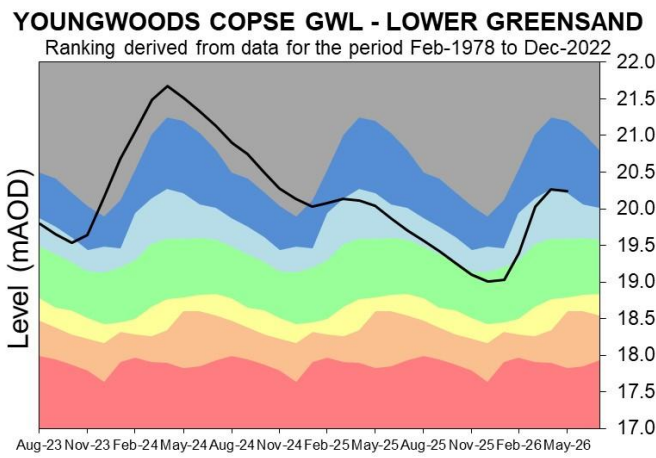
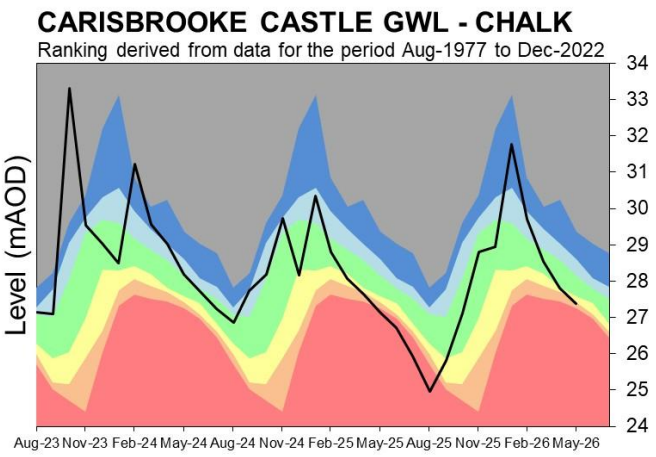
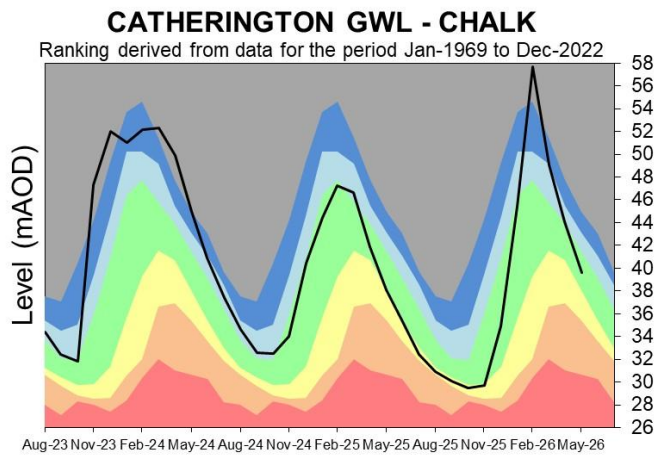
Figure 5.2 Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



Source: Environment Agency, 2026.

### 5.3 East Hampshire and Isle of Wight Groundwater level charts

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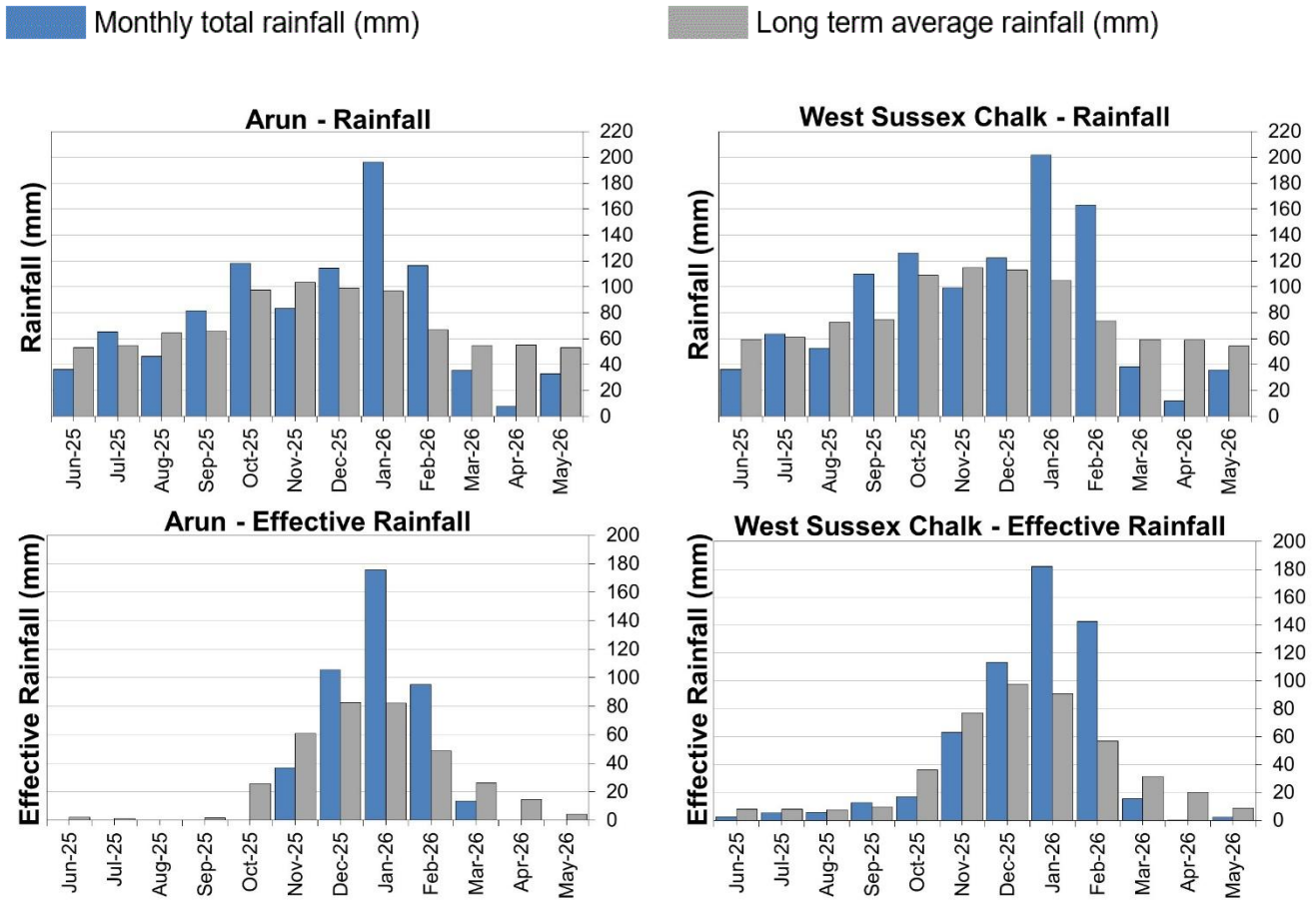


Source: Environment Agency, 2026.

# 6 West Sussex

## 6.1 West Sussex Rainfall and Effective Rainfall charts

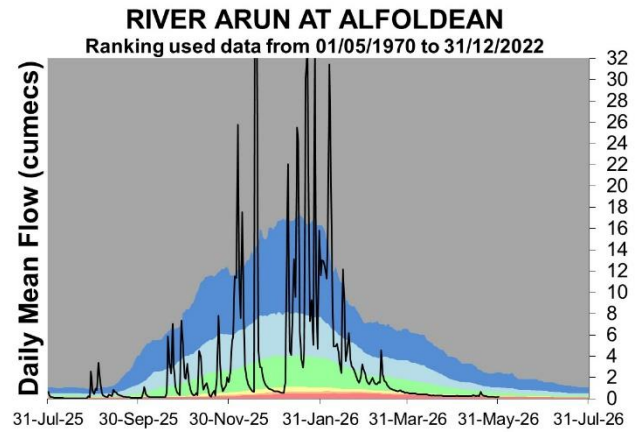
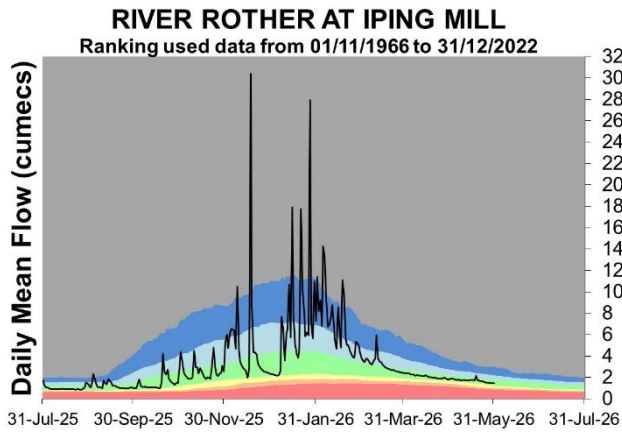
Figure 6.1: Monthly rainfall and effective rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average.



HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

## 6.2 West Sussex River flow charts

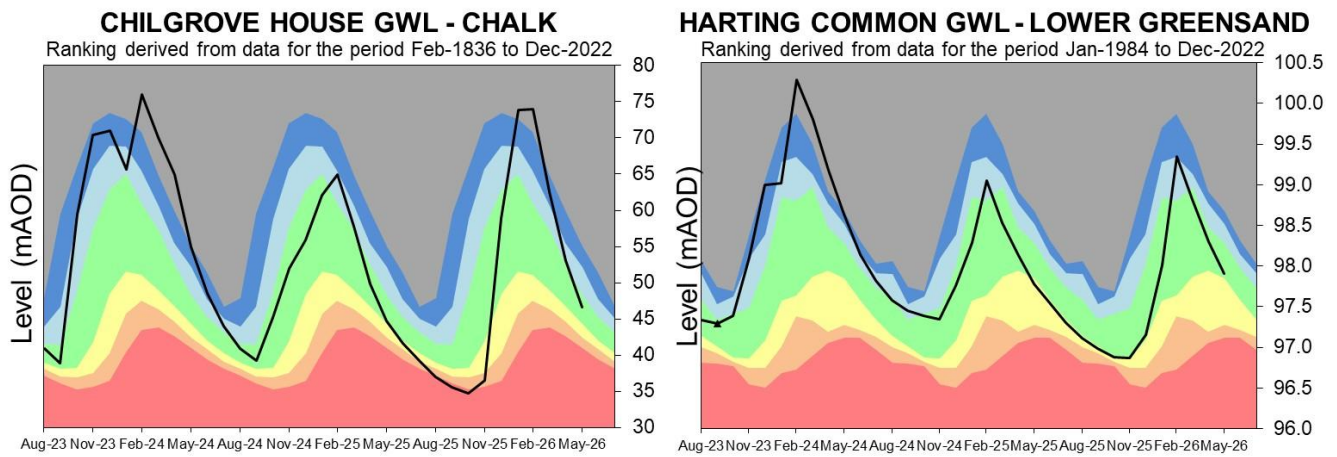
Figure 6.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



Source: Environment Agency, 2026.

### 6.3 West Sussex Groundwater level charts

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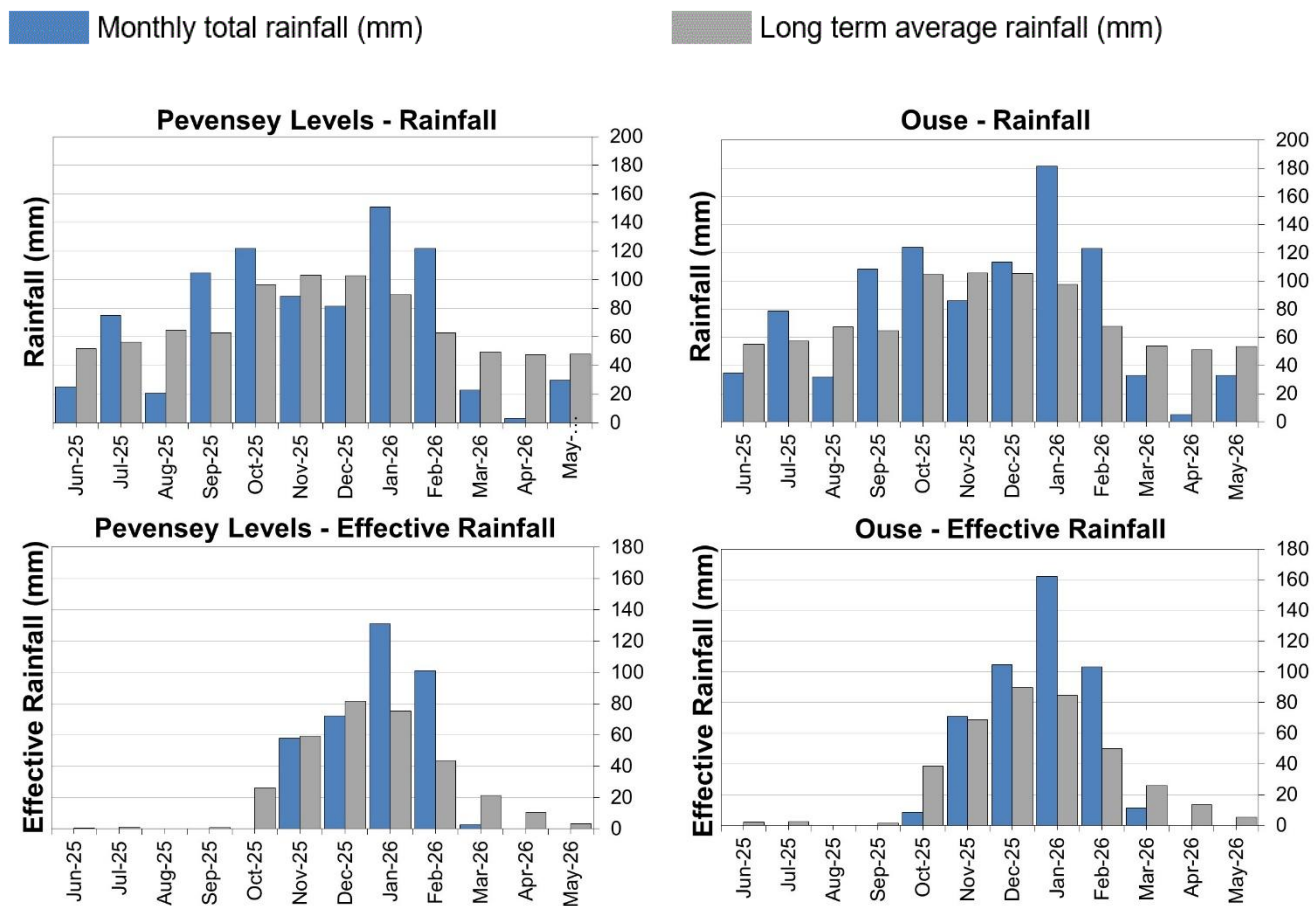


Source: Environment Agency, 2026.

# 7 East Sussex

## 7.1 East Sussex Rainfall and Effective Rainfall charts

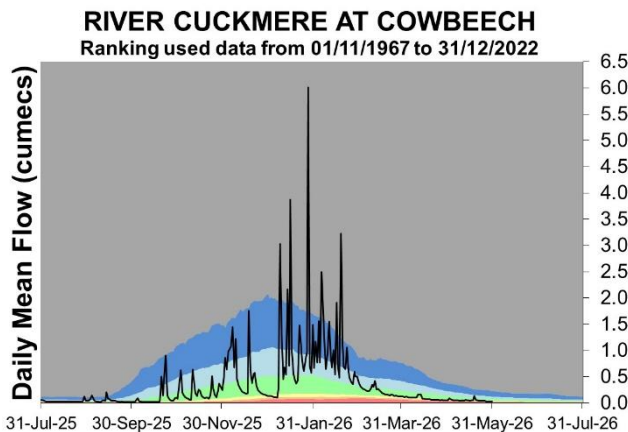
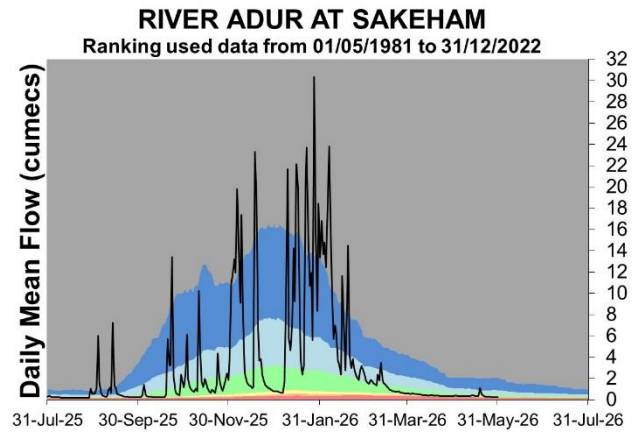
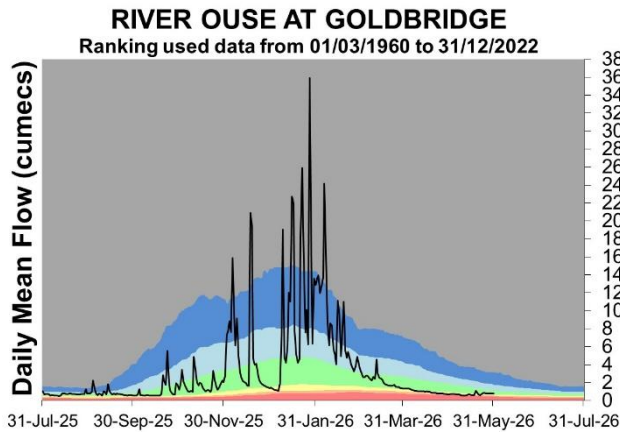
Figure 7.1: Monthly rainfall and effective rainfall totals for the past 12 months compared to the 1991 to 2020 long term average.



HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

## 7.2 East Sussex River flow charts

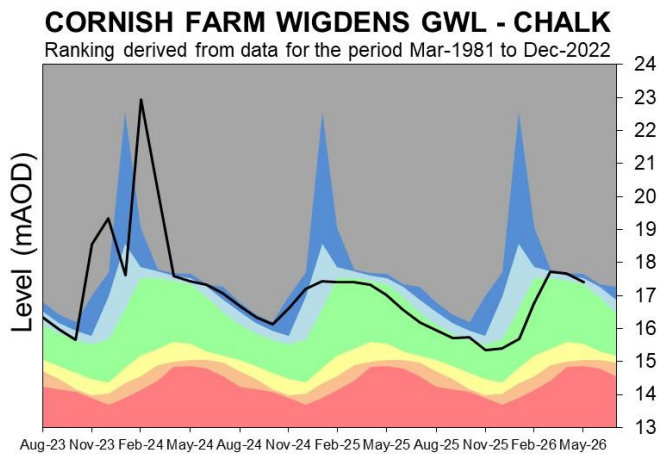
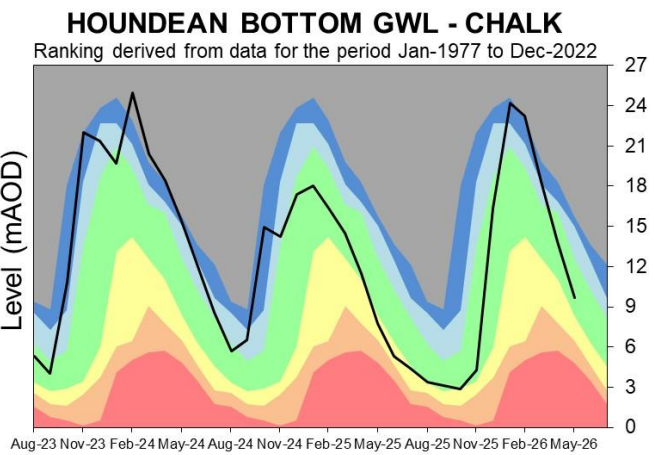
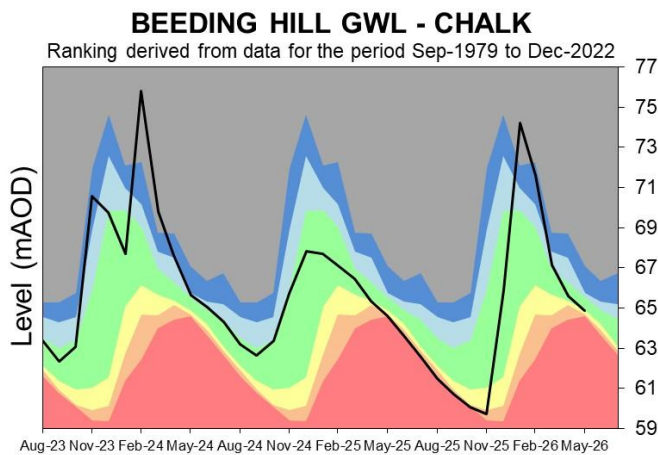
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Source: Environment Agency, 2026.

### 7.3 East Sussex Groundwater level charts

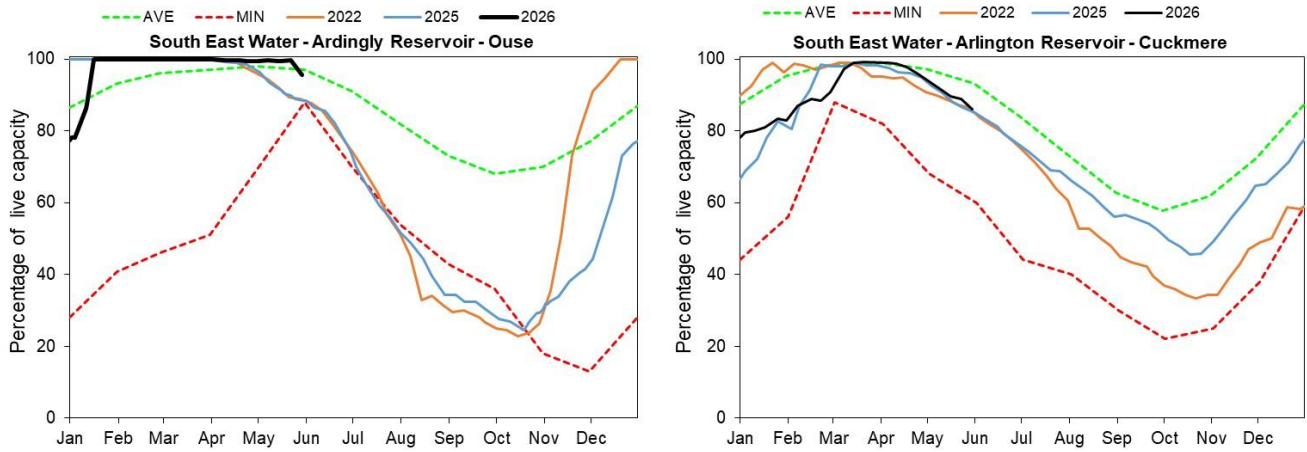
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Source: Environment Agency, 2026.

## 8 Reservoir stocks

Figure 8.1: End of month reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.



(Source: water companies).

# 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 ( $\text{m}^3\text{s}^{-1}$ ).

### **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).

## 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

(Source: Met Office. Crown copyright, 2026). All rights reserved. Environment Agency, 100024198, 2026

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 (mm) 31 day Total	Rainfall May as %LTA	Effective Rainfall (mm) 31 day Total	Effective Rainfall May as %LTA	Soil Moisture Deficit (SMD) Day 31	SMD End of May LTA
Test Chalk	25	46%	1	14%	92	50
East Hampshire Chalk	32	60%	2	20%	89	50
West Sussex Chalk	36	66%	2	26%	88	49
East Sussex Chalk	34	66%	3	38%	91	53
Isle of Wight	36	75%	2	39%	94	55
Western Rother Greensand	36	64%	2	22%	87	49
Hampshire Tertiaries	32	64%	0	0%	93	52
Lymington	32	64%	0	0%	91	50
Sussex Coast	29	65%	0	0%	95	56
Arun	33	62%	0	0%	90	49
Adur	33	61%	0	0%	89	48
Ouse	33	61%	0	0%	89	48
Cuckmere	33	65%	0	0%	90	50
Pevensey Levels	29	62%	0	0%	94	53
SSD Average	32	63%	1	16%	91	51

## 10.2 Seasonal summary table of rainfall and effective rainfall

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

Hydrological Area	Seasonal Rainfall (mm) Total	Seasonal Rainfall as % LTA	Seasonal Effective Rainfall (mm) Total	Seasonal Effective Rainfall as % LTA
Test Chalk	38	33%	1	4%
East Hampshire Chalk	48	41%	2	6%
West Sussex Chalk	47	42%	3	9%
East Sussex Chalk	39	39%	3	14%
Isle of Wight	47	47%	3	13%
Western Rother Greensand	50	42%	3	8%
Hampshire Tertiaries	45	42%	0	0%
Lymington	46	43%	0	0%
Sussex Coast	37	39%	0	0%
Arun	40	37%	0	0%
Adur	40	37%	0	0%
Ouse	38	36%	0	0%
Cuckmere	36	37%	0	0%
Pevensey Levels	32	34%	0	0%
SSD Average	42	39%	1	5%

### 10.3 Rainfall banding table

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

## 10.4 River flows table

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

## 10.5 Groundwater table

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

## 10.6 Abstraction licence flow constraints

Number of flow constraints in force between 1 to 11 May 2026	Number of flow constraints in force between 12 to 18 May 2026	Number of flow constraints in force between 19 to 25 May 2026	Number of flow constraints in force between 26 to 31 May 2026
2	2	4	4

## 10.7 Solent and South Downs Areal Rainfall Units 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