Monthly water situation report: Thames Area

1 Summary - September 2025

Thames area received 69mm of rainfall in September, which was 121% of the long term average (LTA). Soil moisture deficits (SMD) decreased across Thames area; from 170mm in August to 160mm by the end of September. Monthly mean river flows were mostly normal for the time of year. Groundwater levels continue to decline at all but 2 of our indicator sites in September and ranged from notably low (Jackaments Bottom, Inferior Oolite and Ampney Crucis, Great Oolite) to notably high (Frith Cottage and Flashes, Lower Greensand). Farmoor reservoir and the Lower Thames reservoirs remained below the LTA for the time of the year.

1.1 Rainfall

September was a wetter month with the majority of the month's rain falling over 3 days, the 2, 3 and 14 of September. Thames area received 69mm of rainfall in September, which was 121% of the LTA. All our areal units received either normal or above normal rainfall for the time of the year. The rainfall over the last 6 months, since April, was exceptionally low or notably low in all areal units, indicating a very dry summer. Thames area received 66% of the LTA rainfall that would be expected for the summer period (April to September).

1.2 Soil moisture deficit and recharge

SMD decreased across Thames area; from 170mm in August to 160mm by the end of September. This was still far above the LTA of 99mm for the time of year, indicating that soils are considerably drier than expected. As we enter the winter period, soils must become fully wetted before recharge to groundwater resources can happen.

1.3 River flows

Monthly mean flows increased at the majority of the key indicator sites compared to last month, in response to the wetter conditions. Despite this, monthly mean river flows at the majority of our key indicator were normal for the time of year. The River Coln at Bibury was the only indicator site to record exceptionally low flows due to groundwater levels in the oolites.

1.4 Groundwater levels

Groundwater levels continued to decline at all but 2 of our indicator sites during September. Levels ranged from notably low at Jackaments Bottom (Inferior Oolite) and Ampney Crucis (Great Oolite), to notably high at Frith Cottage and the Flashes (Lower Greensand).

Most sites remained within the same banding as the previous month. However, Rockley (Chalk) rose from notably low to below normal, while Jackaments Bottom improved from exceptionally low to notably low.

Groundwater levels at Ampney Crucis and the Flashes have begun to rise, and the rate of decline has slowed across the remaining sites which is likely due to recent rainfall.

Overall, groundwater levels in the Oolites and Chalk are normal to notably low, whereas levels in the slower-responding Lower Greensand remain notably high for this time of year.

1.5 Reservoir stocks

Stocks in Farmoor reservoir increased from 81.6% to 87% during September. Reservoir stocks decreased in the Lower Thames reservoirs and ended the month at 63.6% compared to 66.6% at the end of August. Both the Farmoor reservoir and Lower Thames reservoirs remained below the LTA for the time of the year.

1.6 Environmental impact

At the end of the month, 38 abstraction licences were being constrained in the area to protect water resources and the environment. There were also no flood alerts or flood warnings issued.

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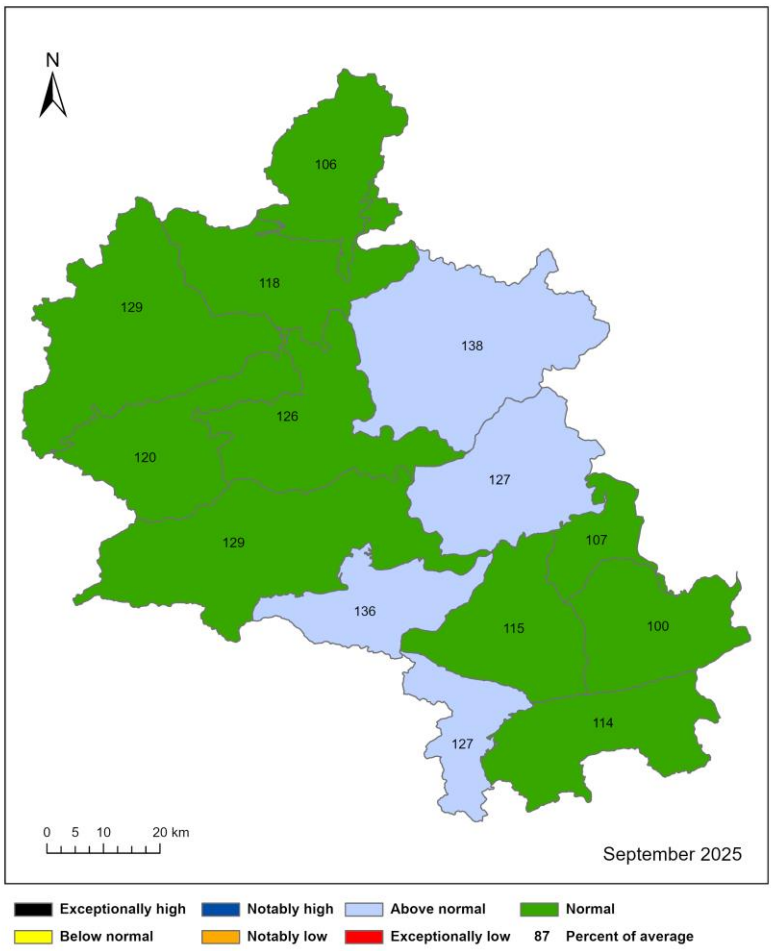
Contact Details: 030708 506 506

2 Rainfall

2.1 Rainfall map

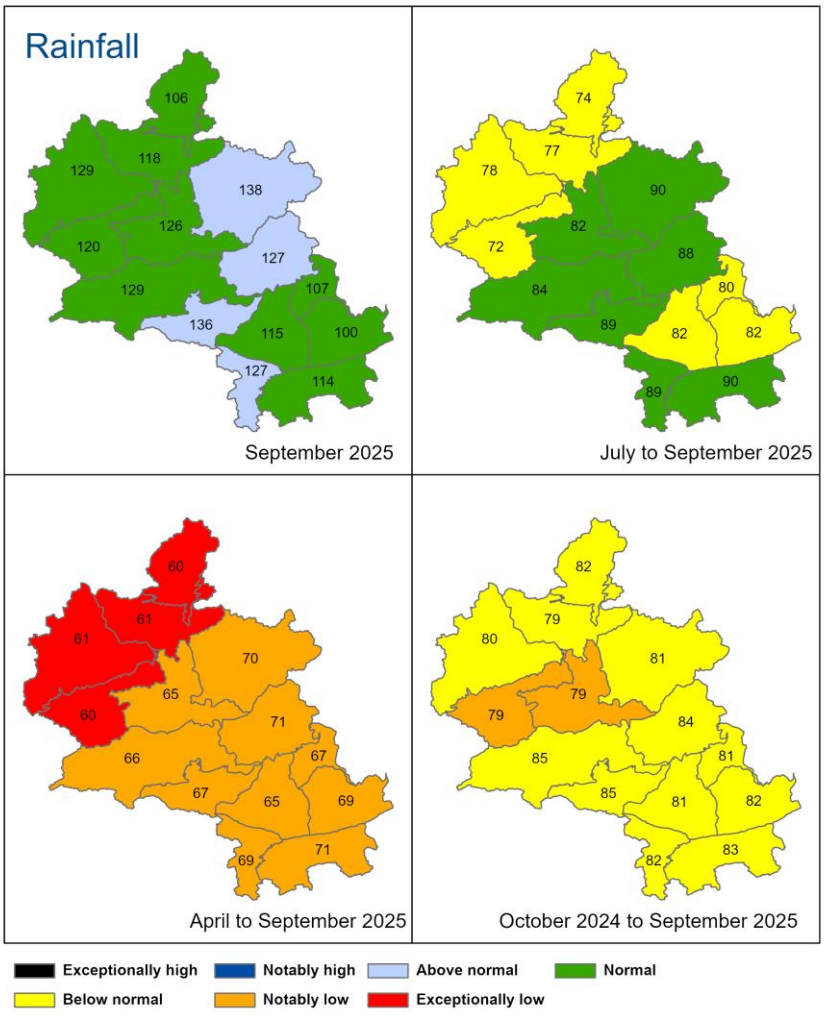
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 30 September 2025), classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.



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

2.2 Rainfall map (2)

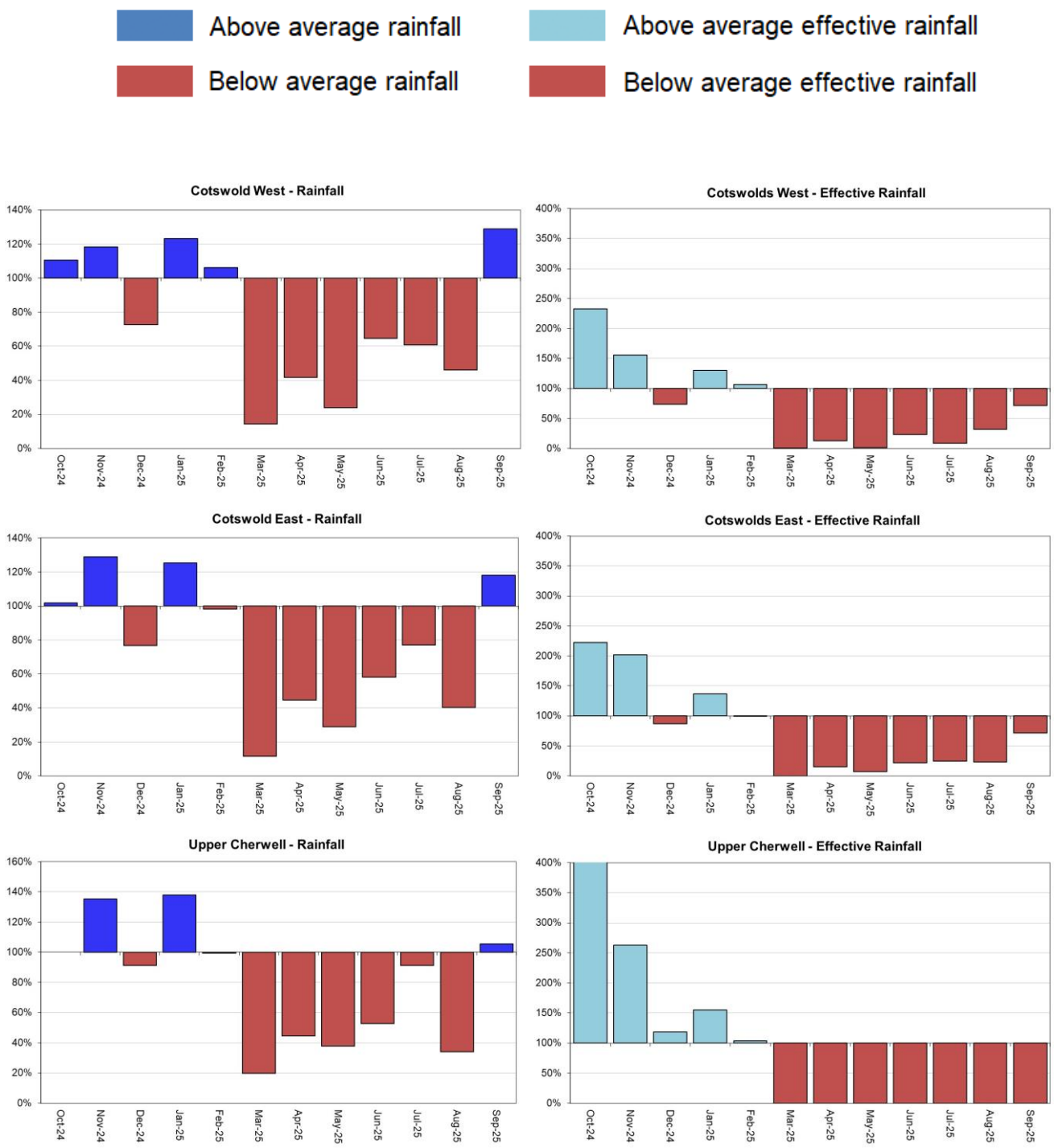
Figure 2.2: Total rainfall for hydrological areas for the current month (up to 30 September 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

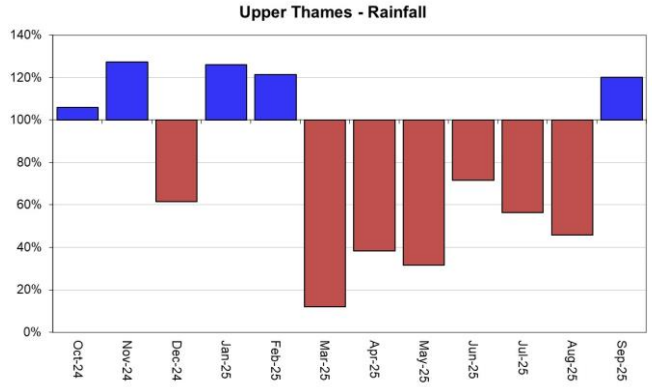


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges (Source: Environment Agency).

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.




Upper Thames - Rainfall
140%
120%
100%
80%
60%
40%
20%
0%
Oct-24
Nov-24
Dec-24
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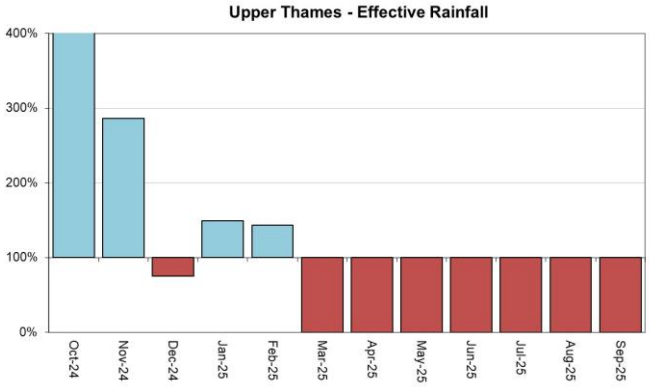
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25


Upper Thames - Effective Rainfall
400%
300%
200%
100%
0%
Oct-24
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Dec-24
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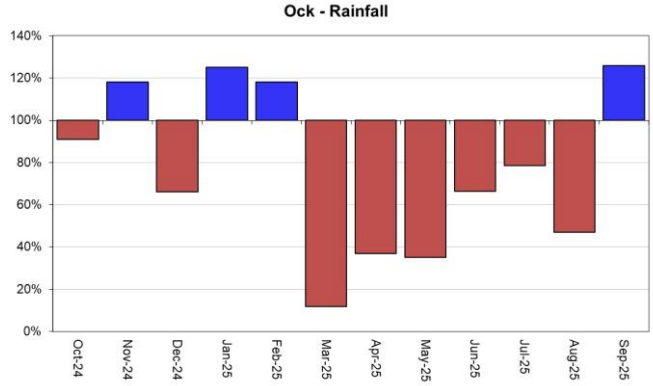
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25


Ock - Rainfall
140%
120%
100%
80%
60%
40%
20%
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Oct-24
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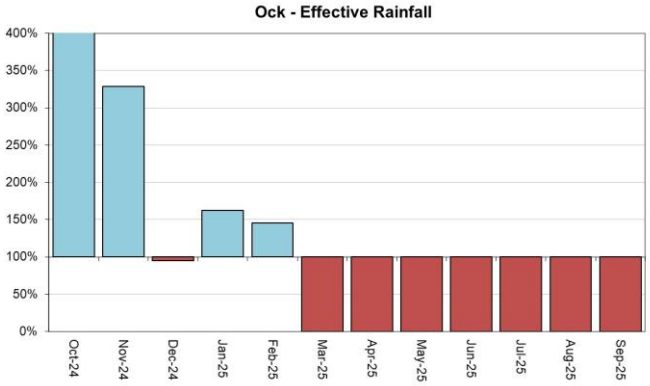
Aug-25
Sep-25


Ock - Effective Rainfall
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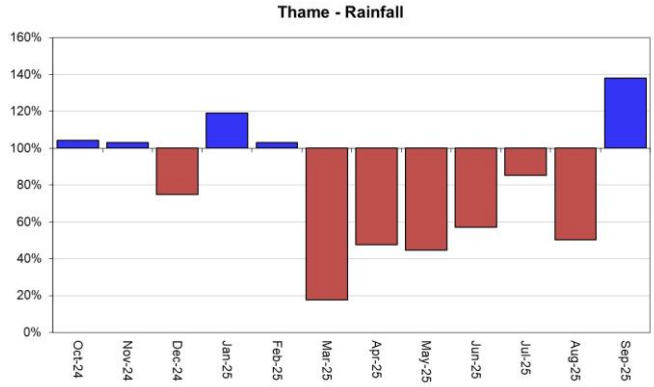
Thame - Rainfall
160%
140%
120%
100%
80%
60%
40%
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Oct-24
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Mar-25
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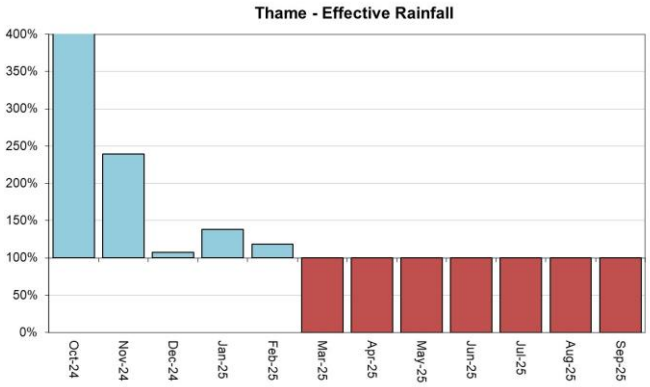
Sep-25


Thame - Effective Rainfall
400%
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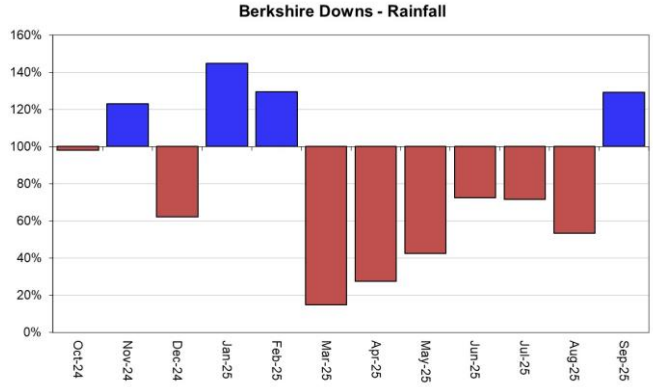
Berkshire Downs - Rainfall
160%
140%
120%
100%
80%
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20%
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Oct-24
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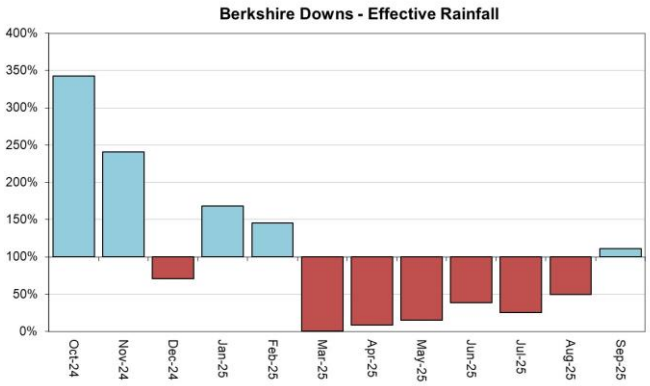
Berkshire Downs - Effective Rainfall
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100%
50%
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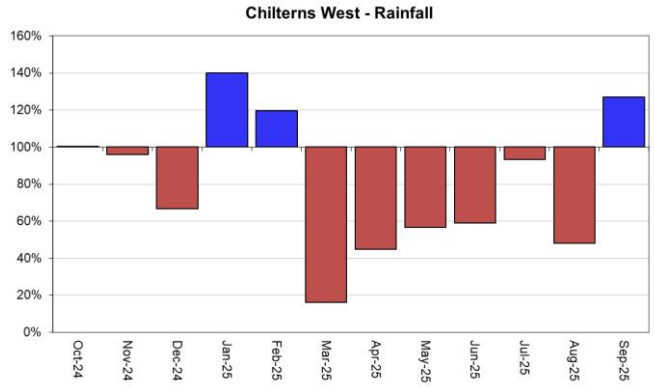
Chilterns West - Rainfall
160%
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80%
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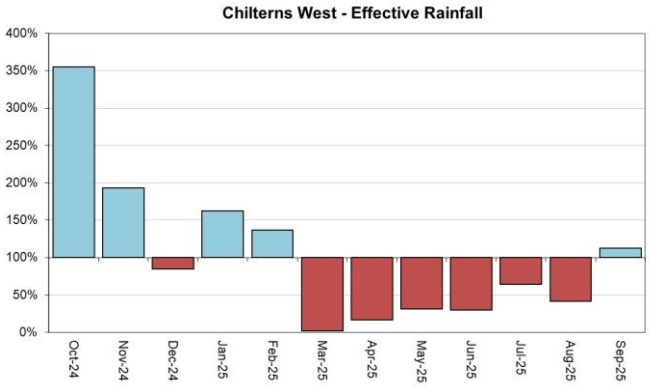
Chilterns West - Effective Rainfall
400%
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100%
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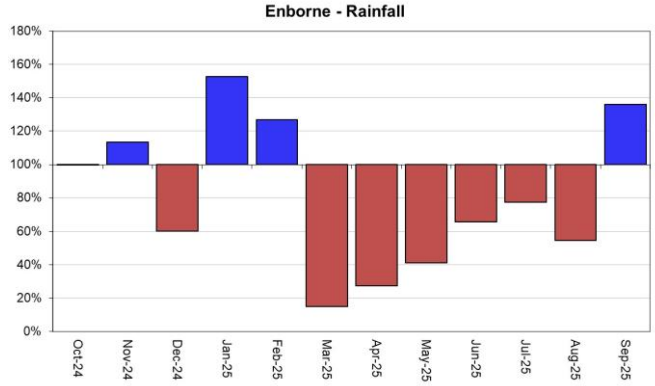
Enborne - Rainfall
180%
160%
140%
120%
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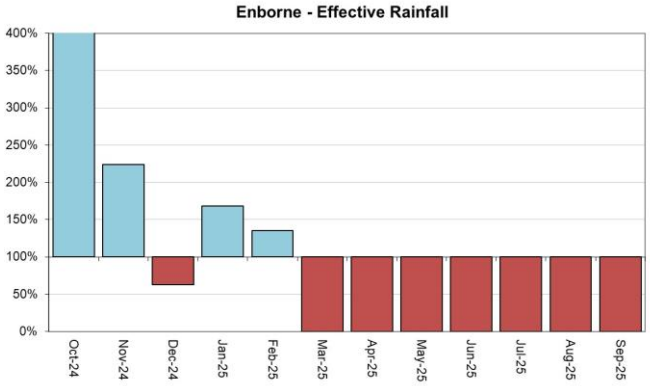
Enborne - Effective Rainfall
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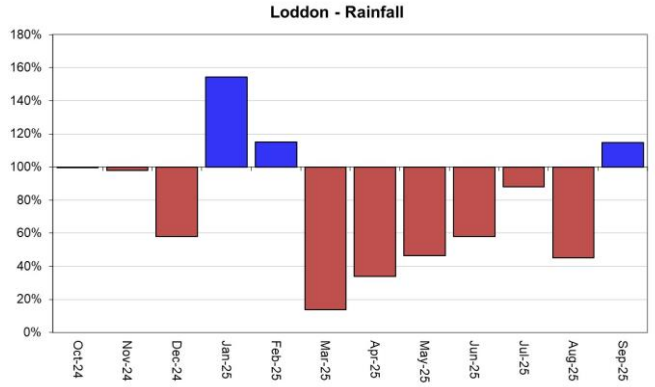
Loddon - Rainfall
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
Oct-24
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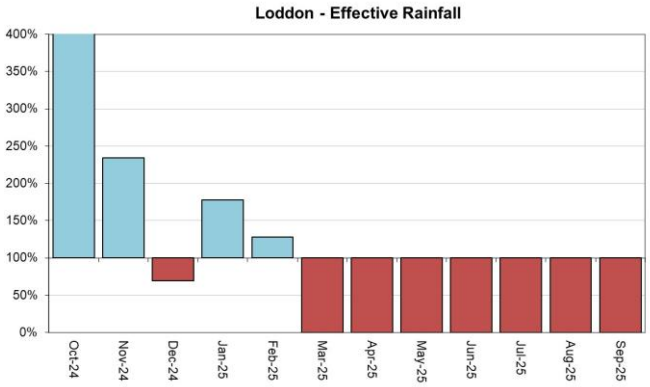
Loddon - Effective Rainfall
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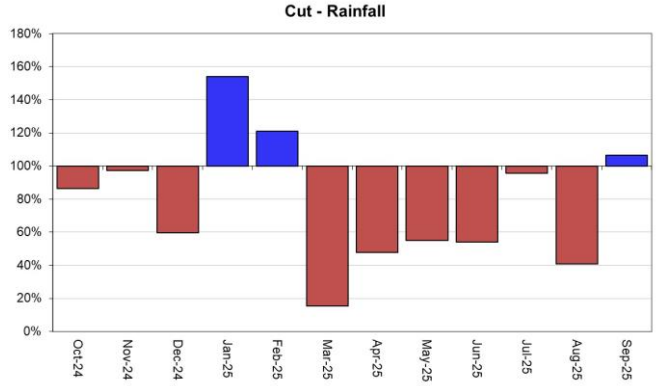
Aug-25
Sep-25


Cut - Rainfall
180%
160%
140%
120%
100%
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40%
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Oct-24
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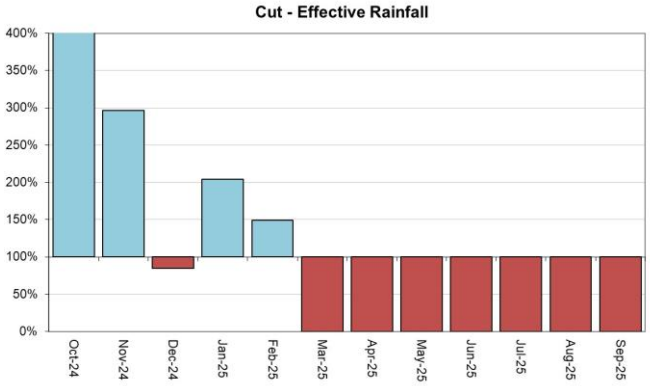
Cut - Effective Rainfall
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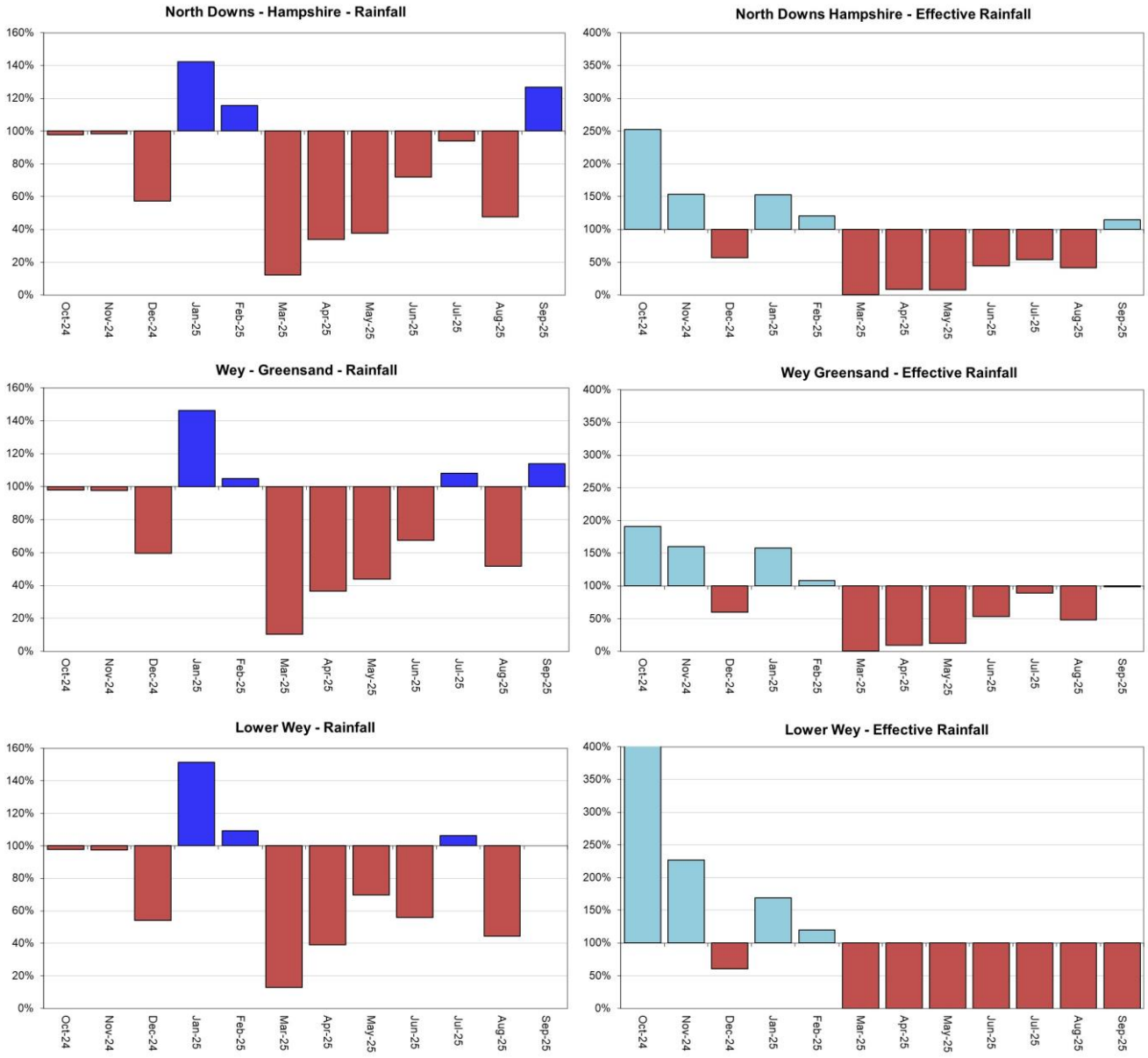
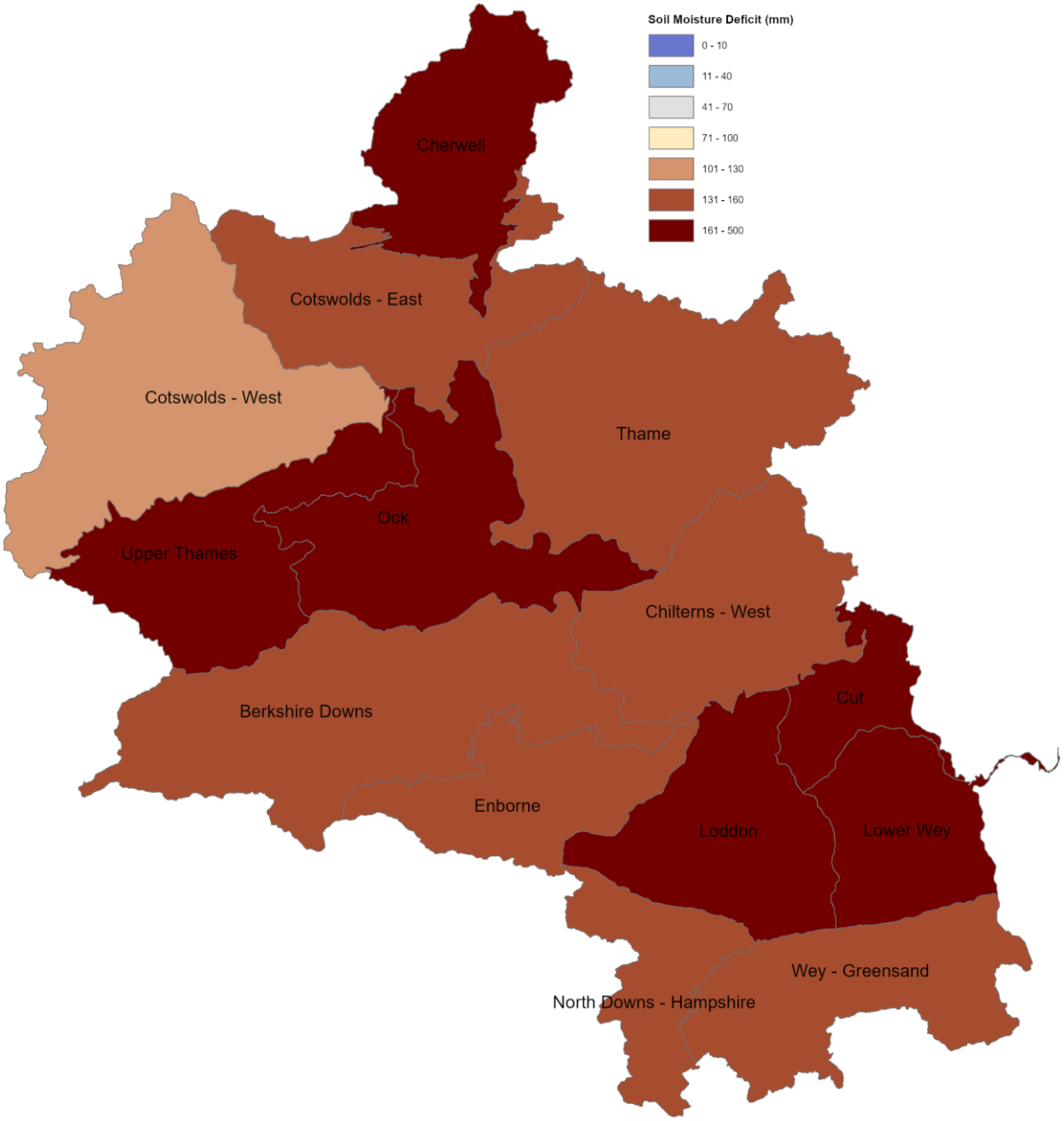


HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).
EA effective rainfall data (Source: EA Soil Moisture Model)

3 Soil moisture deficit

3.1 Soil moisture deficit map

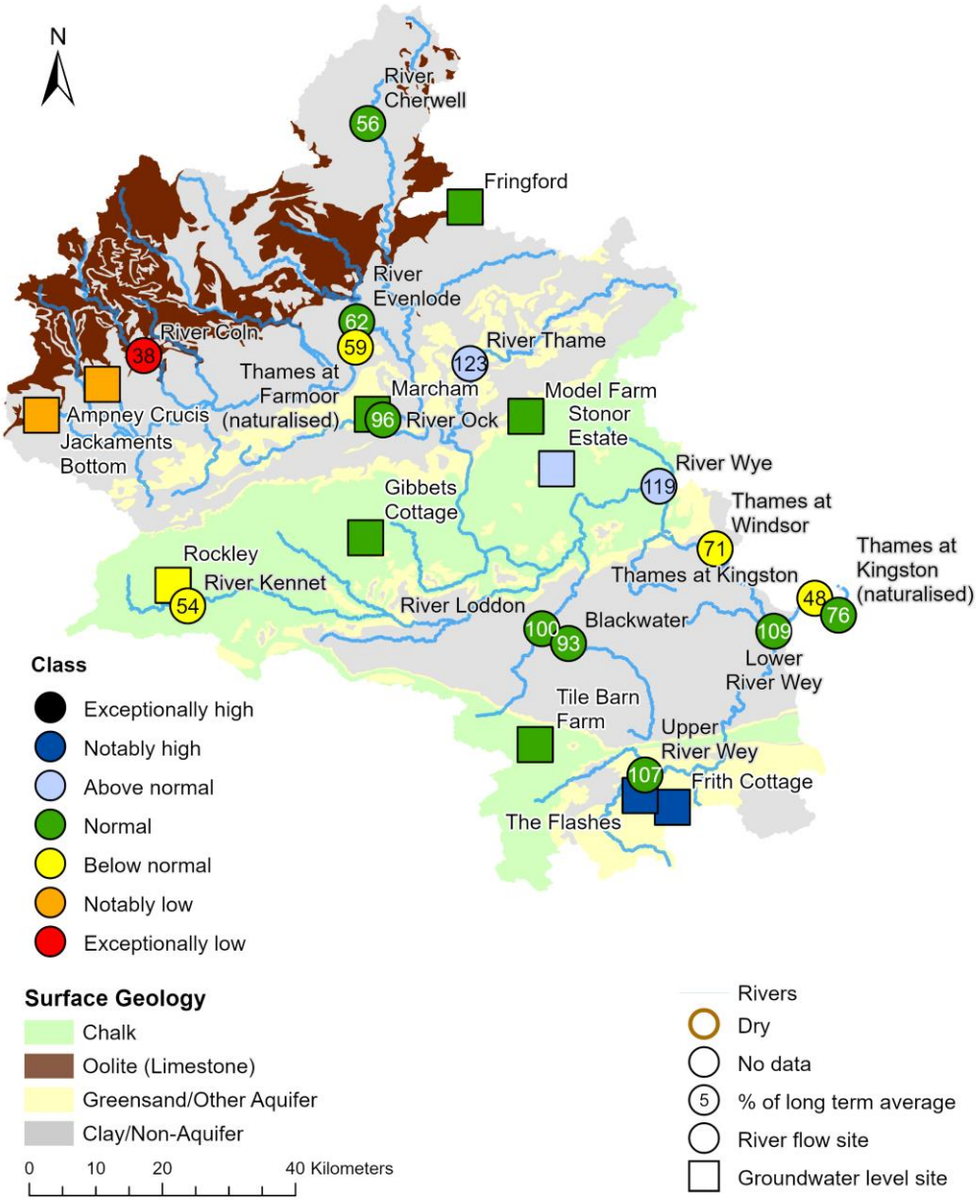
Figure 3.1: Soil moisture deficits for the week ending 30 September 2025. Shows the areal SMD estimate in millimetres.



4 River Flow and Groundwater Status

4.1 River flow and groundwater level map

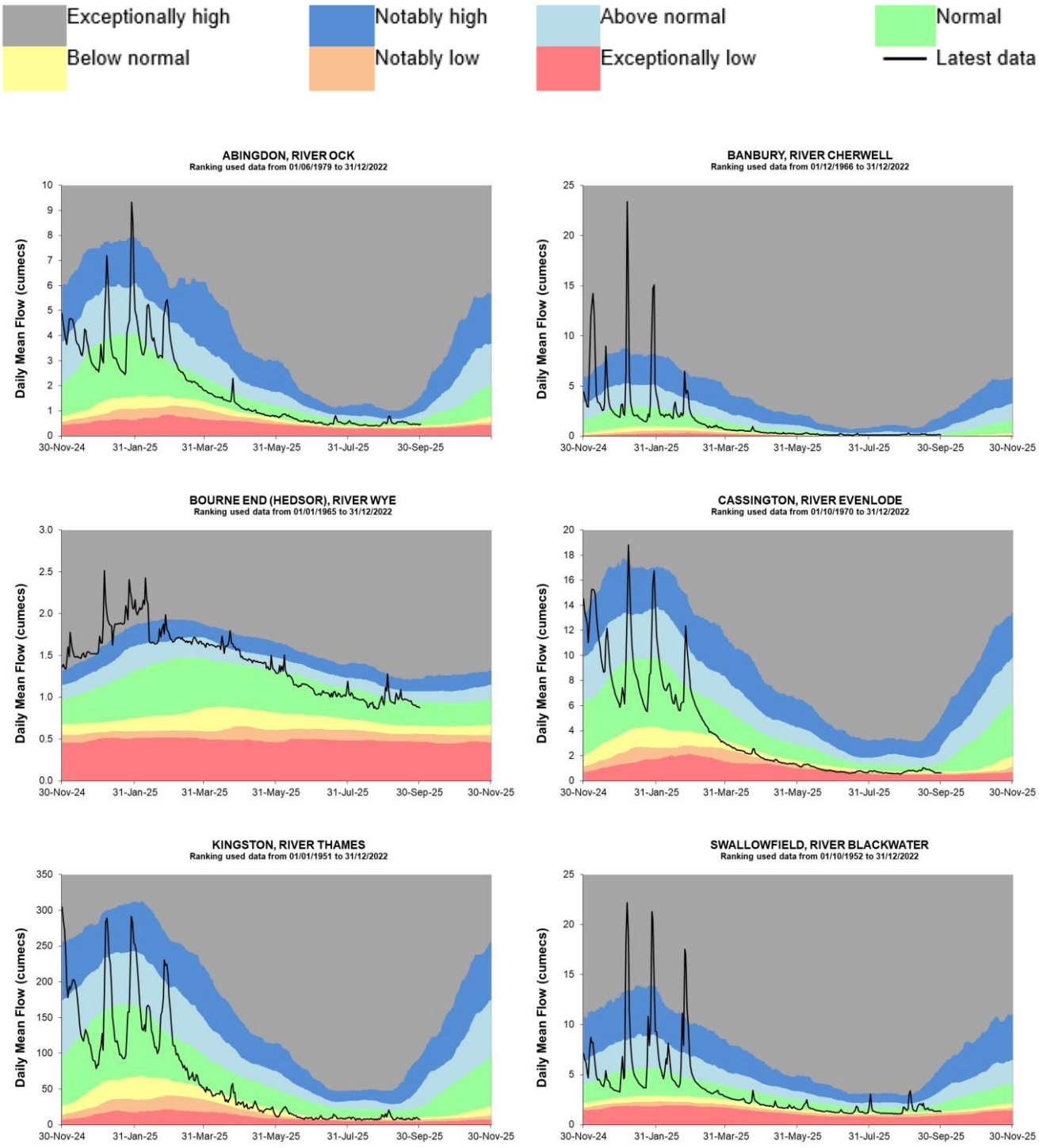
Figure 4.1: Monthly mean river flow for indicator sites and end of month groundwater levels for indicator sites for September 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic September means.



5 River flows

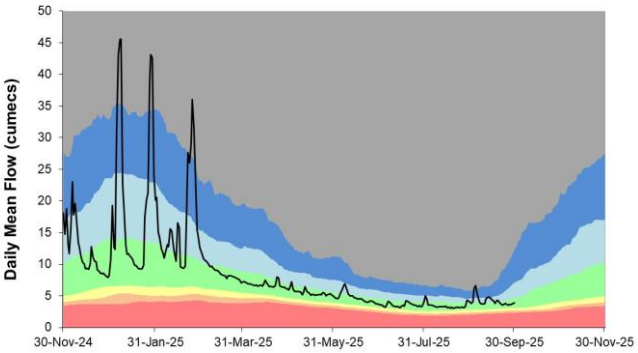
5.1 River flow charts

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.



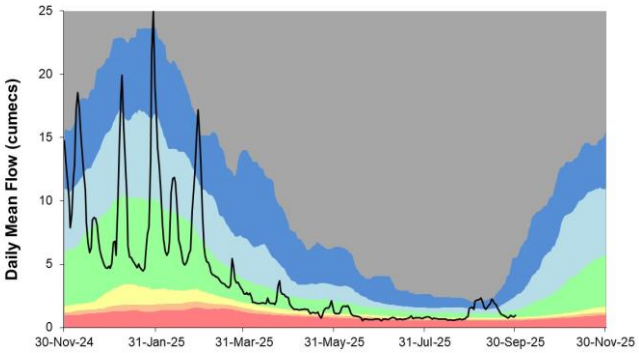
WEYBRIDGE, RIVER WEY

Ranking used data from 01/04/1979 to 31/12/2022



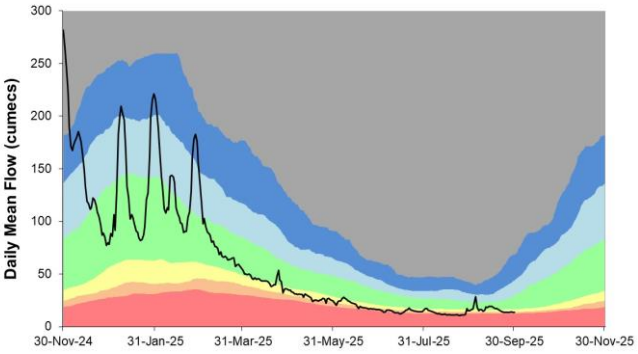
WHEATLEY, RIVER THAME

Ranking used data from 01/01/1990 to 31/12/2022



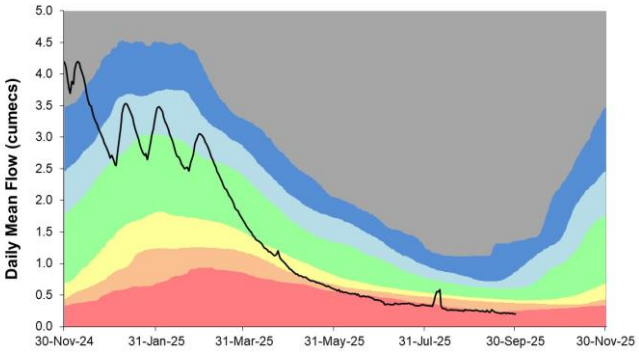
WINDSOR, RIVER THAMES

Ranking used data from 01/08/1979 to 31/12/2022



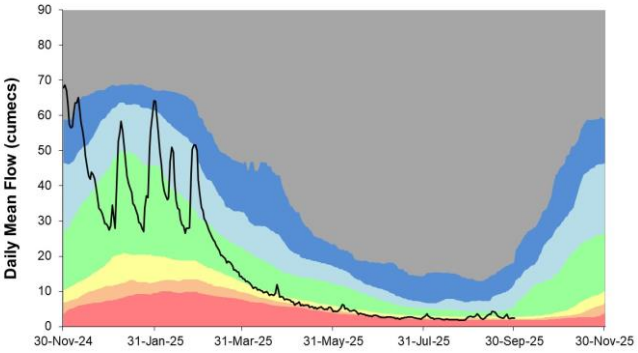
BIBURY, RIVER COLN

Ranking used data from 01/10/1963 to 31/12/2022



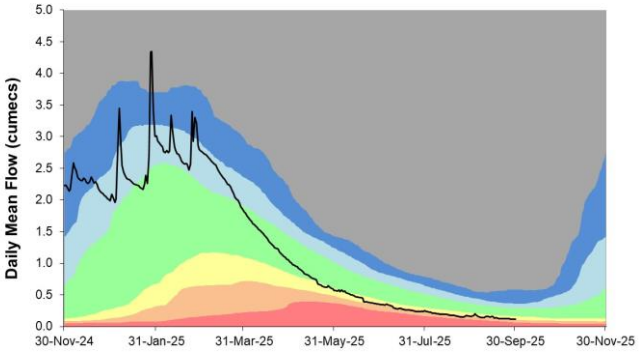
FARMOOR (NATURALISED), RIVER THAMES

Ranking used data from 01/10/1992 to 31/12/2022



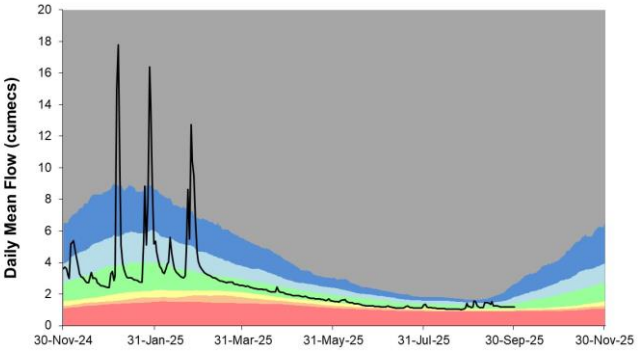
MARLBOROUGH, RIVER KENNET

Ranking used data from 01/02/1972 to 31/12/2022



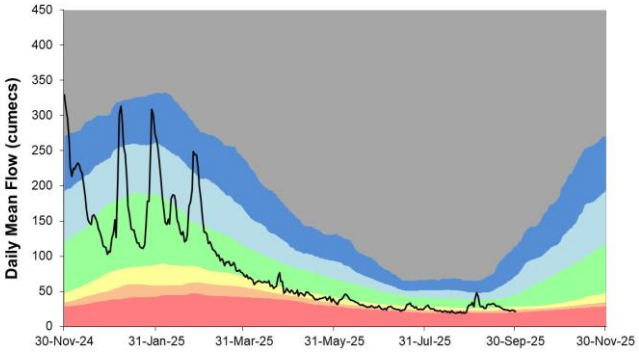
SHEEPBRIDGE, RIVER LODDON

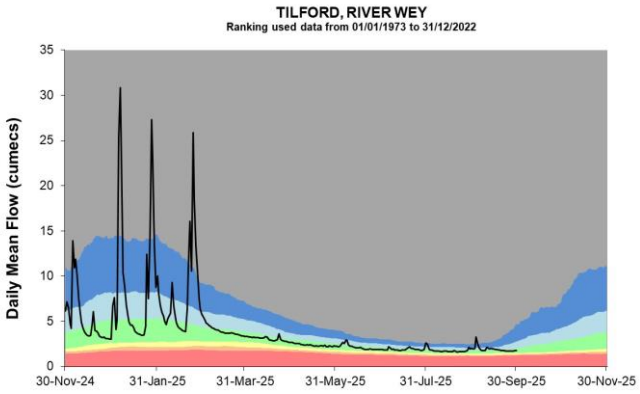
Ranking used data from 01/10/1965 to 31/12/2022



KINGSTON (NATURALISED), RIVER THAMES

Ranking used data from 01/01/1951 to 31/12/2022



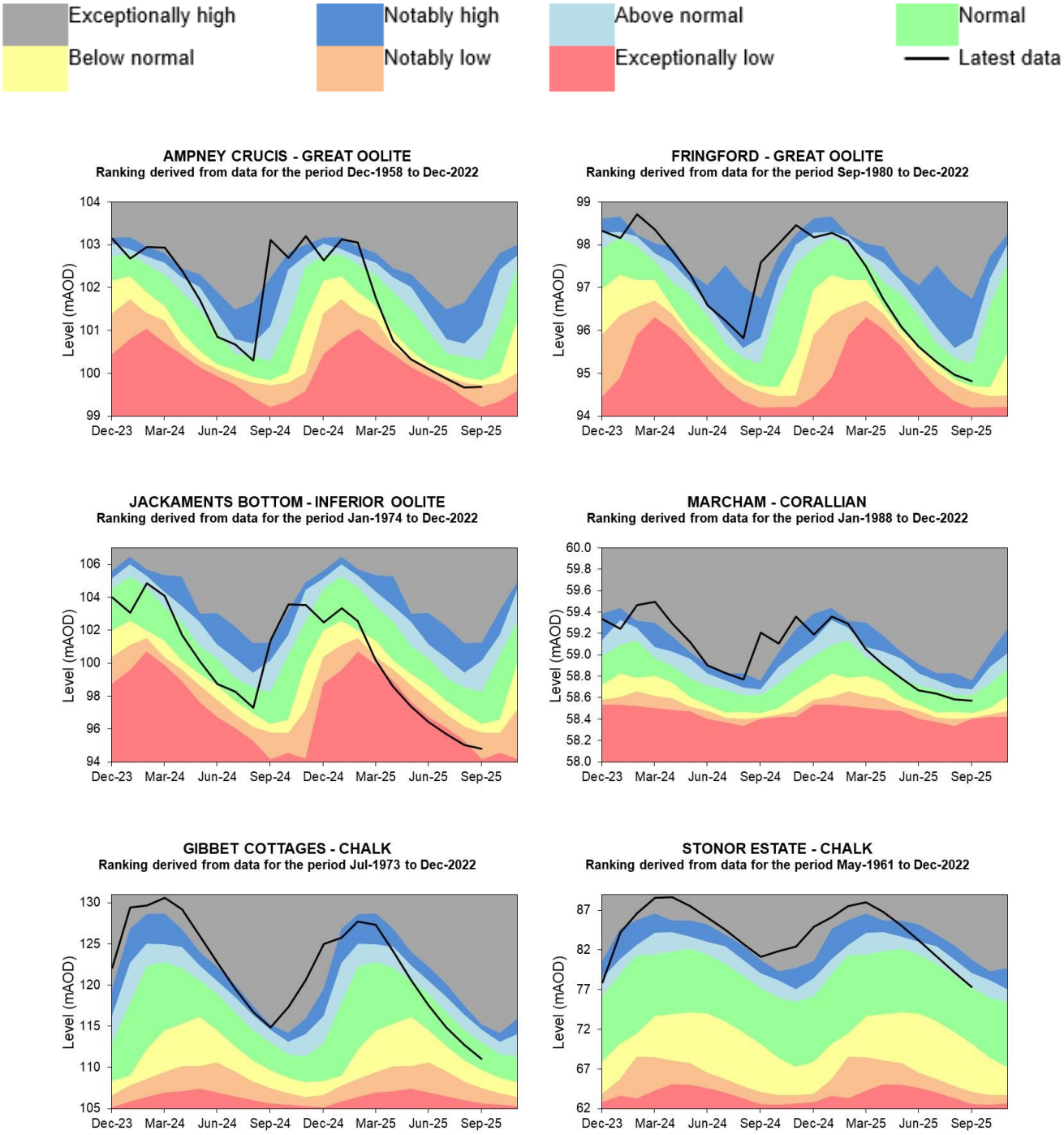


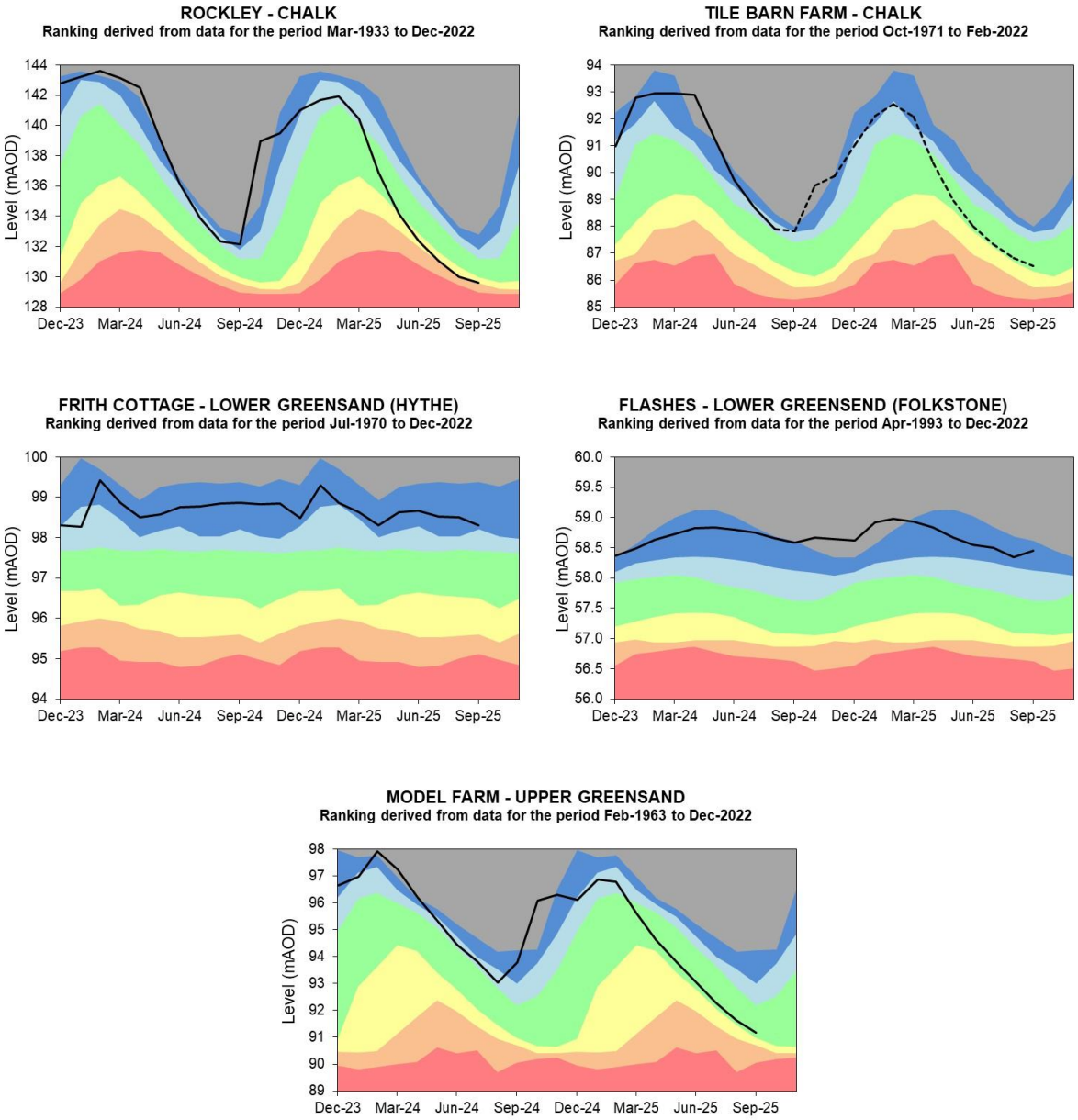
Source: Environment Agency.

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.



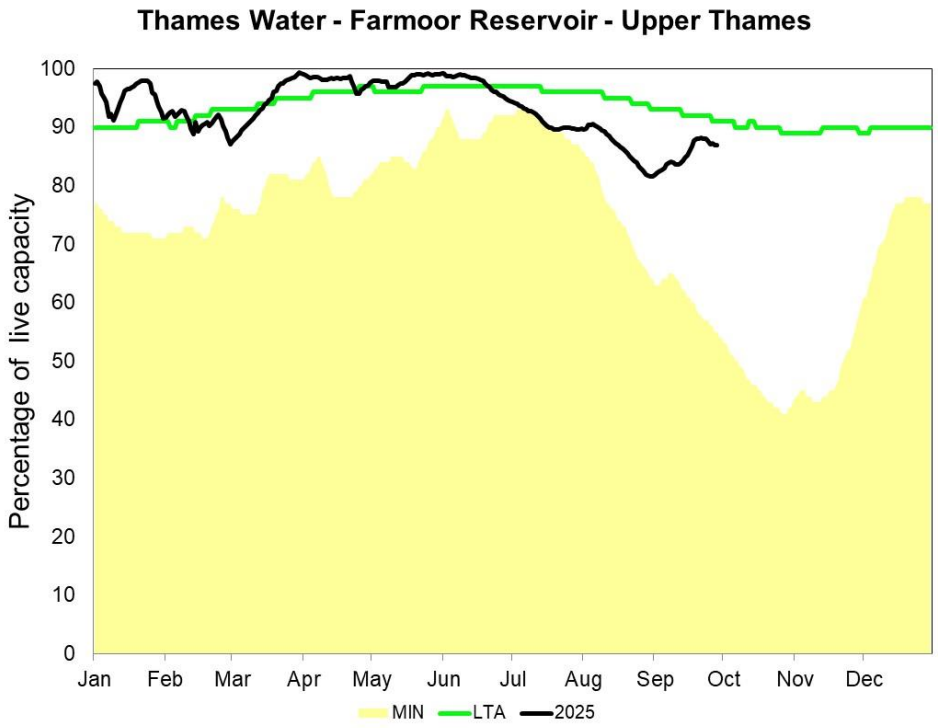


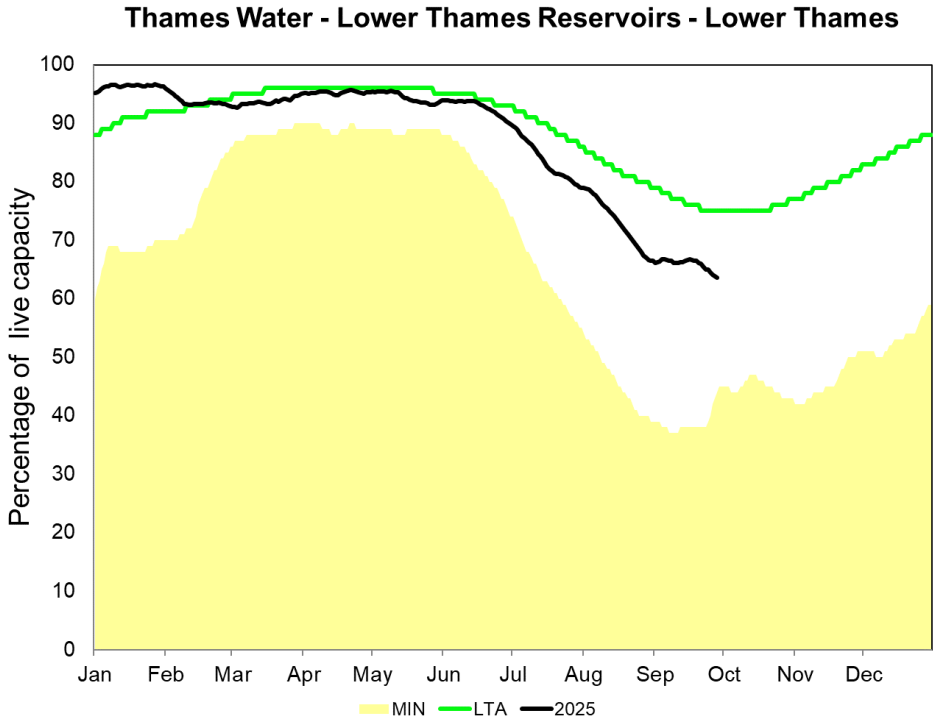
*Tile Barn Farm data has been estimated from two local sites since April 2022. A replacement is planned

Source: Environment Agency, 2025.

7 Reservoir stocks

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

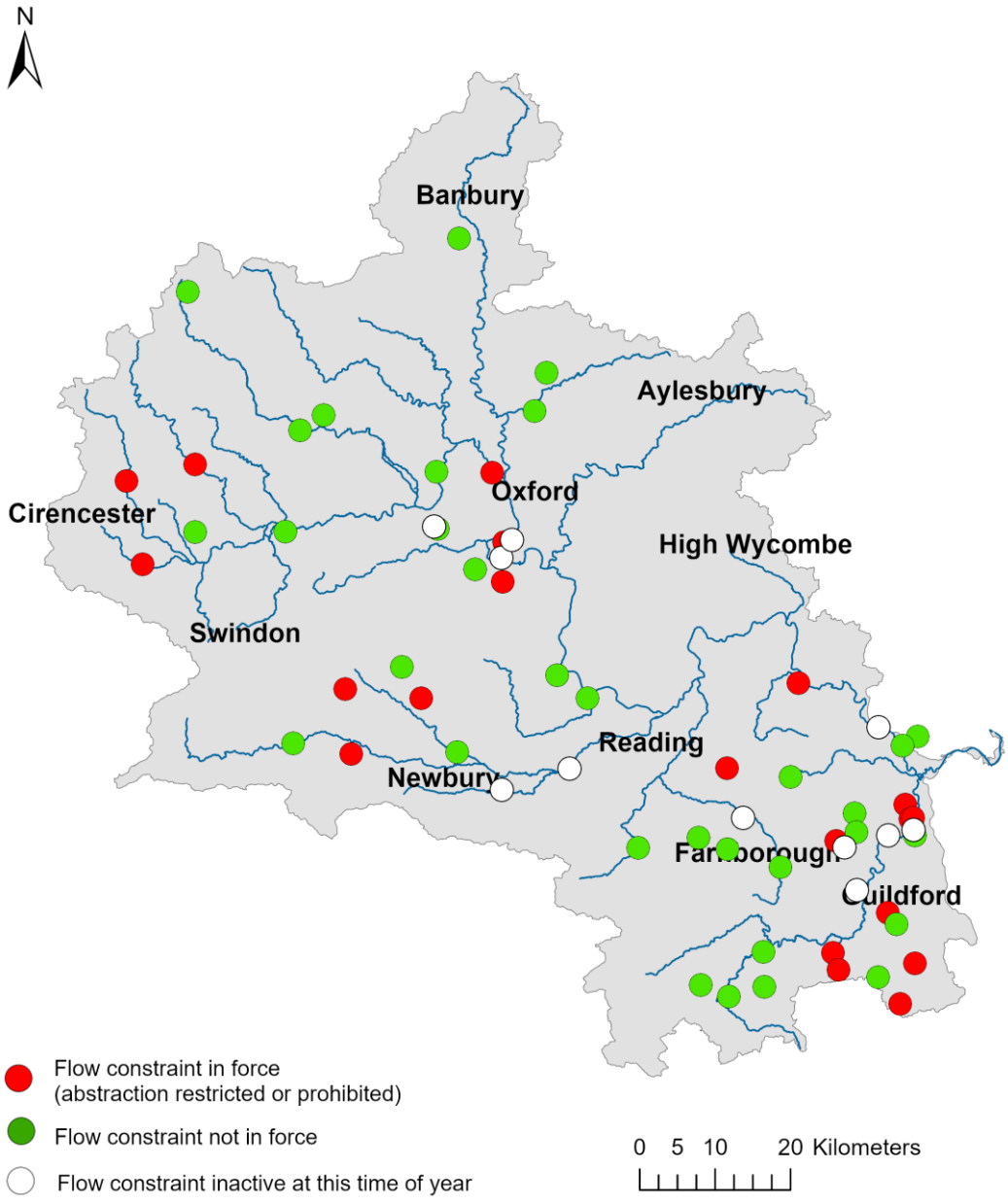




(Source: water companies).

8 Flow Constraints

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



8.2 Summary of flow constraints

Week ending	07/09/25	14/09/25	21/09/25	28/09/25
Constraints enforced by week	28	33	38	38

9 Summary of rainfall, effective rainfall and soil moisture deficit

9.1 Rainfall and effective rainfall

Area	Rainfall (mm) 30 day Total	Rainfall (mm) September LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) 30 day total	Effective Rainfall (mm) September LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	83	64	129	8	11	71
Cotswolds - East	68	57	118	6	9	71
Berkshire Downs	77	59	130	8	7	111
Chilterns - West	74	58	127	7	7	113
North Downs - Hampshire	85	67	127	9	8	116
Wey - Greensand	74	65	114	7	7	99
Upper Thames	64	53	120	0	0	0
Cherwell	60	56	106	0	2	0
Thame	73	53	138	0	0	0
Loddon	63	55	115	0	0	0
Lower Wey	55	56	99	0	0	0
Ock	64	51	125	0	0	0
Enborne	77	57	135	0	1	0
Cut	55	52	106	0	0	0
Thames Area	**69**	**57**	**121**	**3**	**4**	**87**

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	127	63
Cotswolds - East	144	69
Berkshire Downs	157	102
Chilterns - West	157	107
North Downs - Hampshire	147	98
Wey - Greensand	152	100
Upper Thames	177	103
Cherwell	169	89
Thame	155	103
Loddon	173	109
Lower Wey	167	105
Ock	177	113
Enborne	151	102
Cut	183	118
Thames Area	**160**	**99**

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 30/09/2025						
Area	Rainfall (mm) Total	Rainfall (mm) LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) Total	Effective Rainfall (mm) LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	232	381	61	16	65	24
Cotswolds - East	212	351	60	15	54	27
Berkshire Downs	233	353	66	17	49	35
Chilterns - West	239	333	72	18	41	45
North Downs - Hampshire	256	369	70	21	56	37
Wey - Greensand	250	354	71	21	51	41
Upper Thames	198	331	60	0	14	0
Cherwell	207	345	60	0	22	0
Thame	221	314	70	0	12	0
Loddon	202	311	65	0	11	0
Lower Wey	214	309	69	0	10	0
Ock	199	309	64	0	10	0
Enborne	222	331	67	0	20	0
Cut	197	297	66	0	7	0
Thames Area	**220**	**335**	**66**	**8**	**30**	**25**

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	Sep 2025 rainfall % of long term average 1991 to 2020	Sep 2025 band	Jul 2025 to September cumulative band	Apr 2025 to September cumulative band	Oct 2024 to September cumulative band
Berkshire Downs	129	Normal	Normal	Notably low	Below normal
Chilterns West	127	Above Normal	Normal	Notably low	Below normal
Cotswold East	118	Normal	Below normal	Exceptionally low	Below normal
Cotswold West	129	Normal	Below normal	Exceptionally low	Below normal
Cut	107	Normal	Below normal	Notably low	Below normal
Enborne	136	Above Normal	Normal	Notably low	Below normal
Loddon	115	Normal	Below normal	Notably low	Below normal
Lower Wey	100	Normal	Below normal	Notably low	Below normal
North Downs - Hampshire	127	Above Normal	Normal	Notably low	Below normal
Ock	126	Normal	Normal	Notably low	Notably low
Thame	138	Above Normal	Normal	Notably low	Below normal
Upper Cherwell	106	Normal	Below normal	Exceptionally low	Below normal
Upper Thames	120	Normal	Below normal	Exceptionally low	Notably low
Wey - Greensand	114	Normal	Normal	Notably low	Below normal

11.2 River flows table

Site name	River	Catchment	Sep 2025 band	Aug 2025 band
Abingdon	River Ock	Ock	Normal	Normal
Banbury	River Cherwell	Cherwell Upper	Normal	Normal
Bibury	River Coln	Coln	Exceptionally low	Exceptionally low
Bourne End (Hedsor)	River Wye	Wye Bucks	Above normal	Normal
Cassington	River Evenlode	Evenlode	Normal	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	Notably low
Sheepbridge	River Loddon	Loddon	Normal	Normal
Swallowfield	River Blackwater	Loddon	Normal	Below normal
Tilford	River Wey	Wey Addleston Bourne	Normal	Normal
Weybridge	River Wey	Wey Addleston Bourne	Normal	Normal
Wheatley	River Thame	Thame	Above normal	Below normal
Windsor	River Thames	Thames	Below normal	Exceptionally low
Kingston (naturalised)	River Thames	Thames North Bank	Normal	Notably low

11.3 Groundwater table

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