Monthly water situation report: Thames Area

1 Summary - June 2025

Thames area received 33mm of rainfall in June, 63% of the of the Long Term Average (LTA). All our areal rainfall units recorded below normal or normal rainfall, however over the last 3 months, rainfall in Thames area has been the 7th driest period since 1871, with it even being the 2nd driest recorded for Cotswolds West and Cherwell. Soil moisture deficits (SMD's) increased significantly across Thames area, rising from 92mm in May to 124mm by the end of June. River flows decreased at all sites compared to last month, reacting to the sustained low rainfall over the last 3 months. Likewise, groundwater levels declined at the majority of indicator sites in June and ranged from exceptionally low (Inferior Oolite) to notably high (Chalk). The Lower Thames and Farmoor reservoirs ended the month slightly below the LTA.

1.1 Rainfall

Thames area received 33mm of rainfall in June, 63% of the LTA. All areal units received below normal or normal precipitation, the first time normal rainfall has been recorded since February. Rainfall over the last 3 months was exceptionally low across most of Thames Area. The last 3 months (April, May June) have been the 7th driest period for Thames area since 1871, and the 2nd driest recorded for Cotswolds West and Cherwell areal units.

1.2 Soil moisture deficit and recharge

Soil moisture deficits (SMD's) increased significantly across Thames area, rising from 92mm in May to 124mm by the end of June. This was significantly higher than the LTA of 67mm for the time of year, indicating that soils are much drier than usual. Cotswolds West, Chilterns West, Chilterns East and North Downs Hampshire all had their highest SMD's since recordings began in 1920. The sharp increase reflected a sustained lack of effective rainfall; only 28% of the LTA occurred during June. This was due to a combination of sustained lower rainfall and increased sunshine hours.

1.3 River flows

Monthly mean flows decreased at all key indicator sites compared to last month, largely due to dry soils and declining groundwater levels. The majority of sites recorded flows that were below normal or lower in June, with the River Coln at Bibury the only exceptionally low site. In contrast, Weybridge and Tilford on the River Wey had normal flow for the time of the year, buoyed by above normal groundwater levels higher in the catchment.

1.4 Groundwater levels

Groundwater levels decreased at the majority of our indicator sites in June and ranged from exceptionally low (Jackaments Bottom, Inferior Oolite) to notably high (Stonor Estate, Chalk). Groundwater levels of some sites changed banding in comparison with May, with Fringford (Great Oolite) and Rockley (Chalk) dropping from normal banding into below normal, and Gibbet cottages (Chalk) and Marcham (Corralian) dropping from above normal to normal. Overall, groundwater levels of the Chalk and Great Oolites remained normal or below normal, with the exception of Stonor Estate (Chalk). Levels of the slower responding Lower Greensands remained notably high for the time of year with Frith Cottage (Lower Greensand)remaining stable.

1.5 Reservoir stocks

Reservoir stocks decreased in the Lower Thames reservoirs and ended the month at 90.1%, compared to 93.6% at the end of May. Stocks in Farmoor reservoir decreased from 99.1% to 94.7% during June. The Lower Thames reservoirs and Farmoor reservoirs ended the month remaining below the LTA.

1.6 Environmental impact

At the end of the month, 34 abstraction licences were being constrained in the area to protect water resources and the environment. There were no flood alerts in force by the end of June.

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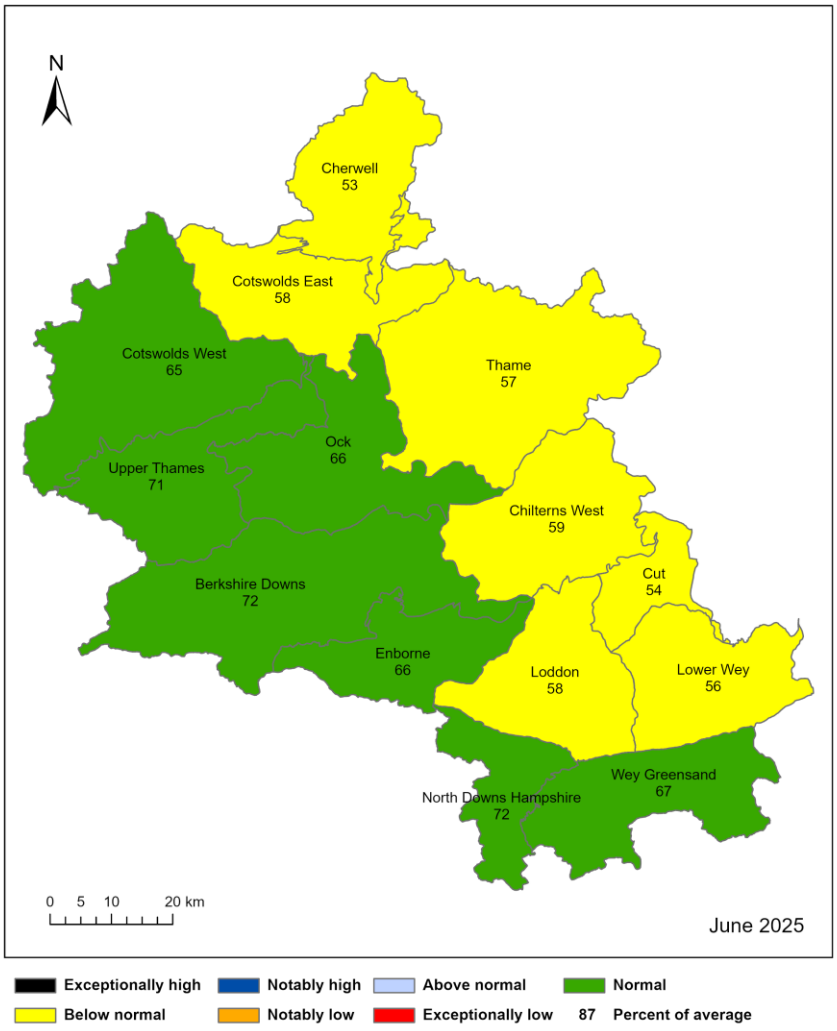
2 Rainfall

2.1 Rainfall map

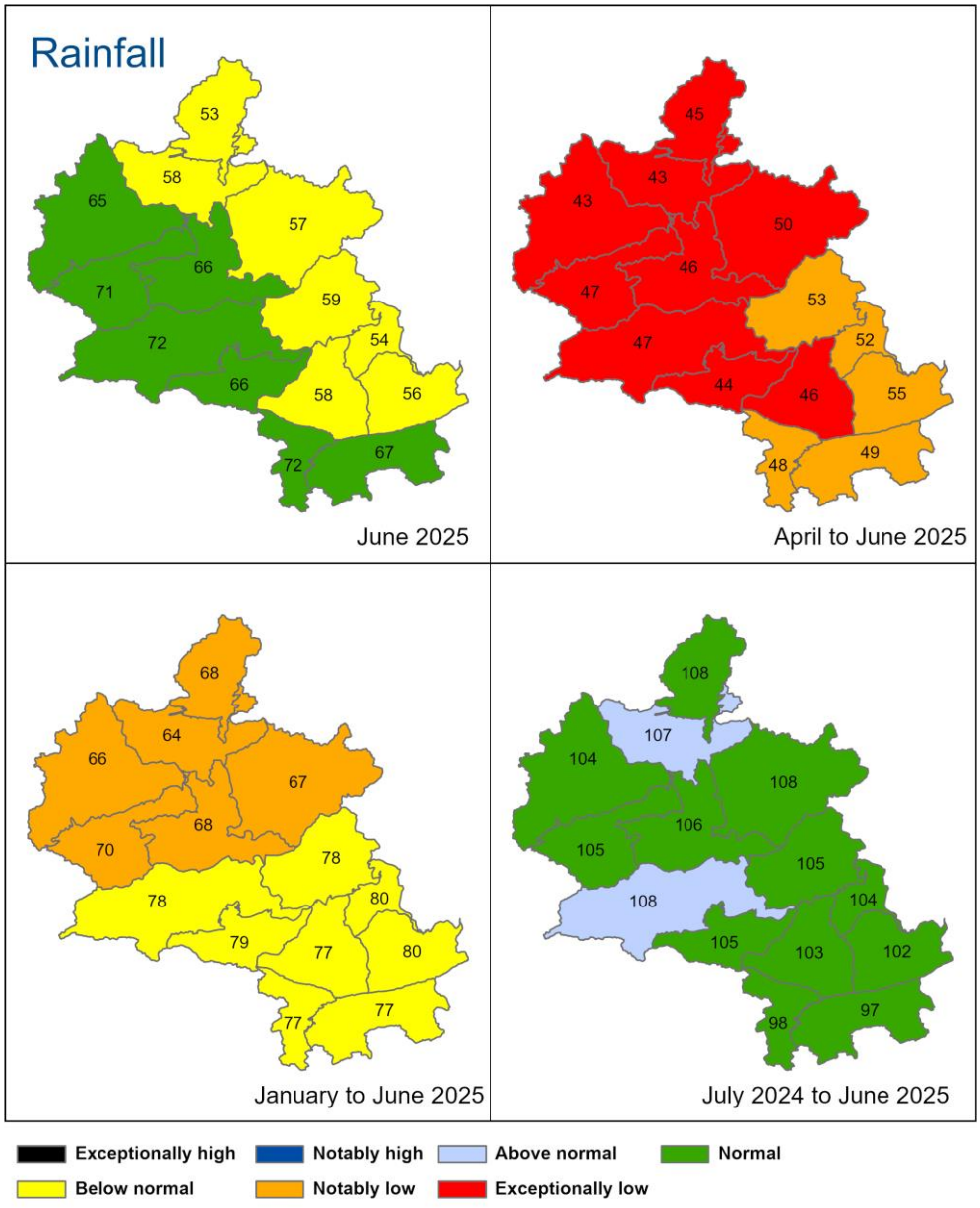
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 30 June 2025), classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



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

2.2 Rainfall map (2)

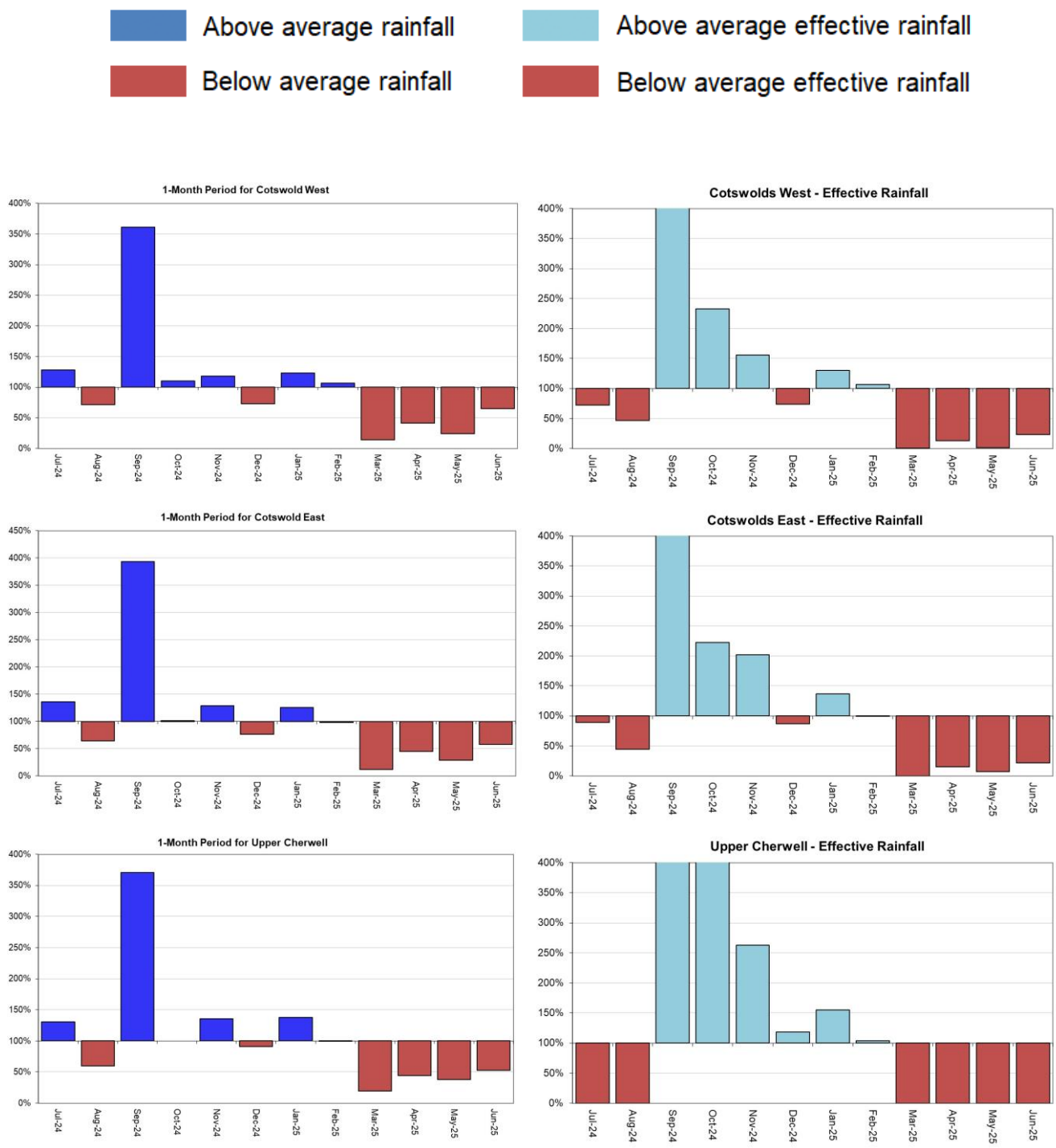
Figure 2.2: Total rainfall for hydrological areas for the current month (up to 30 June 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

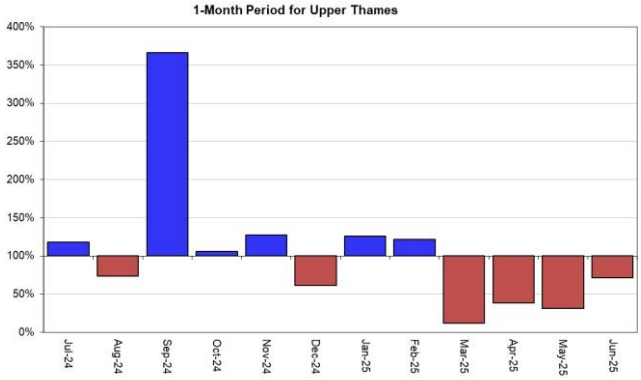


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

2.3 Rainfall charts

Figure 2.3: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average for each areal unit.




1-Month Period for Upper Thames
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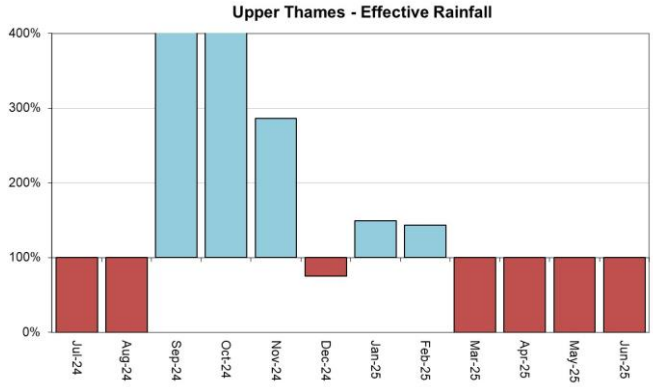
Upper Thames - Effective Rainfall
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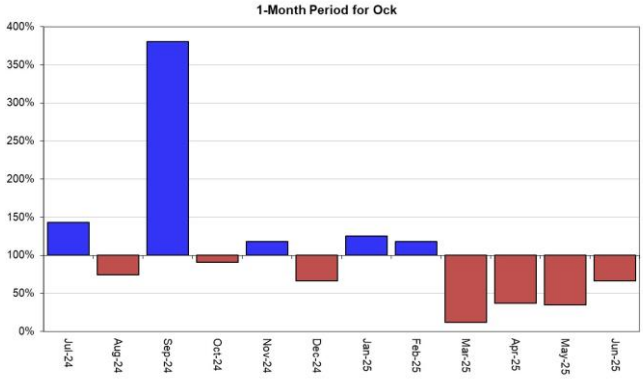
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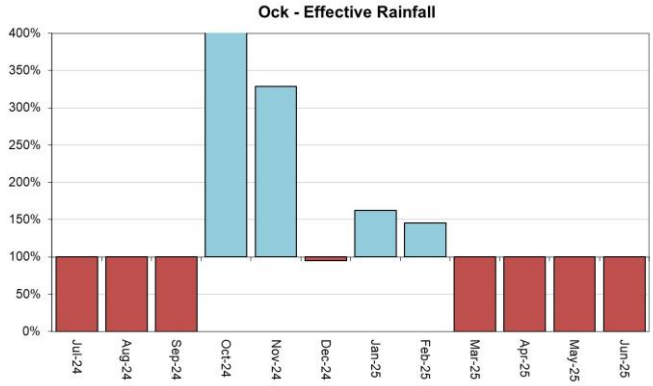
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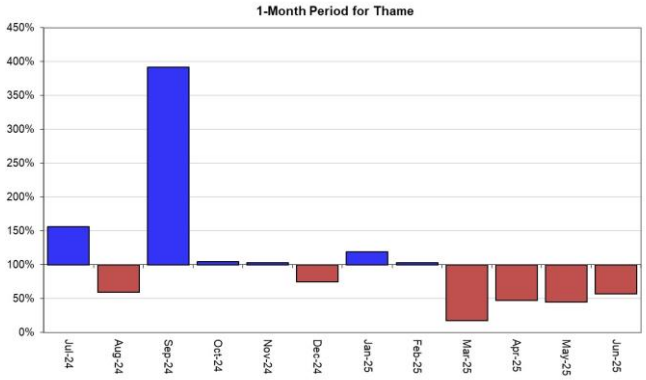
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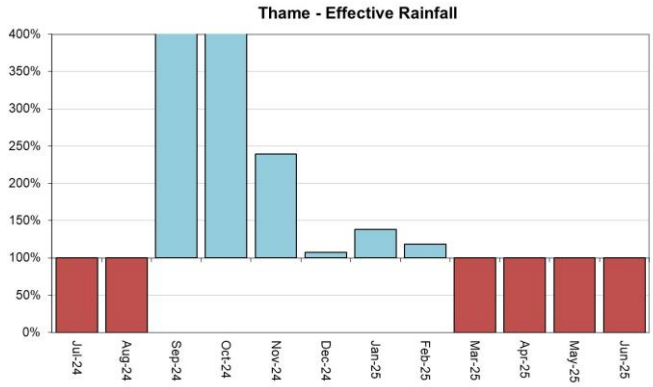
Thame - Effective Rainfall
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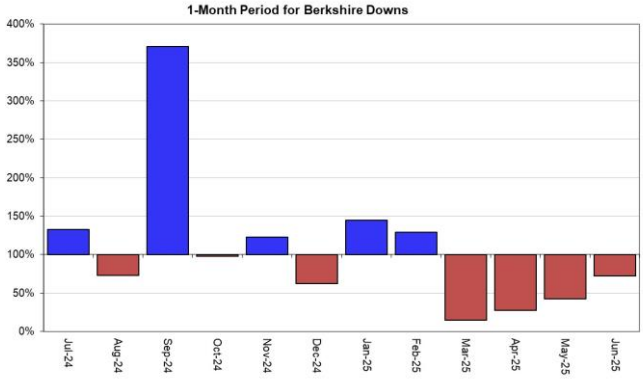
1-Month Period for Berkshire Downs
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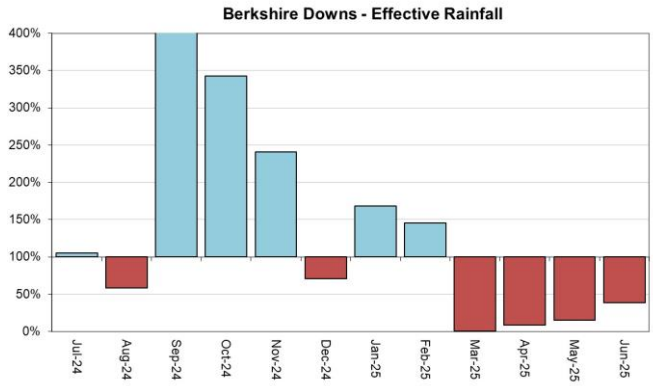
Berkshire Downs - Effective Rainfall
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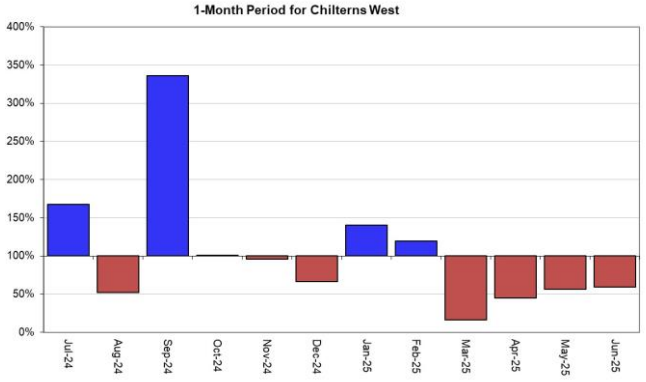
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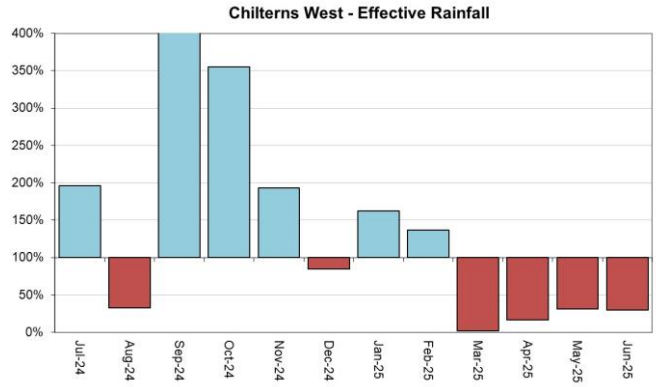
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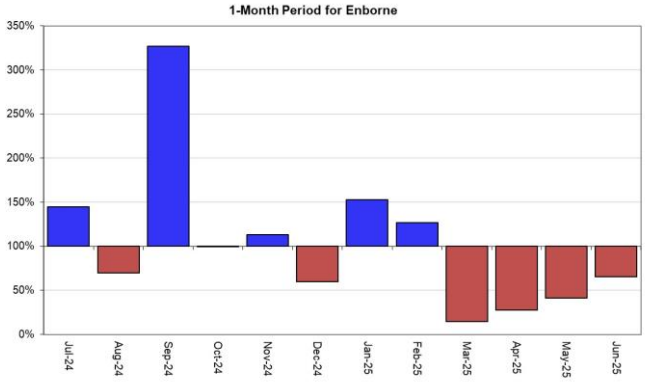
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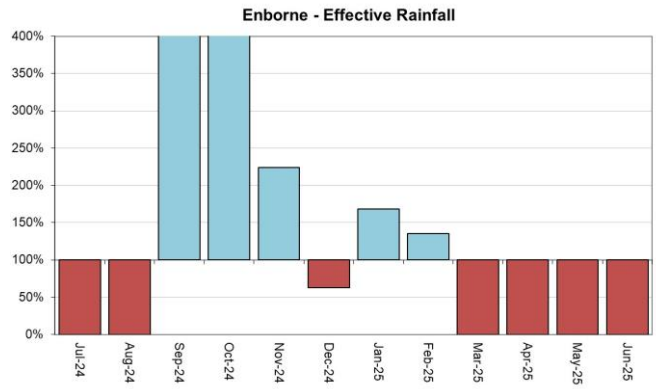
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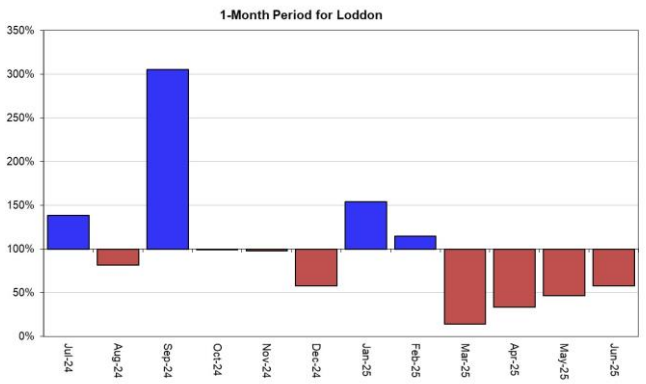
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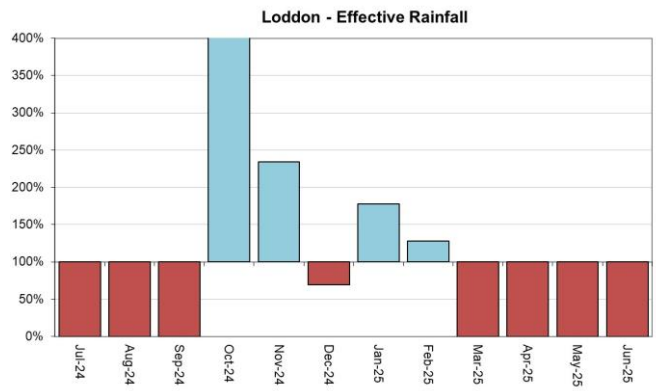
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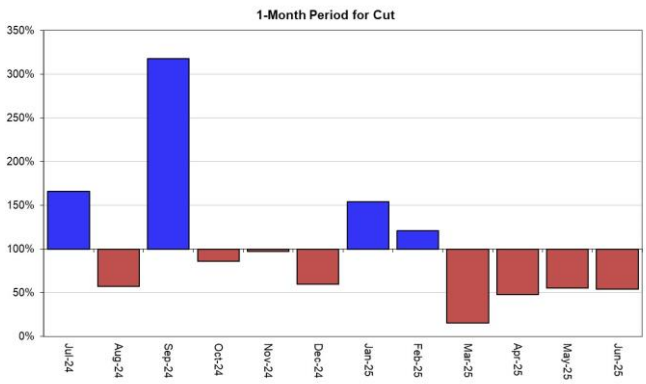
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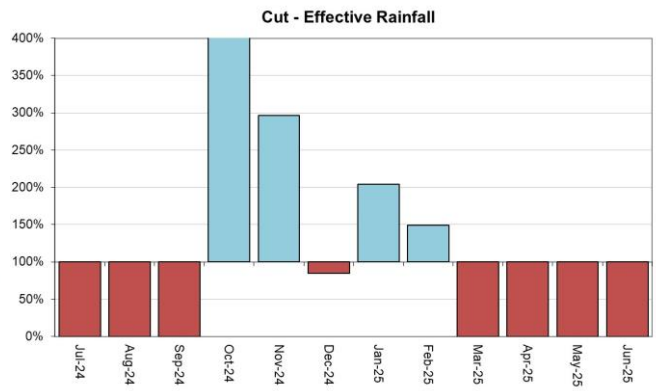
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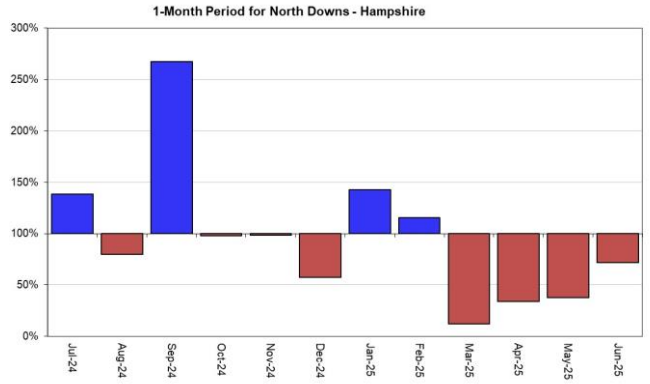
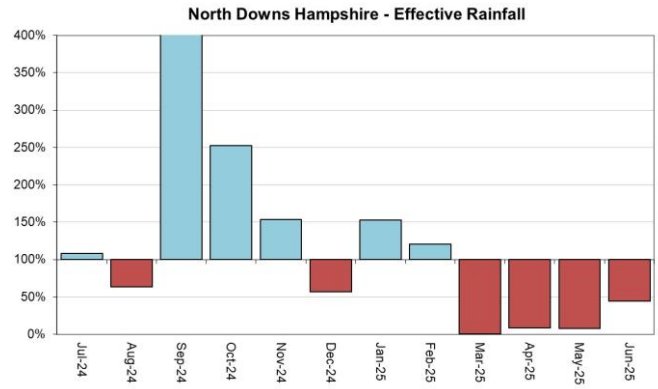
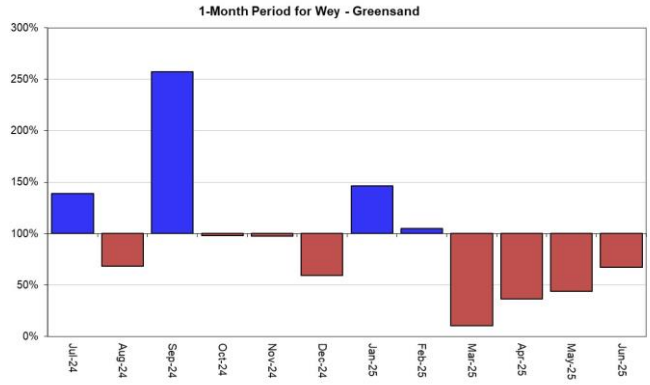
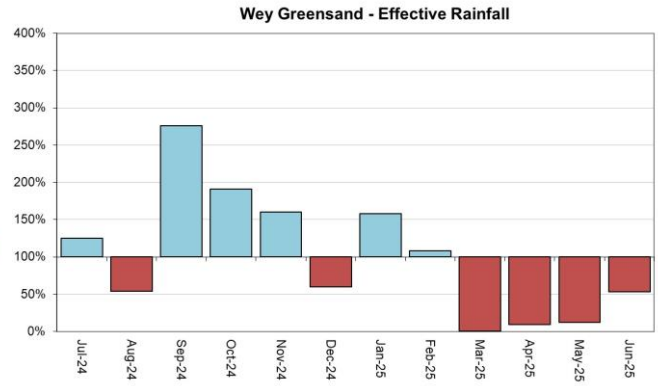
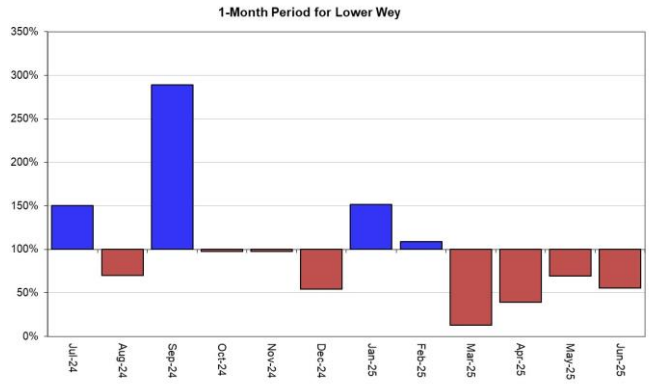
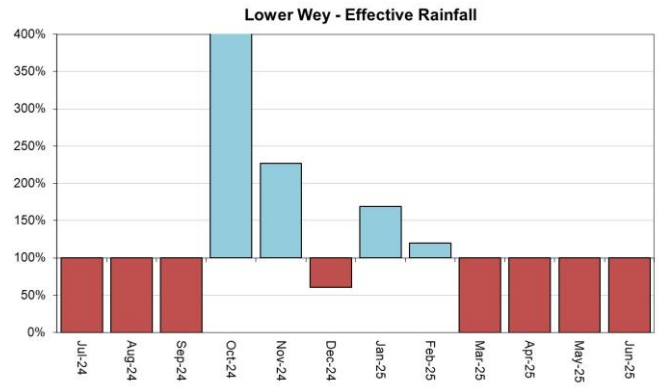












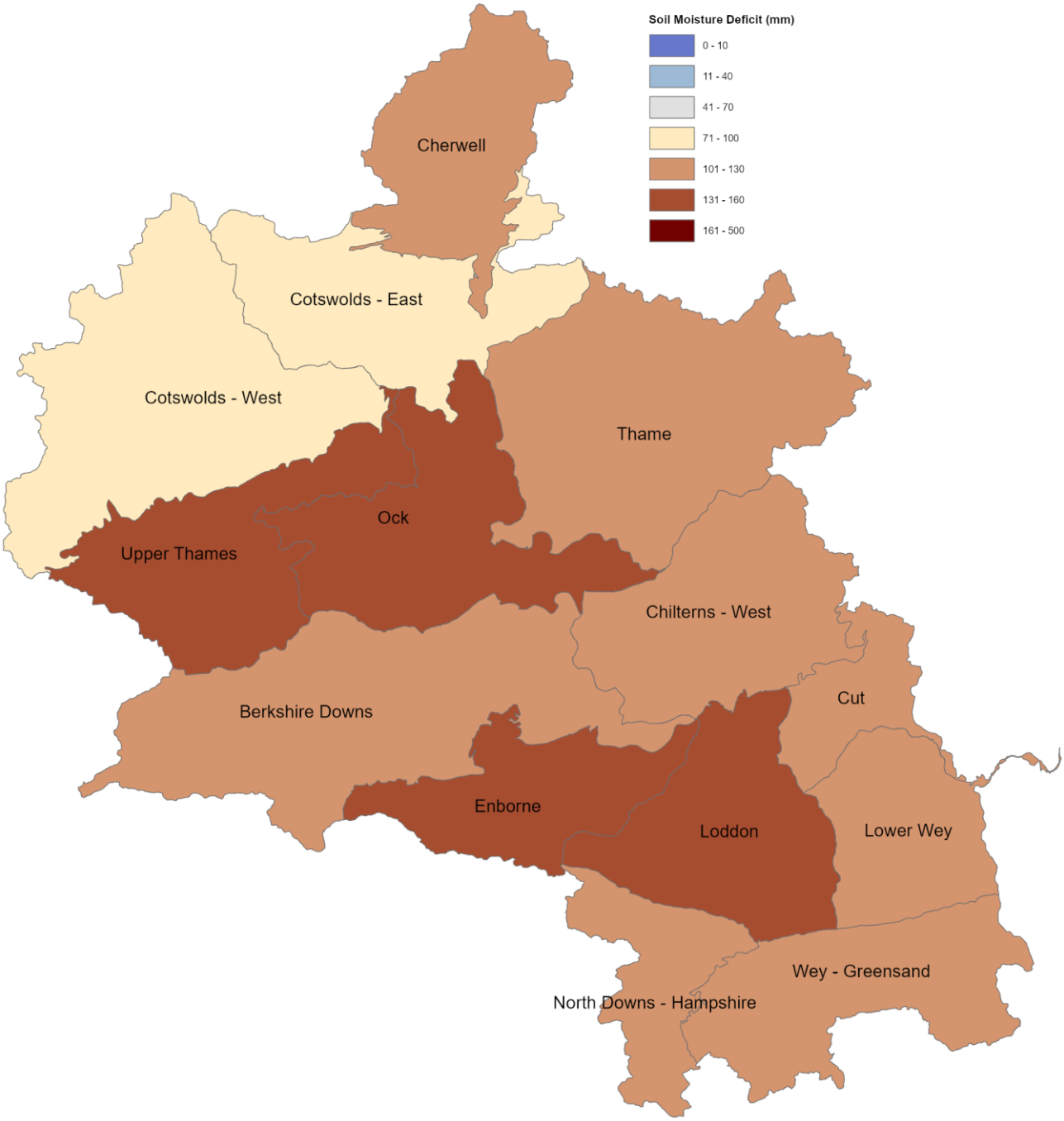
HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

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

3 Soil moisture deficit

3.1 Soil moisture deficit map

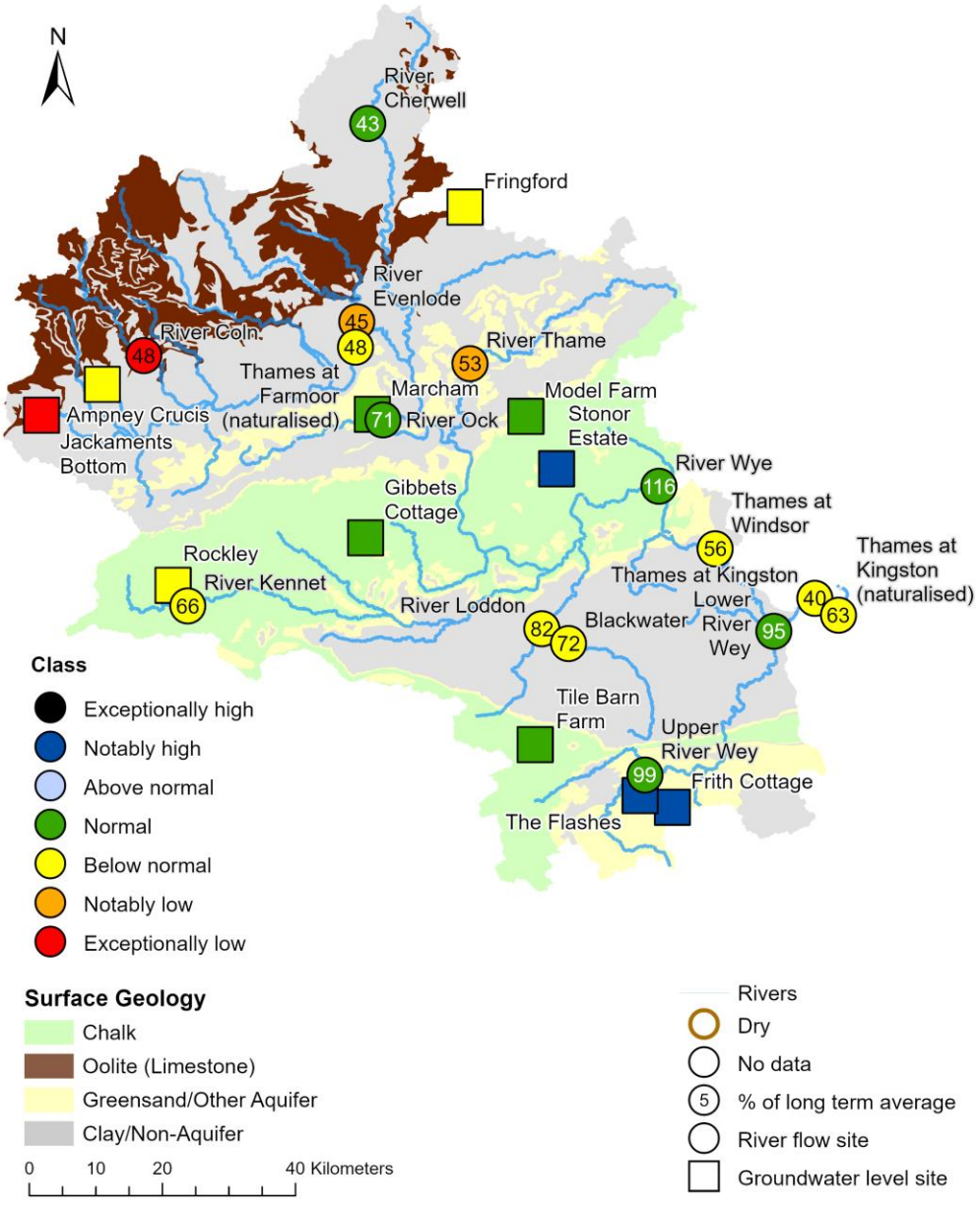
Figure 3.1: Soil moisture deficits for the week ending 30 June 2025. Shows the areal SMD estimate in millimetres.



4 River Flow and Groundwater Status

4.1 River flow and groundwater level map

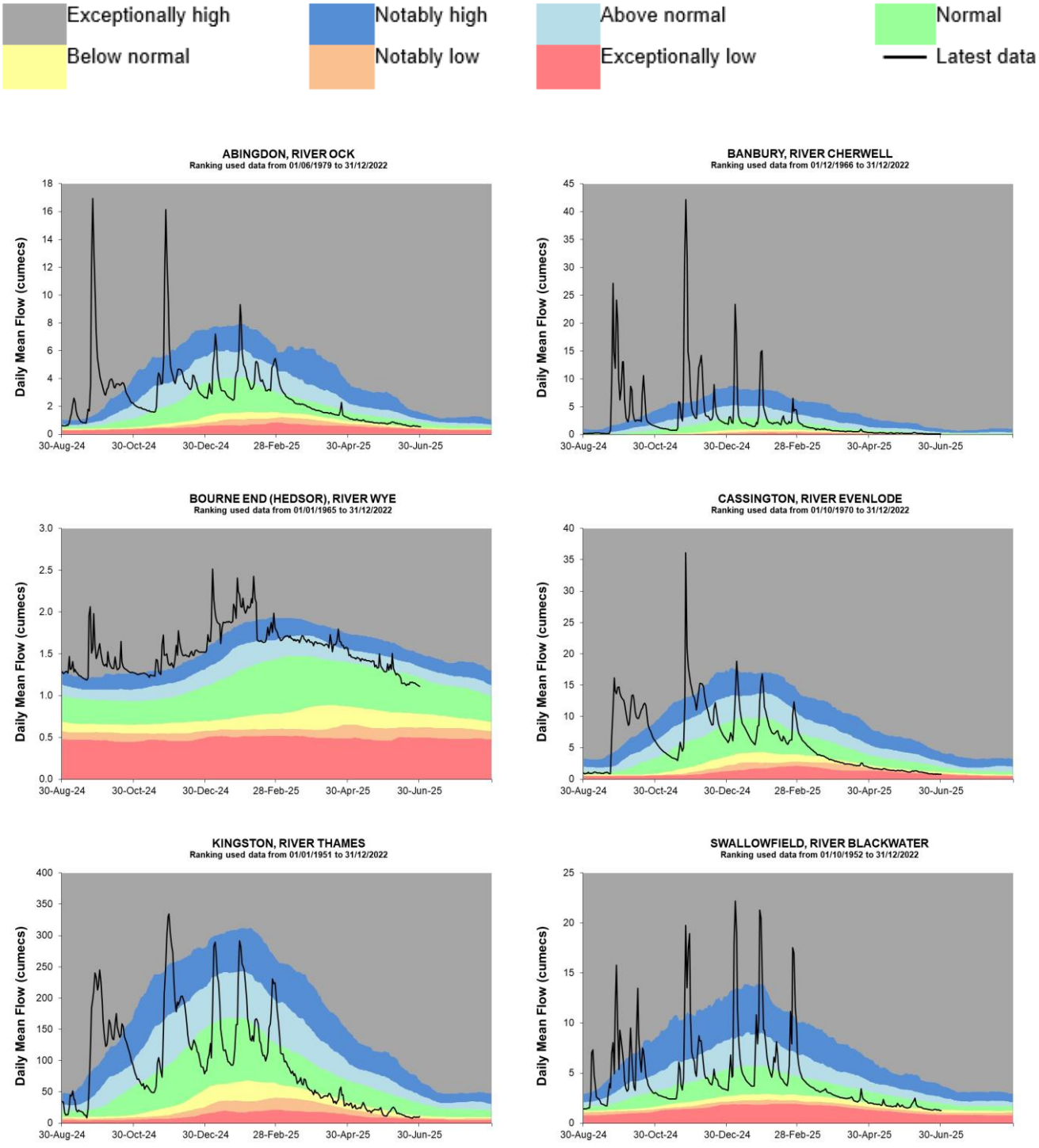
Figure 4.1: Monthly mean river flow for indicator sites and end of month groundwater levels for indicator sites for June 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic June means.



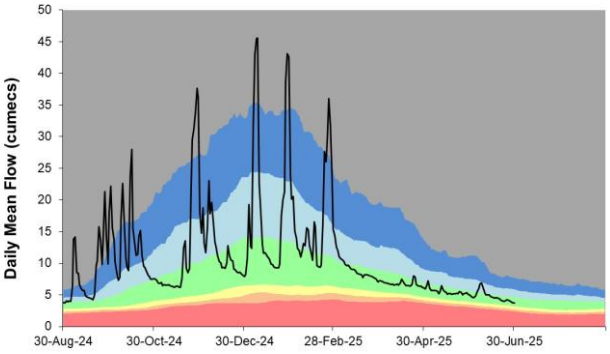
5 River flows

5.1 River flow charts

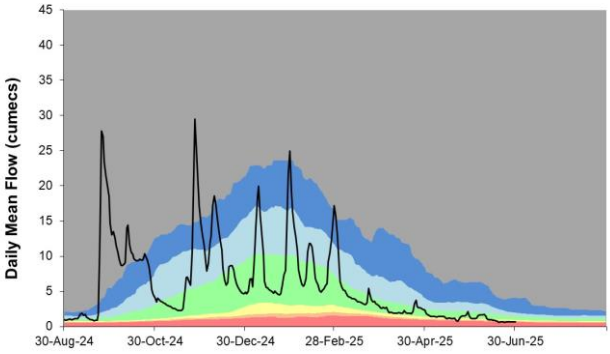
Figure 5.1: Daily mean river flows for indicator sites compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



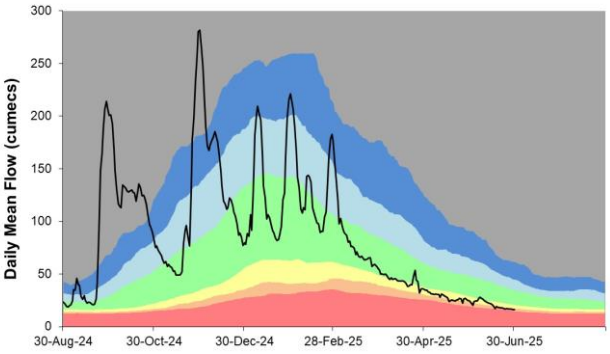
WEYBRIDGE, RIVER WEY
Ranking used data from 01/04/1979 to 31/12/2022



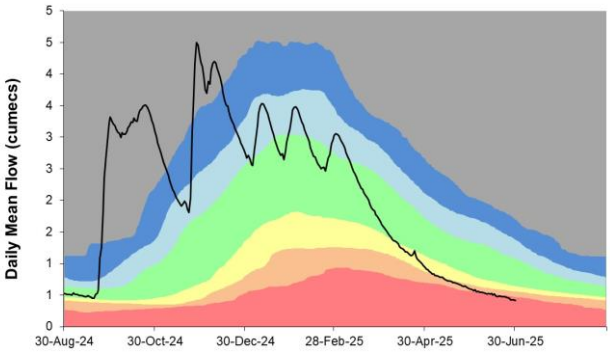
WHEATLEY, RIVER THAME
Ranking used data from 01/01/1990 to 31/12/2022



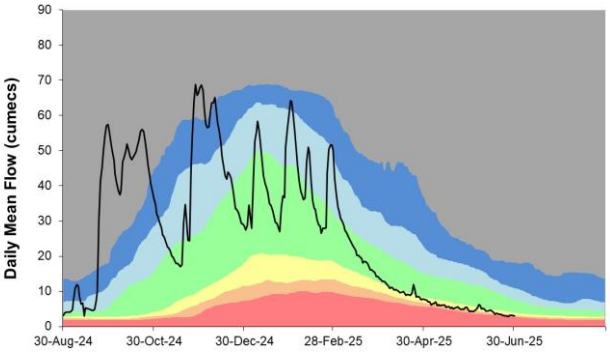
WINDSOR, RIVER THAMES
Ranking used data from 01/08/1979 to 31/12/2022



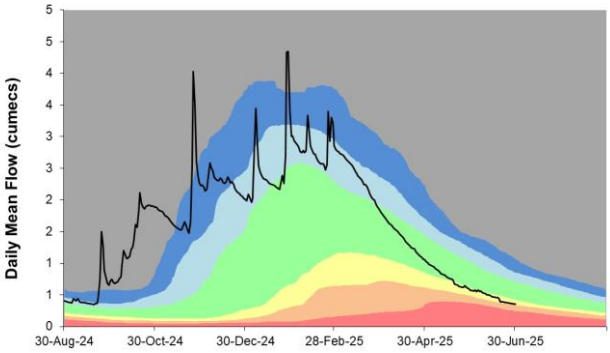
BIBURY, RIVER COLN
Ranking used data from 01/10/1963 to 31/12/2022

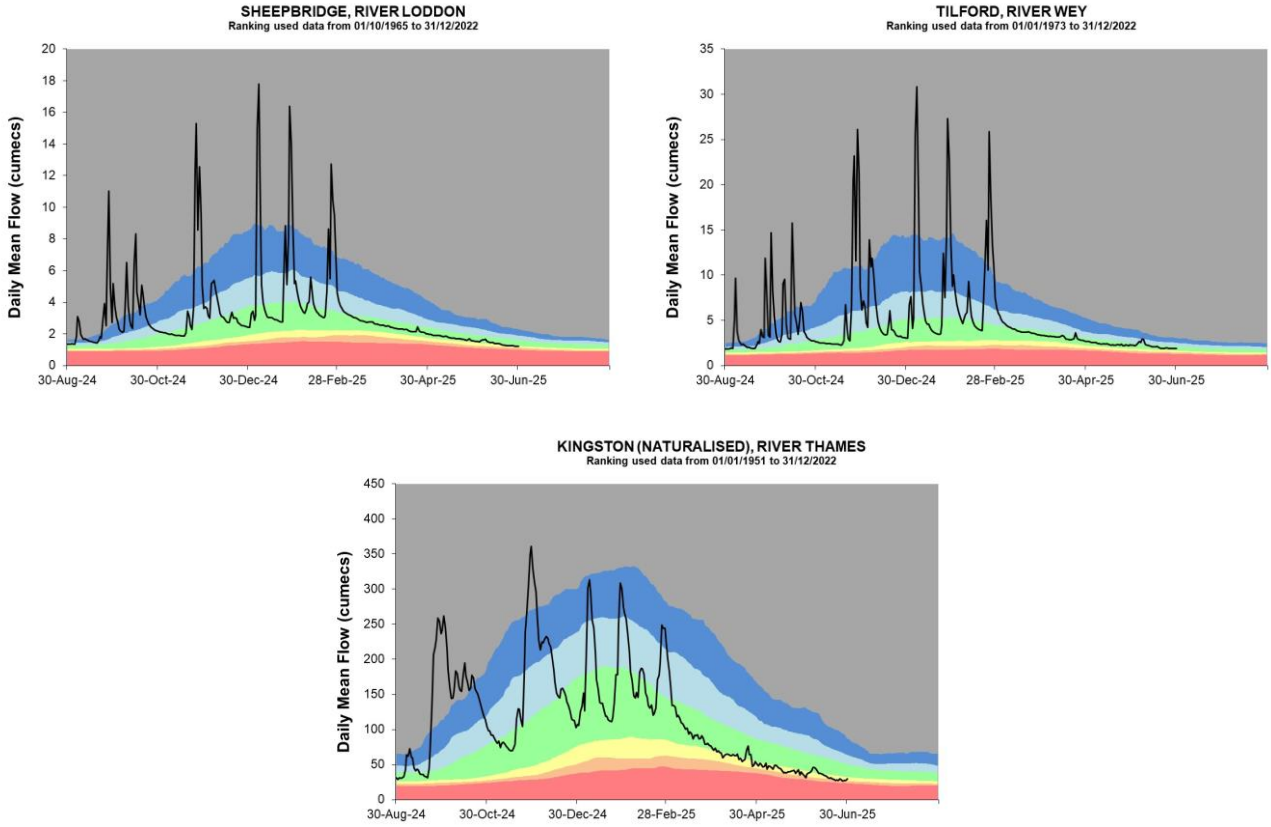


FARMOOR (NATURALISED), RIVER THAMES
Ranking used data from 01/10/1992 to 31/12/2022



MARLBOROUGH, RIVER KENNET
Ranking used data from 01/02/1972 to 31/12/2022



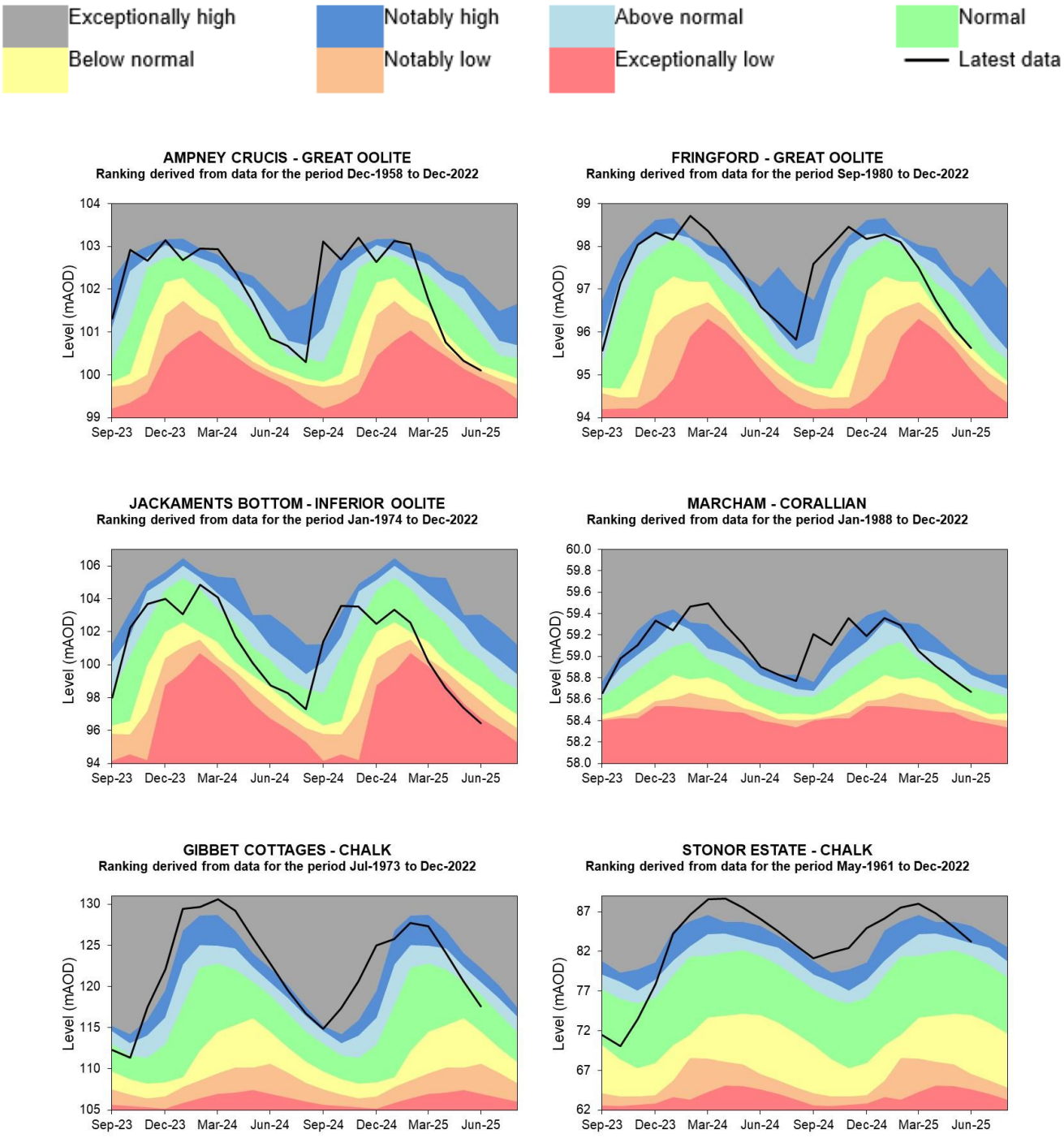


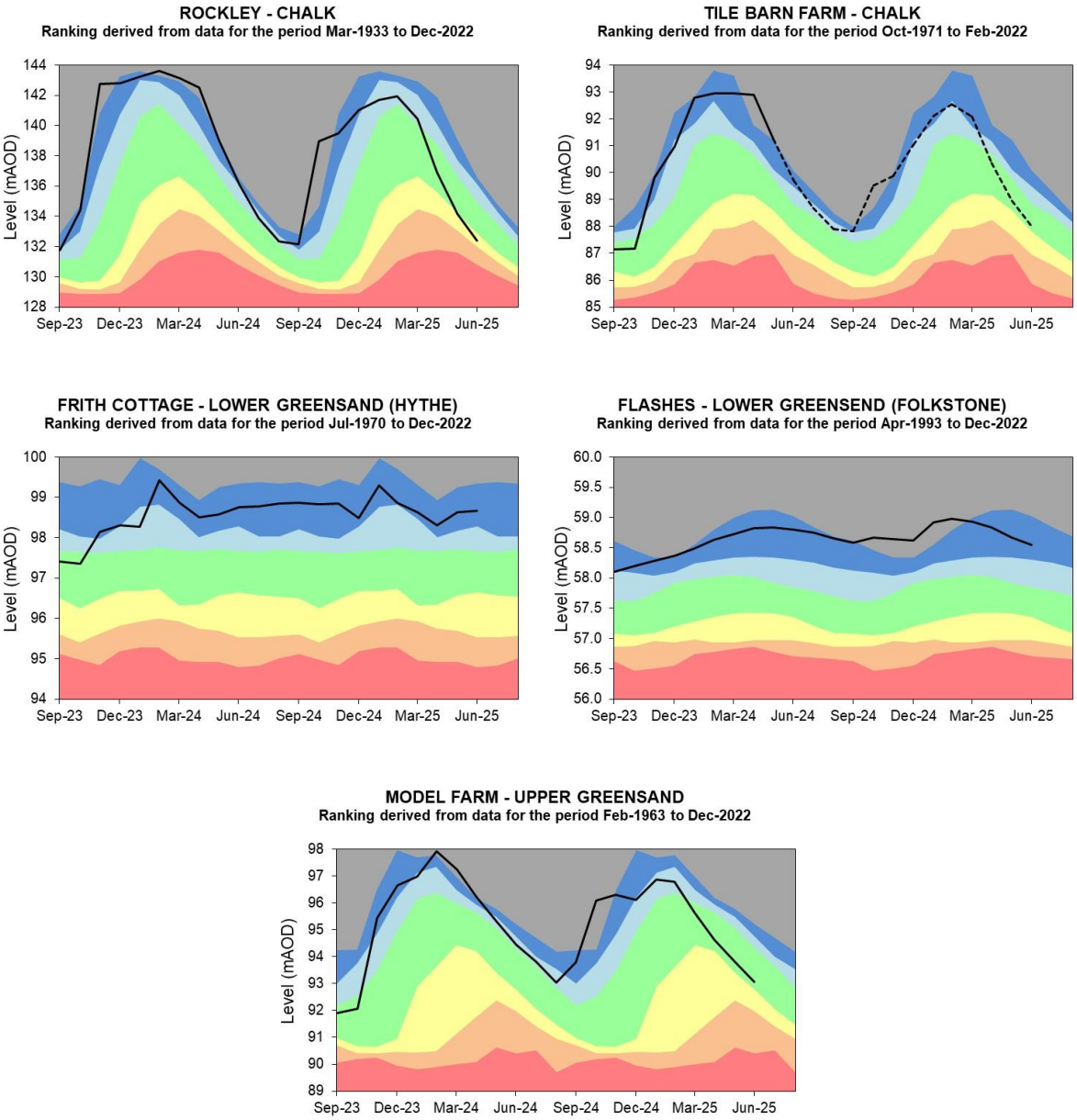
Source: Environment Agency.

6 Groundwater levels

6.1 Groundwater level charts

Figure 6.1: End of month groundwater levels for indicator sites, compared to an analysis of historic end of month levels, and long term maximum and minimum levels.



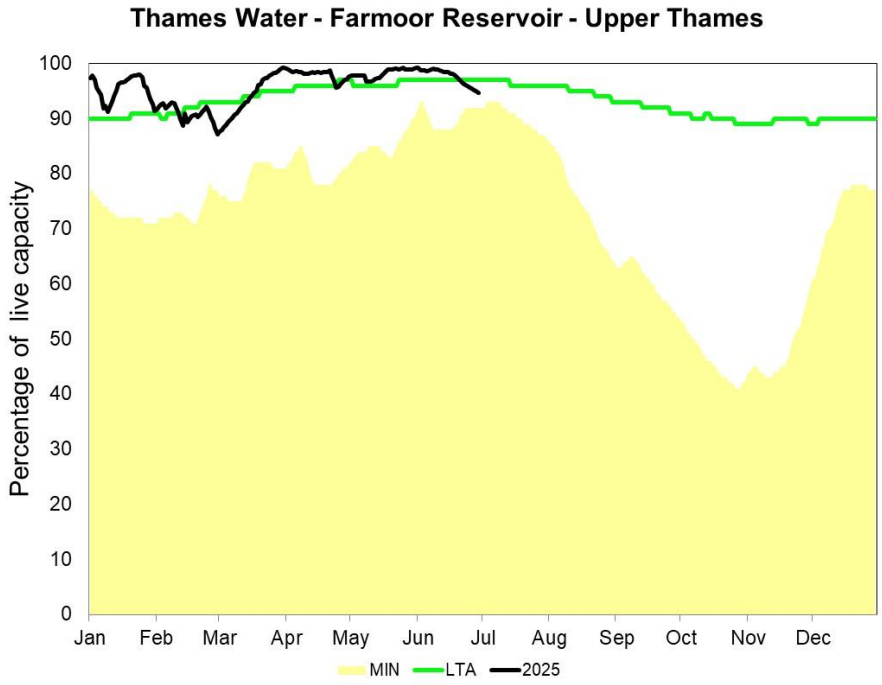


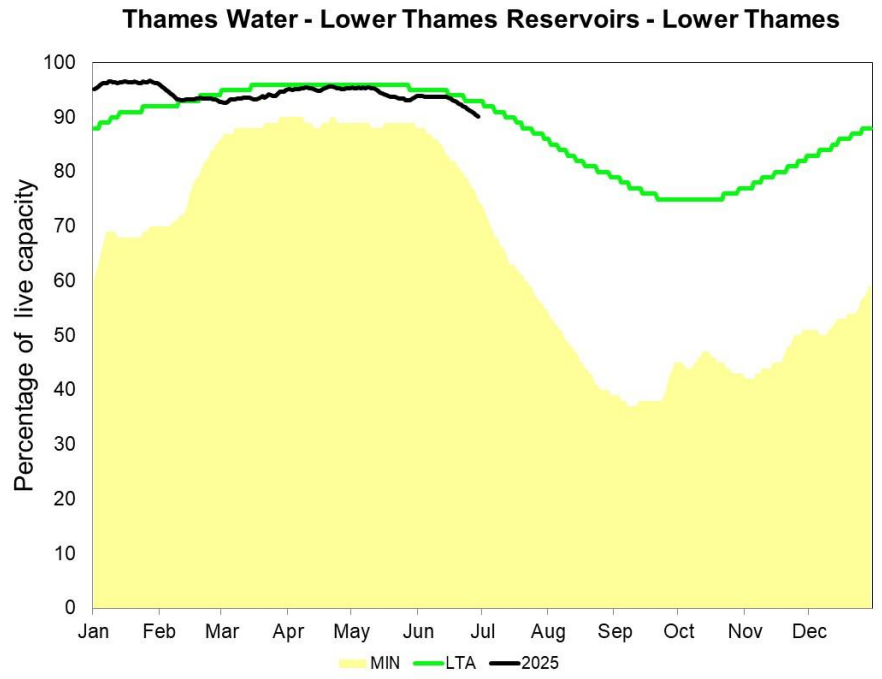
*Tile Barn Farm data has been estimated from two local sites since April 2022. A replacement is planned

Source: Environment Agency, 2025.

7 Reservoir stocks

Figure 7.1: End of month regional reservoir stocks compared to minimum and average stocks.

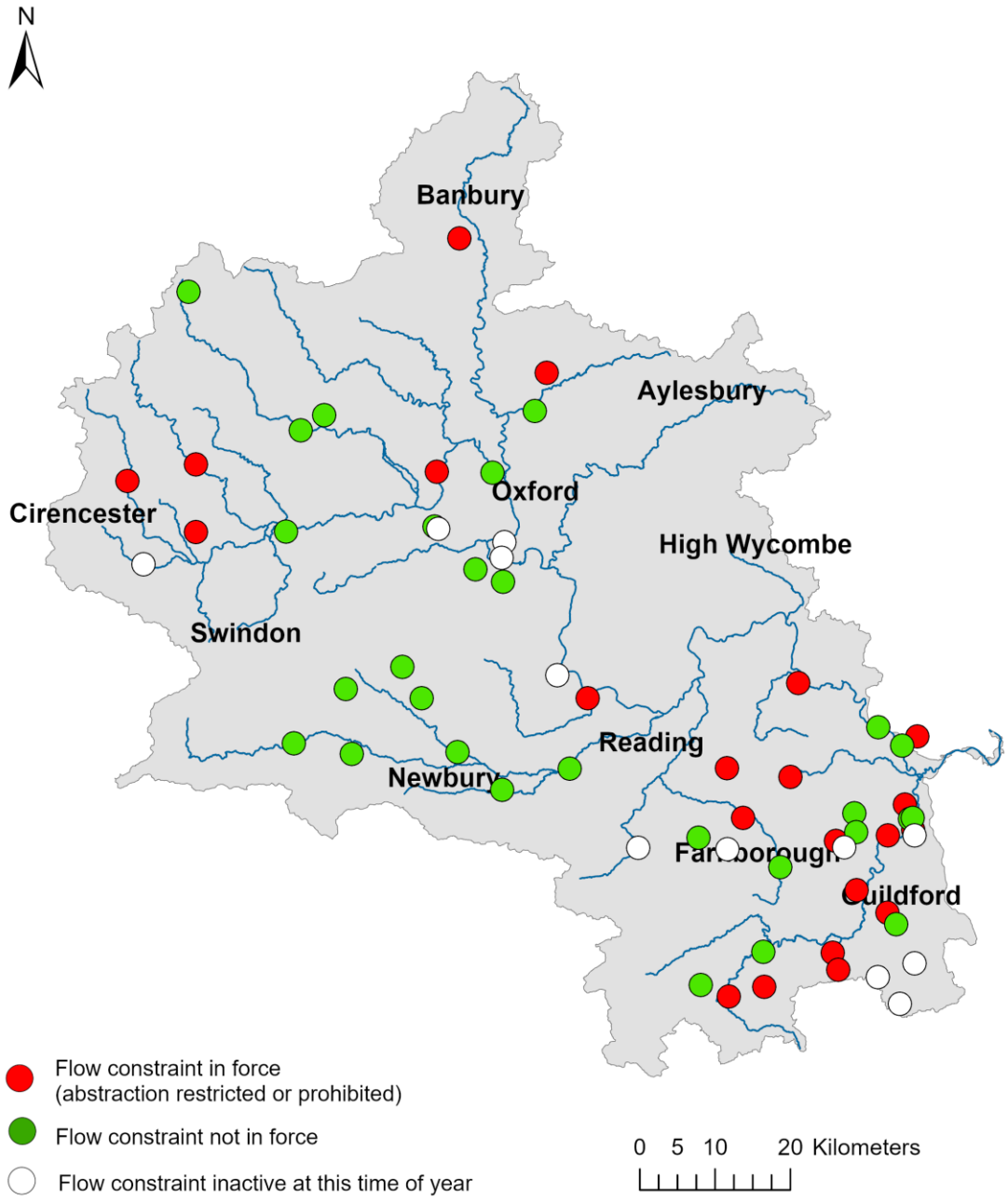




(Source: water companies).

8 Flow Constraints

8.1 Figure 8.1: End of month flow constraints in Thames Area.



8.2 Summary of flow constraints

Week ending	08/06/25	15/06/25	22/06/25	29/06/25
Constraint	7	31	33	34

9 Summary of rainfall, effective rainfall and soil moisture deficit

9.1 Rainfall and effective rainfall

Area	Rainfall (mm) 30 day Total	Rainfall (mm) June LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) 30 day total	Effective Rainfall (mm) June LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	38	59	64	2	9	23
Cotswolds - East	31	54	58	2	7	21
Berkshire Downs	39	54	72	2	6	39
Chilterns - West	31	52	59	1	5	29
North Downs - Hampshire	43	59	72	3	7	45
Wey - Greensand	37	55	67	3	5	53
Upper Thames	38	52	72	0	1	0
Cherwell	27	52	53	0	2	0
Thame	28	48	57	0	1	0
Loddon	29	50	58	0	0	0
Lower Wey	28	51	56	0	0	0
Ock	32	49	66	0	1	0
Enborne	35	53	65	0	2	0
Cut	26	48	53	0	0	
Thames Area	**33**	**53**	**63**	**1**	**3**	**28**

HadUK rainfall data (Source: Met Office Crown copyright 2025)
EA effective rainfall data (Source: EA Soil Moisture Model)

9.2 Soil moisture deficit

Area	SMD (mm) Day 30	SMD (mm) LTA
Cotswolds - West	98	39
Cotswolds - East	99	41
Berkshire Downs	128	69
Chilterns - West	123	73
North Downs - Hampshire	127	70
Wey - Greensand	127	72
Upper Thames	131	70
Cherwell	125	63
Thame	127	69
Loddon	131	76
Lower Wey	125	74
Ock	133	75
Enborne	130	70
Cut	129	81
Thames Area	**124**	**67**

HadUK rainfall data (Source: Met Office Crown copyright 2025)
EA effective rainfall data (Source: EA Soil Moisture Model)

9.3 Summer rainfall and effective rainfall

Summer period: 01/04/2025 to 30/06/2025						
Area	Rainfall (mm) Total	Rainfall (mm) LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) Total	Effective Rainfall (mm) LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	78	184	43	5	36	13
Cotswolds - East	73	169	43	5	30	15
Berkshire Downs	80	171	47	4	29	15
Chilterns - West	86	161	53	5	24	21
North Downs - Hampshire	84	176	48	5	35	15
Wey - Greensand	82	168	49	5	32	16
Upper Thames	75	160	47	0	11	0
Cherwell	73	163	45	0	16	0
Thame	75	151	50	0	10	0
Loddon	68	148	46	0	11	0
Lower Wey	80	146	55	0	10	0
Ock	69	151	46	0	9	0
Enborne	72	162	44	0	17	0
Cut	74	141	52	0	7	0
Thames Area	**76**	**161**	**47**	**2**	**20**	**10**

HadUK rainfall data (Source: Met Office Crown copyright 2025)
EA effective rainfall data (Source: EA Soil Moisture Model)

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 1991 to 2020. However, the period used may vary by parameter being reported on (see figure captions for details).

mAOD

Metres above ordnance datum (mean sea level at Newlyn Cornwall).

MORECS

Met Office Rainfall and Evaporation Calculation System. Met Office service providing real time calculation of evapotranspiration, soil moisture deficit and effective rainfall on a 40 by 40 km grid.

Naturalised flow

River flow with the impacts of artificial influences removed. Artificial influences may include abstractions, discharges, transfers, augmentation and impoundments.

NCIC

National Climate Information Centre. NCIC area monthly rainfall totals are derived using the Met Office 5 km gridded dataset, which uses rain gauge observations.

Recharge

The process of increasing the water stored in the saturated zone of an aquifer. Expressed in depth of water (mm).

Reservoir gross capacity

The total capacity of a reservoir.

Reservoir live capacity

The capacity of the reservoir that is normally usable for storage to meet established reservoir operating requirements. This excludes any capacity not available for use (for example, storage held back for emergency services, operating agreements or physical restrictions). May also be referred to as ‘net’ or ‘deployable’ capacity.

Soil moisture deficit (SMD)

The difference between the amount of water actually in the soil and the amount of water the soil can hold. Expressed in depth of water (mm).

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.

11 Appendices

11.1 Rainfall table

Hydrological area	Jun 2025 rainfall % of long term average 1991 to 2020	Jun 2025 band	Apr 2025 to June cumulative band	Jan 2025 to June cumulative band	Jul 2024 to June cumulative band
Berkshire Downs	72	Normal	Exceptionally low	Below normal	Above normal
Chilterns West	59	Below Normal	Notably low	Below normal	Normal
Cotswold East	58	Below Normal	Exceptionally low	Notably low	Above normal
Cotswold West	65	Normal	Exceptionally low	Notably low	Normal
Cut	54	Below Normal	Notably low	Below normal	Normal
Enborne	66	Normal	Exceptionally low	Below normal	Normal
Loddon	58	Below Normal	Exceptionally low	Below normal	Normal
Lower Wey	56	Below Normal	Notably low	Below normal	Normal
North Downs - Hampshire	72	Normal	Notably low	Below normal	Normal

Ock	66	Normal	Exceptionally low	Notably low	Normal
Thame	57	Below Normal	Exceptionally low	Notably low	Normal
Upper Cherwell	53	Below Normal	Exceptionally low	Notably low	Normal
Upper Thames	71	Normal	Exceptionally low	Notably low	Normal
Wey - Greensand	67	Normal	Notably low	Below normal	Normal

11.2 River flows table

Site name	River	Catchment	Jun 2025 band	May 2025 band
Abingdon	River Ock	Ock	Normal	Normal
Banbury	River Cherwell	Cherwell Upper	Normal	Below normal
Bibury	River Coln	Cotswolds West	Exceptionally Low	Notably Low
Bourne End (hedsor)	River Wye	Wye Bucks	Normal	Above normal
Cassington	River Evenlode	Evenlode	Notably low	Notably low
Farmoor (naturalised)	River Thames	Thames	Below normal	Notably low
Kingston	River Thames	Thames North Bank	Below normal	Below normal
Marlborough	River Kennet	Kennet	Below normal	Normal
Sheepbridge	River Loddon	Loddon	Below normal	Normal
Swallowfield	River Blackwater	Loddon	Below normal	Below normal
Tilford	River Wey	Wey Addleston Bourne	Normal	Normal
Weybridge	River Wey	Wey Addleston Bourne	Normal	Normal
Wheatley	River Thame	Thame	Notably low	Below normal

Windsor	River Thames	Thames	Below normal	Notably low
Kingston (naturalised)	River Thames	Thames North Bank	Below normal	Below normal

11.3 Groundwater table

Site name	Aquifer	End of Jun 2025 band	End of May 2025 band
Ampney Crucis Obh	Burford Oolitic Limestone (great)	Below normal	Below normal
Frith Cottage	Godalming Lower Greensand	Notably high	Notably high
Gibbet Cottages Obh	Berkshire Downs Chalk	Normal	Above normal
Jackaments Bottom Obh	Burford Oolitic Limestone (inferior)	Exceptionally low	Exceptionally low
Marcham Obh	Shrivenham Corallian	Normal	Above normal
Model Farm	Chiltern Upper Greensand	Normal	Normal
Rockley Obh	Berkshire Downs Chalk	Below normal	Normal
Stonor Estate	South-west Chilterns Chalk	Notably high	Notably high
The Flashes Obh	Godalming Lower Greensand	Notably high	Notably high
Tile Barn Farm	Basingstoke Chalk	Normal	Normal

Fringford P.s.	Upper Bedford Ouse Oolitic Limestone (great)	Below normal	Normal