Monthly water situation report: Thames Area

1 Summary - March 2025

Thames area received 7mm of rainfall through March, 11% of the long term average (LTA). All of our areal rainfall units had exceptionally low rainfall throughout the month. Rainfall for this month ranked in the top 10 driest March's on record for most catchments. For Upper Thames and Ock areal rainfall units, this month was the third driest March, and for Cotswolds East, North Downs, Lower Wey and Wey Greensand it ranked as the fourth driest. Thames area overall had its lowest precipitation in March since 1961. River flows decreased at all of our key indicator sites compared with last month. Groundwater levels decreased at all but one of our indicator sites in March. Ampney Crucis, Fringford and Model Farm all dropped into the normal banding for groundwater levels, whilst Jackaments Bottom dropped from normal to notably low. The Lower Thames reservoirs ended the month below average for the time of year whilst Farmoor exceeded the LTA.

1.1 Rainfall

Thames area received 7mm of rainfall in March, 11% of the LTA. All our areal units received exceptionally low levels of precipitation. Rainfall for this month ranked in the top ten driest March's on record for most catchments. For Upper Thames and Ock, this month was the third driest March, and for Cotswolds East, North downs, Lower Wey and Wey Greensands it ranked as the fourth driest. West Thames overall had the driest month since 1961. Despite the dry month, rainfall remained above normal and notably high across Thames area in the past 6 and 12 months.

1.2 Soil moisture deficit and recharge

Soil moisture deficits (SMD) increased from February (4mm) across Thames area to end the month at 31mm, exceeding the LTA of 8mm. The winter period (October to March) ended in March, and although it was a dry month, 153% of LTA effective rainfall occurred over the winter period as a whole.

1.3 River flows

Monthly mean flows decreased at all of our key indicator sites compared to last month. Across the total number of indicator sites, 13 measured as normal, and only 2 sites measured as above normal; these being Bourne End Hedsor (Wye) and Marlborough (Kennet). Additionally, 7 sites remained above 100% of the LTA despite the low rainfall, with Bourne End Hedsor (Wye) and Marlborough being notable examples measuring at over 140%.

1.4 Groundwater levels

Groundwater levels decreased at all but one of our indicator sites in March. Ampney Crucis, Fringford (Great Oolite) and Model Farm (Upper Greensand) all dropped into the normal banding for groundwater levels, whilst Jackaments Bottom (Inferior Oolite) dropped from normal to notably Low. Stonor Estate, despite showing signs of seasonal recovery starting towards the end of the month, remained in the exceptionally high banding, for the 14th month in a row.

1.5 Reservoir stocks

Reservoir stocks rose in the Lower Thames reservoirs and ended the month at 94.8%, compared to 93.1% at the end of January. Stocks in Farmoor reservoir increased from 88.2% to 99.3% during March. The Lower Thames reservoirs ended the month remaining below average for the time of year however Farmoor ended the month with a value which exceeded the LTA.

1.6 Environmental impact

During March there were 5 groundwater flood alerts issued in Thames Area. At the end of the month, 3 abstraction licences were being constrained in the area to protect water resources and the environment.

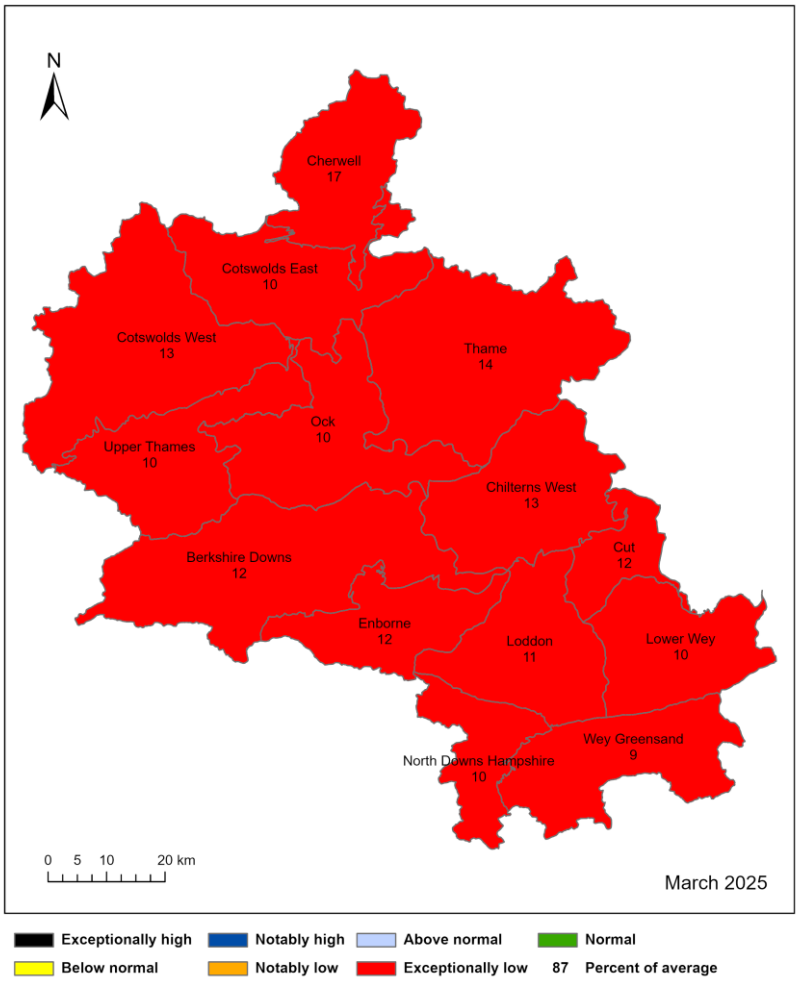
Author: Thames Area Groundwater Resources and Hydrology, enquiriesWT@environment-agency.gov.uk

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 31 March 2025), classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information



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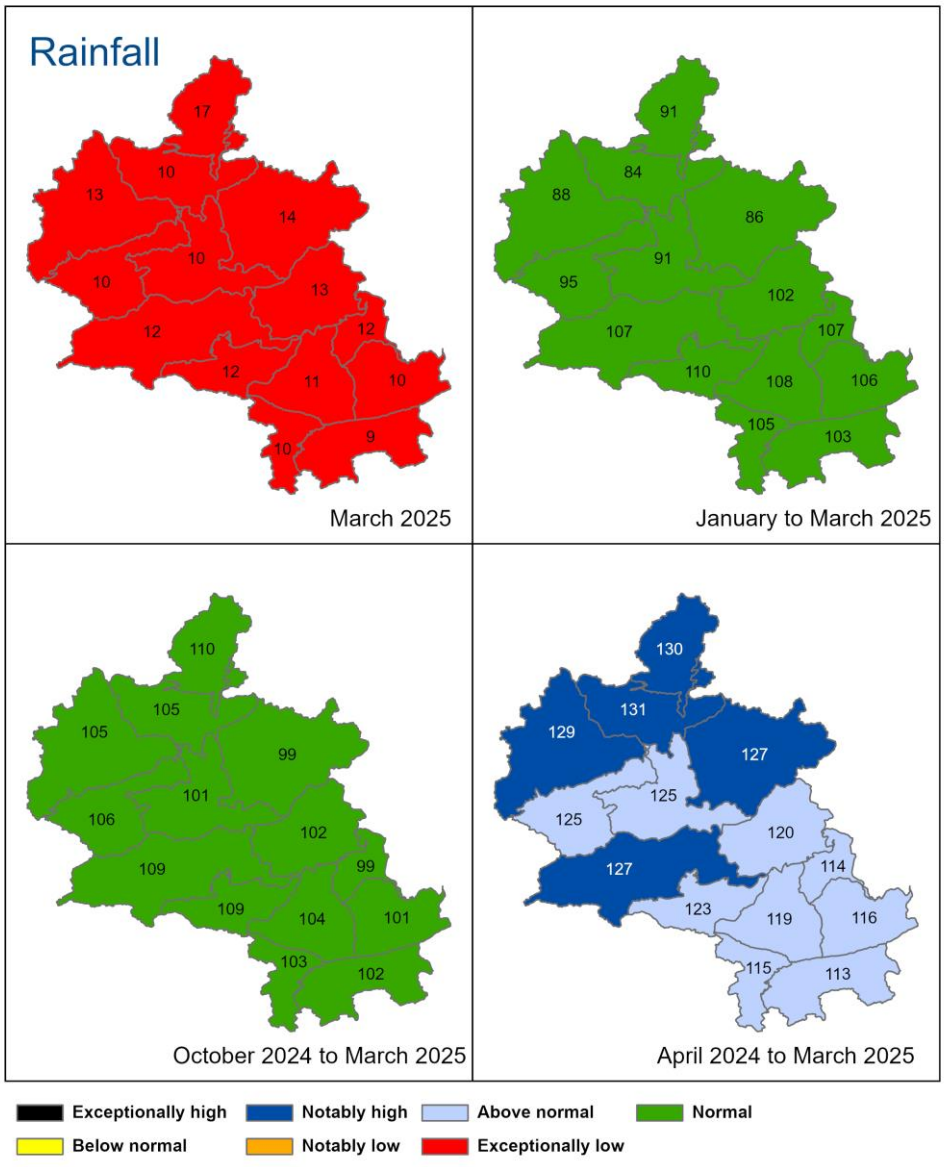
Rainfall data for Oct 2023, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to Oct 2023, extracted from Met Office HadUK 1km gridded rainfall dataset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

2.2 Rainfall map (2)

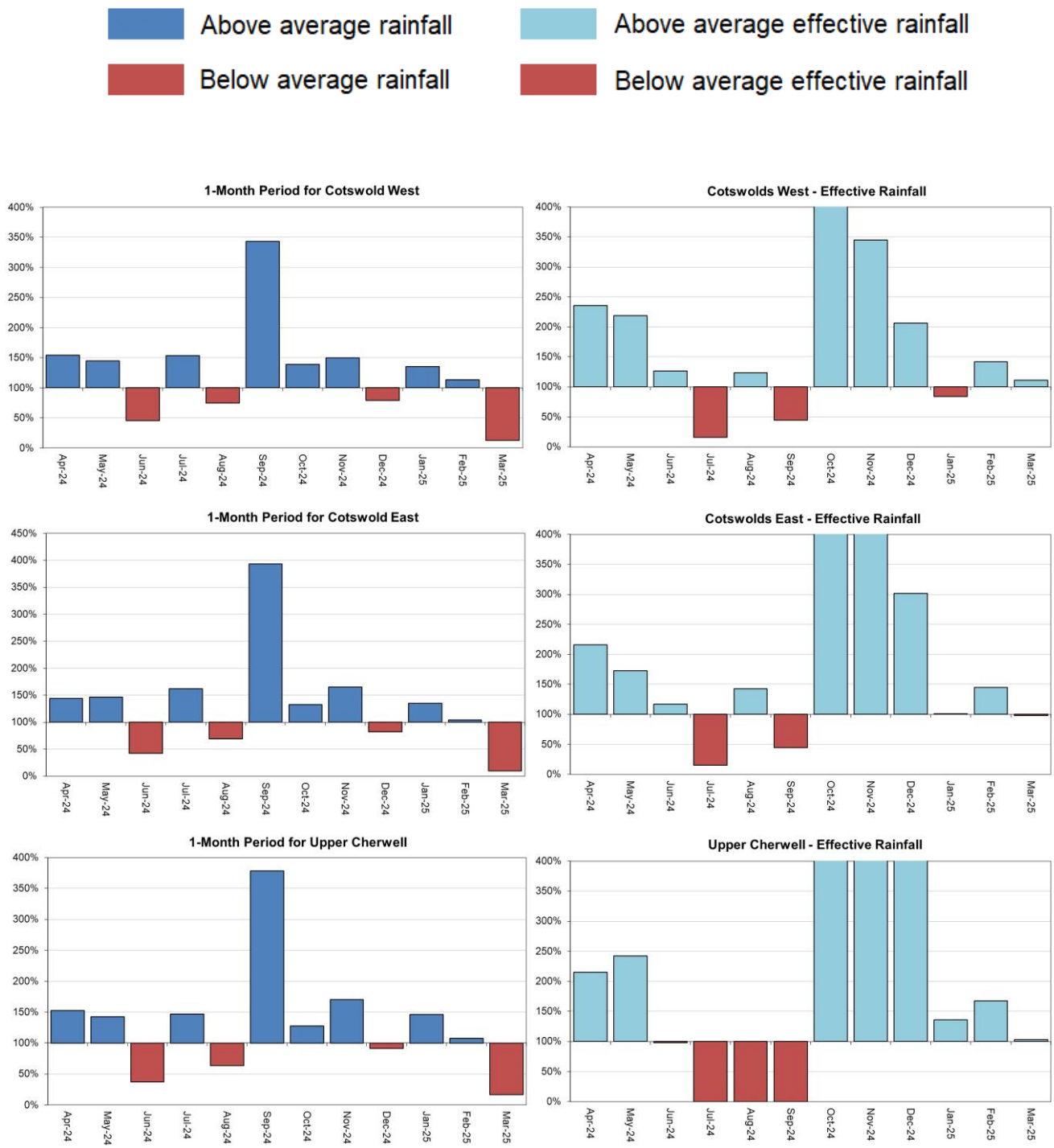
Figure 2.2: Total rainfall for hydrological areas for the current month (up to 31 March 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

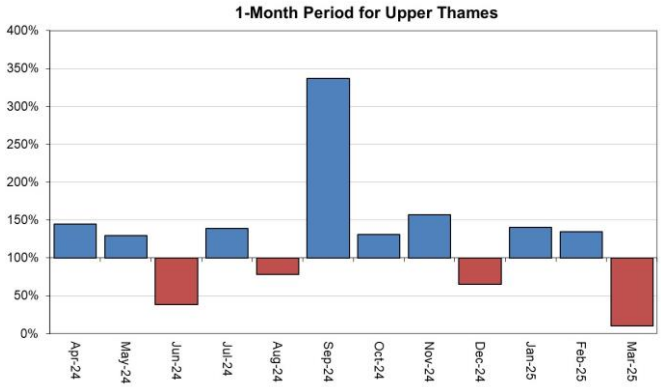


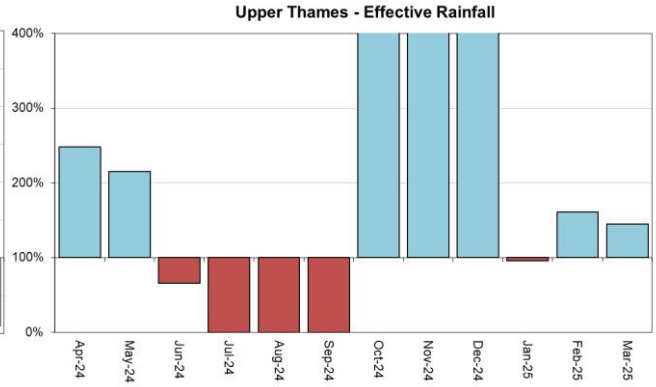
HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

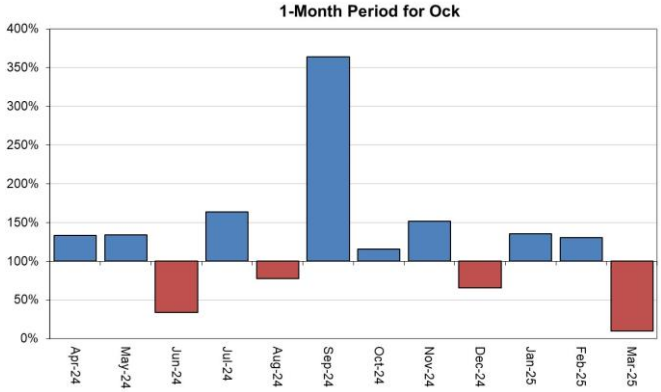
2.3 Rainfall charts

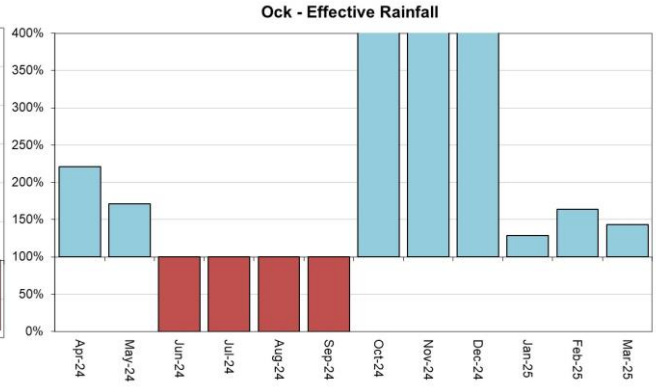
Figure 2.3: Monthly rainfall totals for the past 12 months as a percentage of the 1961 to 1990 long term average for each areal unit.

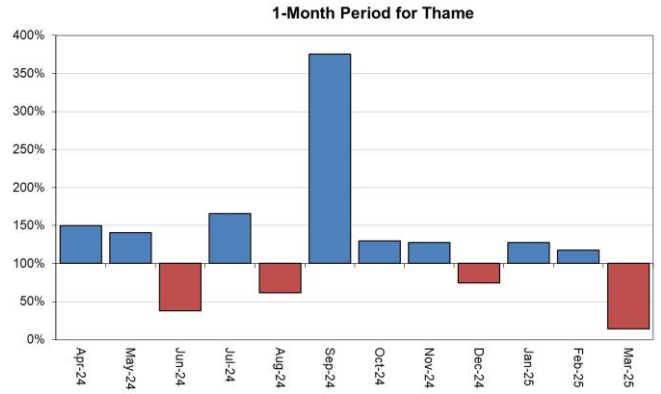


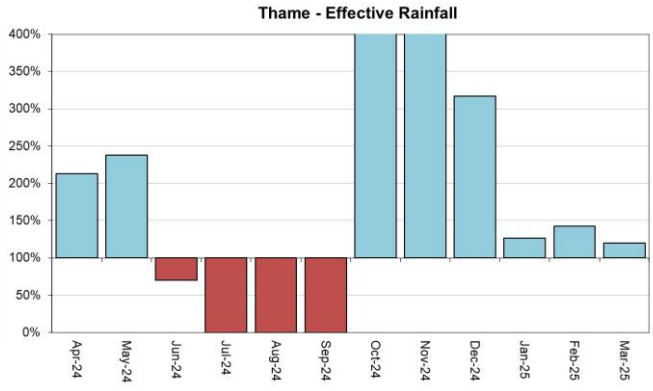

1-Month Period for Upper Thames
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25

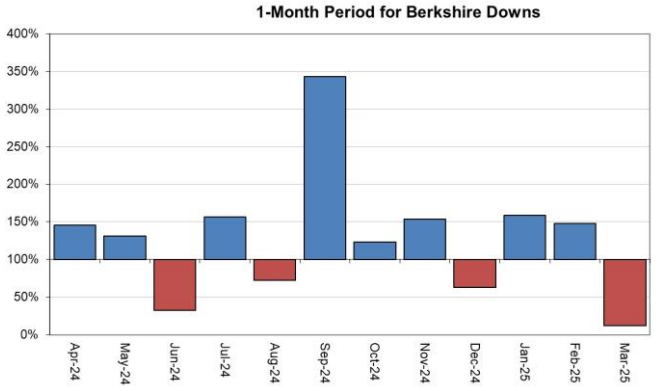

Upper Thames - Effective Rainfall
400%
300%
200%
100%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25

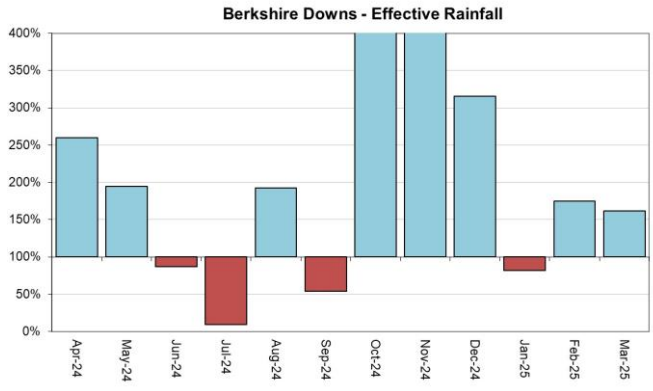

1-Month Period for Ock
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Ock - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


1-Month Period for Thame
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Thame - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


1-Month Period for Berkshire Downs
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Berkshire Downs - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
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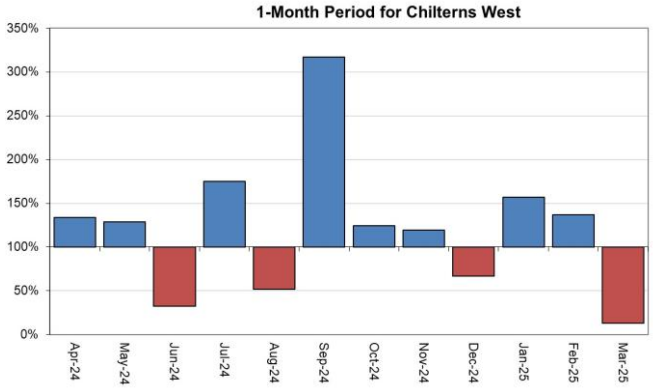
Mar-25


1-Month Period for Chilterns West
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
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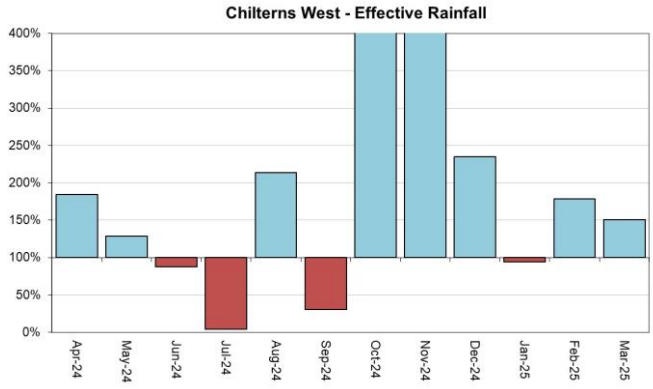
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Chilterns West - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
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Jun-24
Jul-24
Aug-24
Sep-24
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Nov-24
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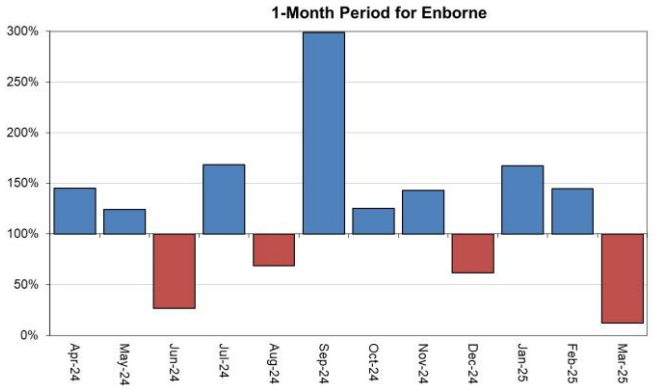
Jan-25
Feb-25
Mar-25


1-Month Period for Enborne
300%
250%
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Apr-24
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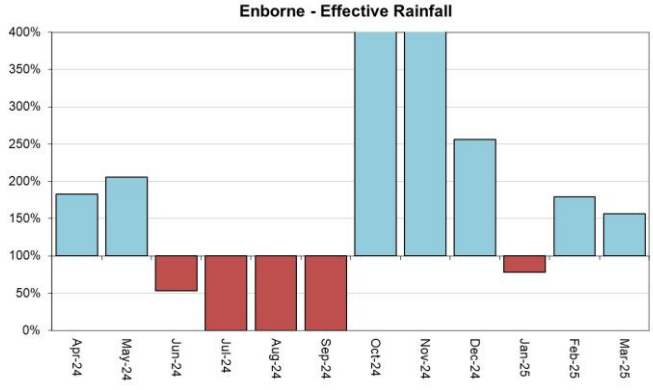
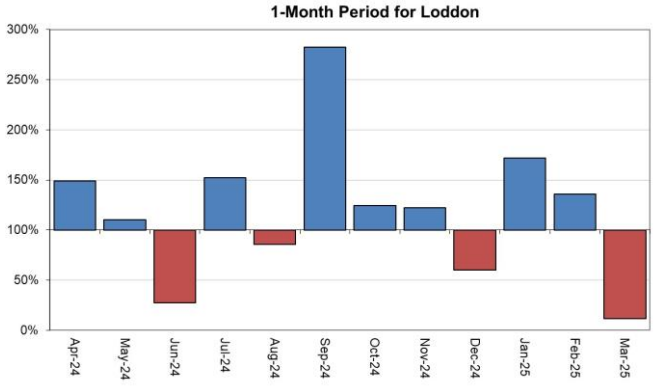
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Enborne - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


1-Month Period for Loddon
300%
250%
200%
150%
100%
50%
0%
Apr-24
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Jun-24
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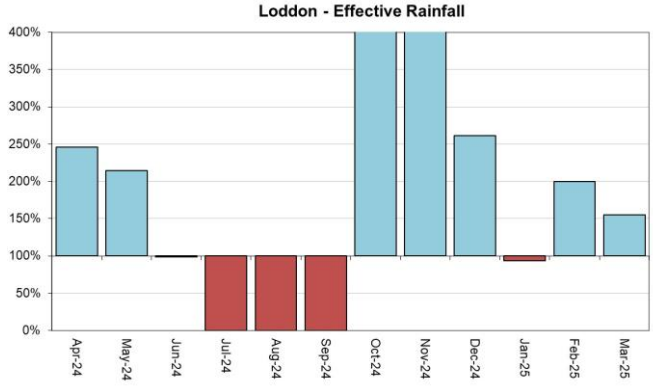
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Loddon - Effective Rainfall
400%
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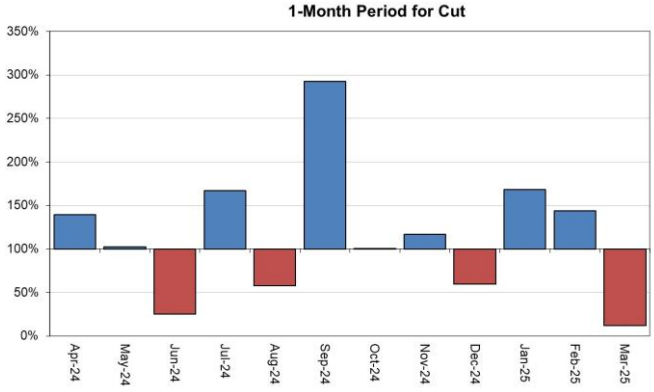
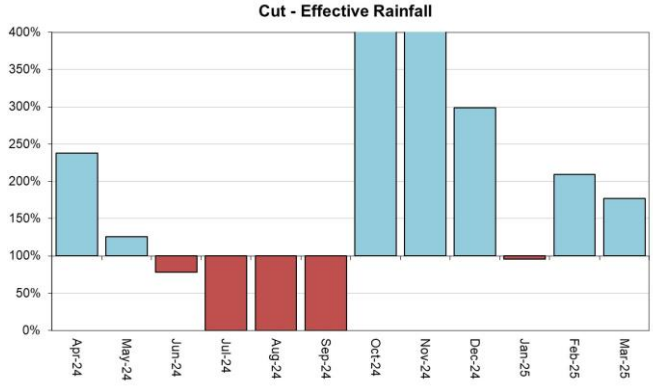
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


1-Month Period for Cut
350%
300%
250%
200%
150%
100%
50%
0%
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25


Cut - Effective Rainfall
400%
350%
300%
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200%
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100%
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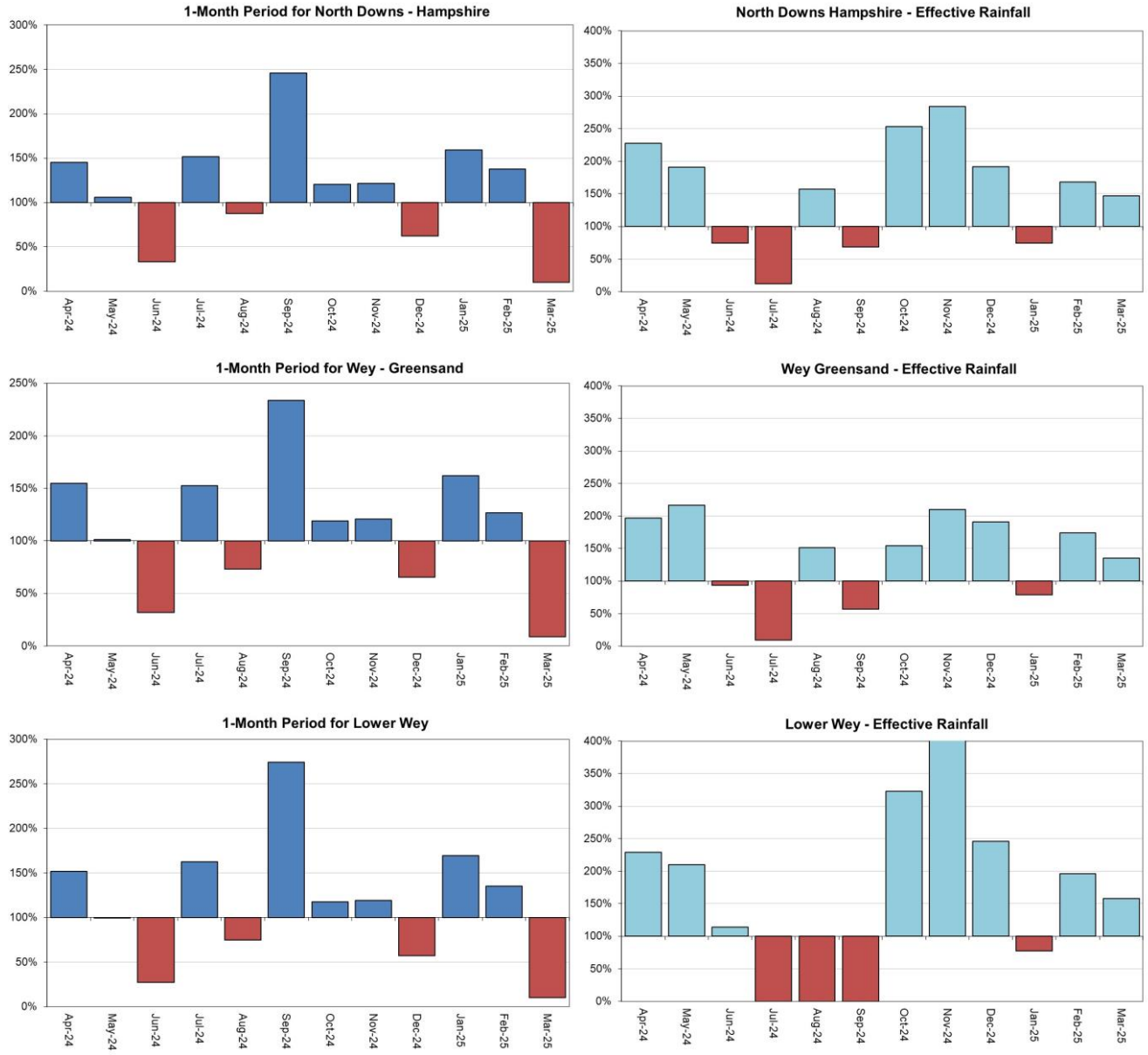
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25



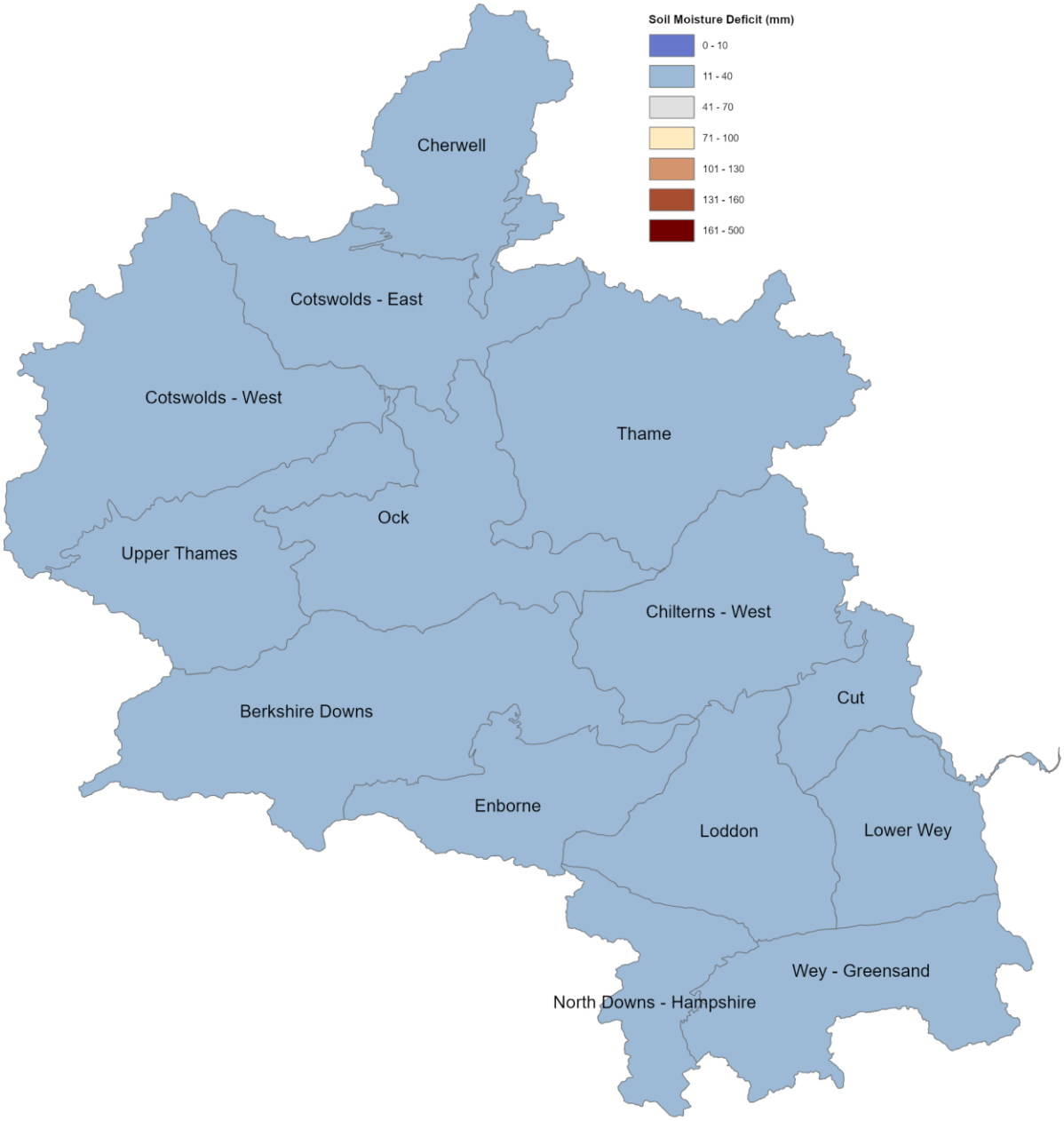
HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

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 31 March 2025. Shows the areal SMD estimate in millimetres.

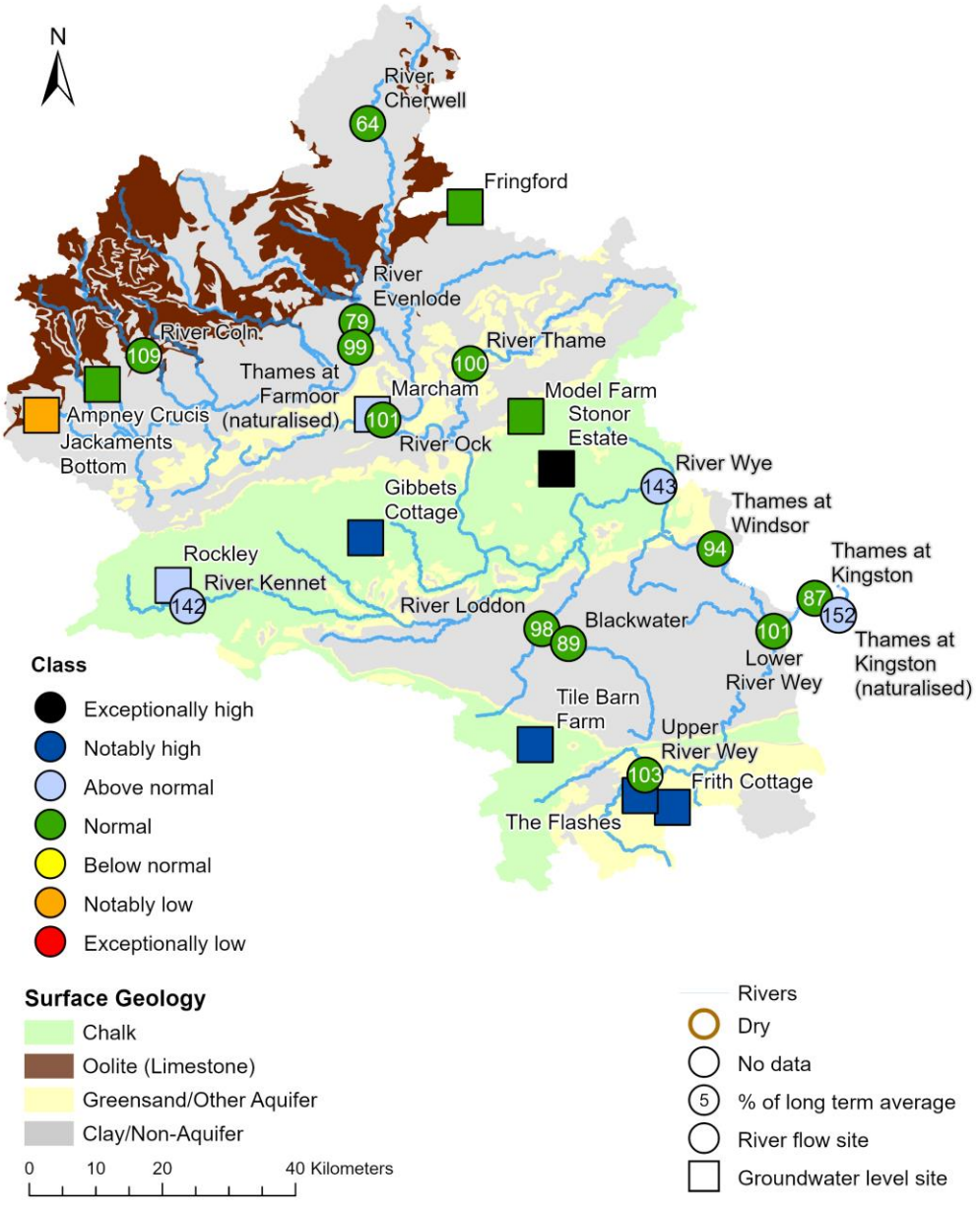


(Source: Met Office. Crown copyright, 2025). All rights reserved. Environment Agency, 100024198, 2025.

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 March 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic March means.

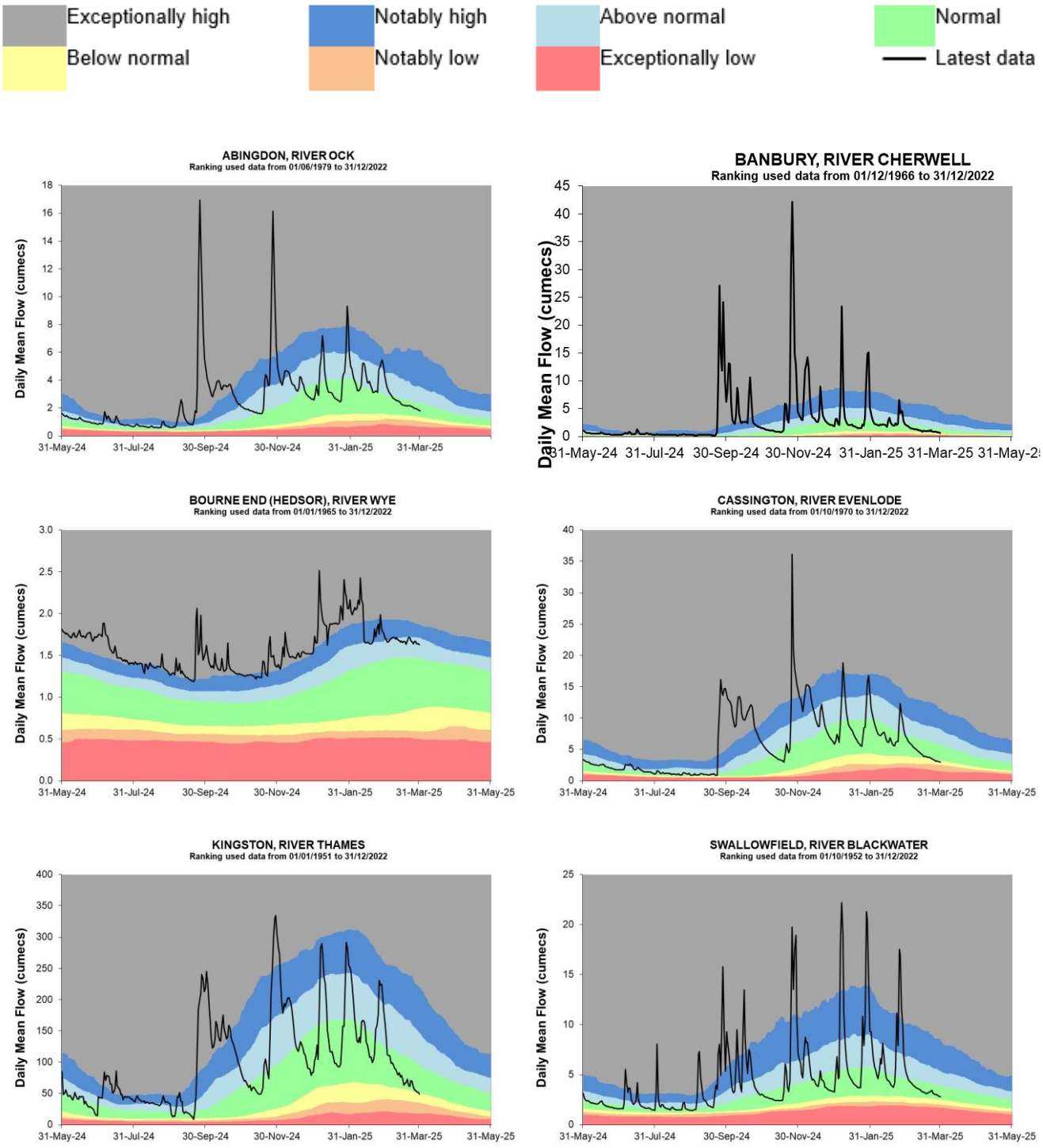


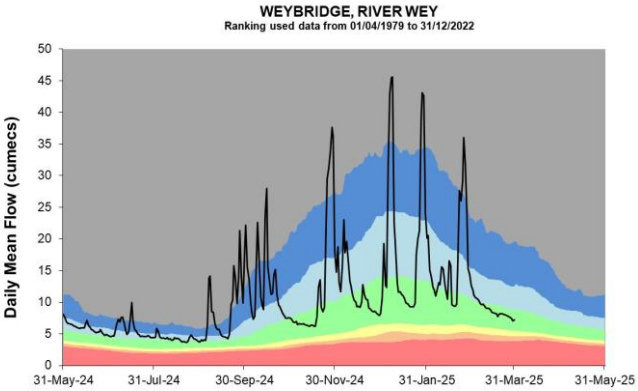
(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

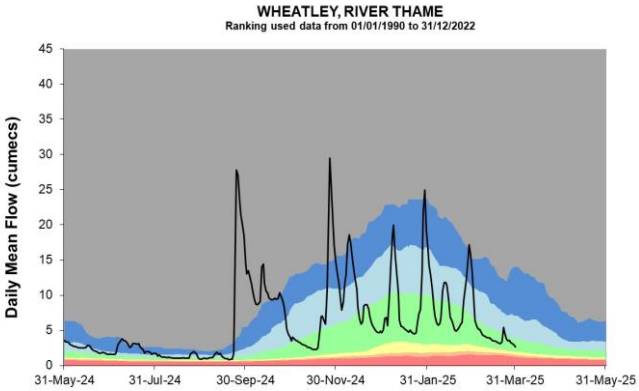
5 River flows

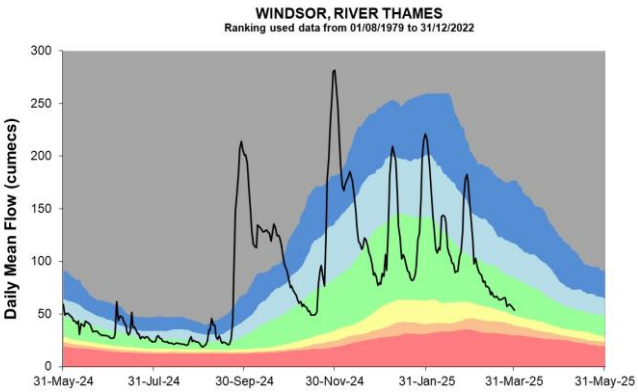
5.1 River flow charts

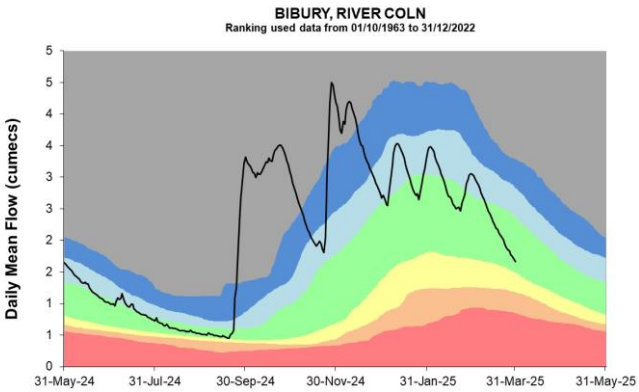
Figure 5.1: Daily mean river flows for indicator sites compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

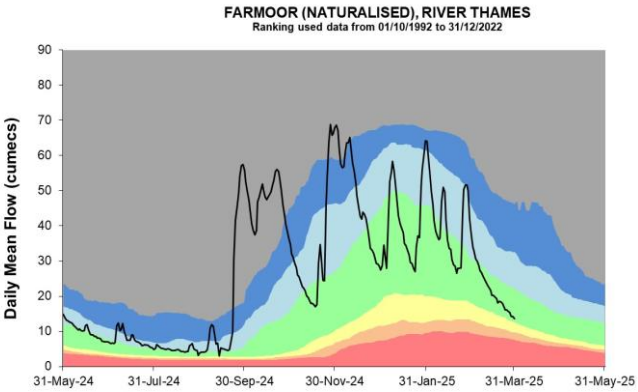


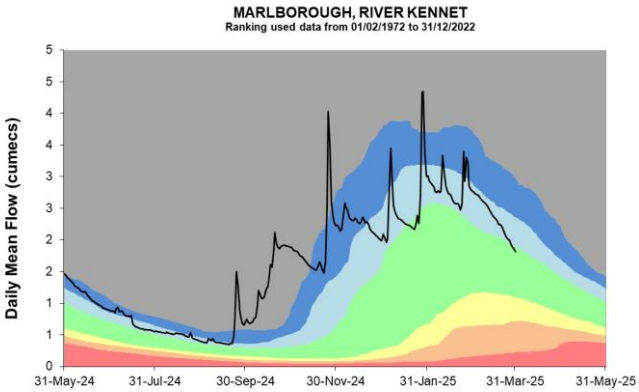

WEYBRIDGE, RIVER WEY
Ranking used data from 01/04/1979 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
35
40
45
50
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25

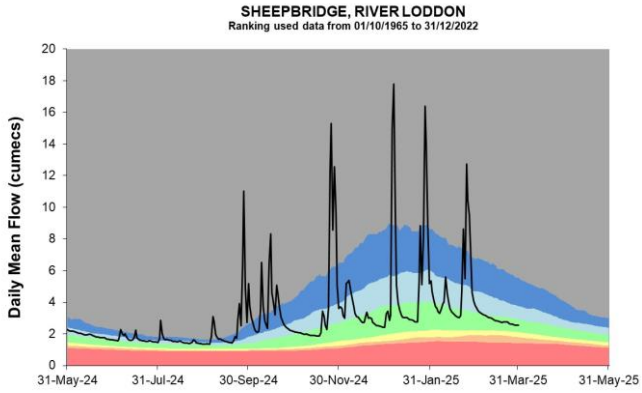

WHEATLEY, RIVER THAME
Ranking used data from 01/01/1990 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
35
40
45
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25

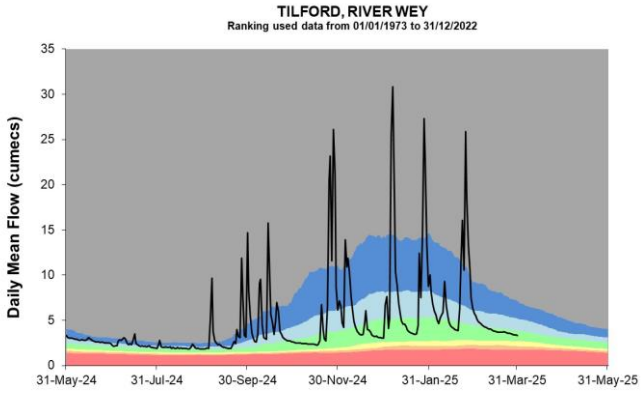

WINDSOR, RIVER THAMES
Ranking used data from 01/08/1979 to 31/12/2022
Daily Mean Flow (cumecs)
0
50
100
150
200
250
300
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25

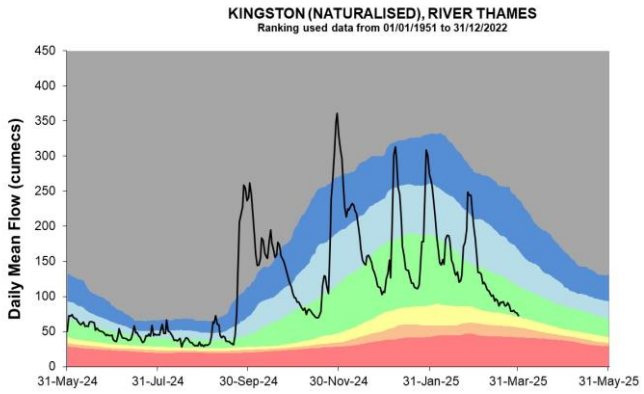

BIBURY, RIVER COLN
Ranking used data from 01/10/1963 to 31/12/2022
Daily Mean Flow (cumecs)
0
1
1
2
2
3
3
4
4
5
5
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25


FARMOOR (NATURALISED), RIVER THAMES
Ranking used data from 01/10/1992 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
80
90
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25


MARLBOROUGH, RIVER KENNET
Ranking used data from 01/02/1972 to 31/12/2022
Daily Mean Flow (cumecs)
0
1
1
2
2
3
3
4
4
5
5
31-May-24
31-Jul-24
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25





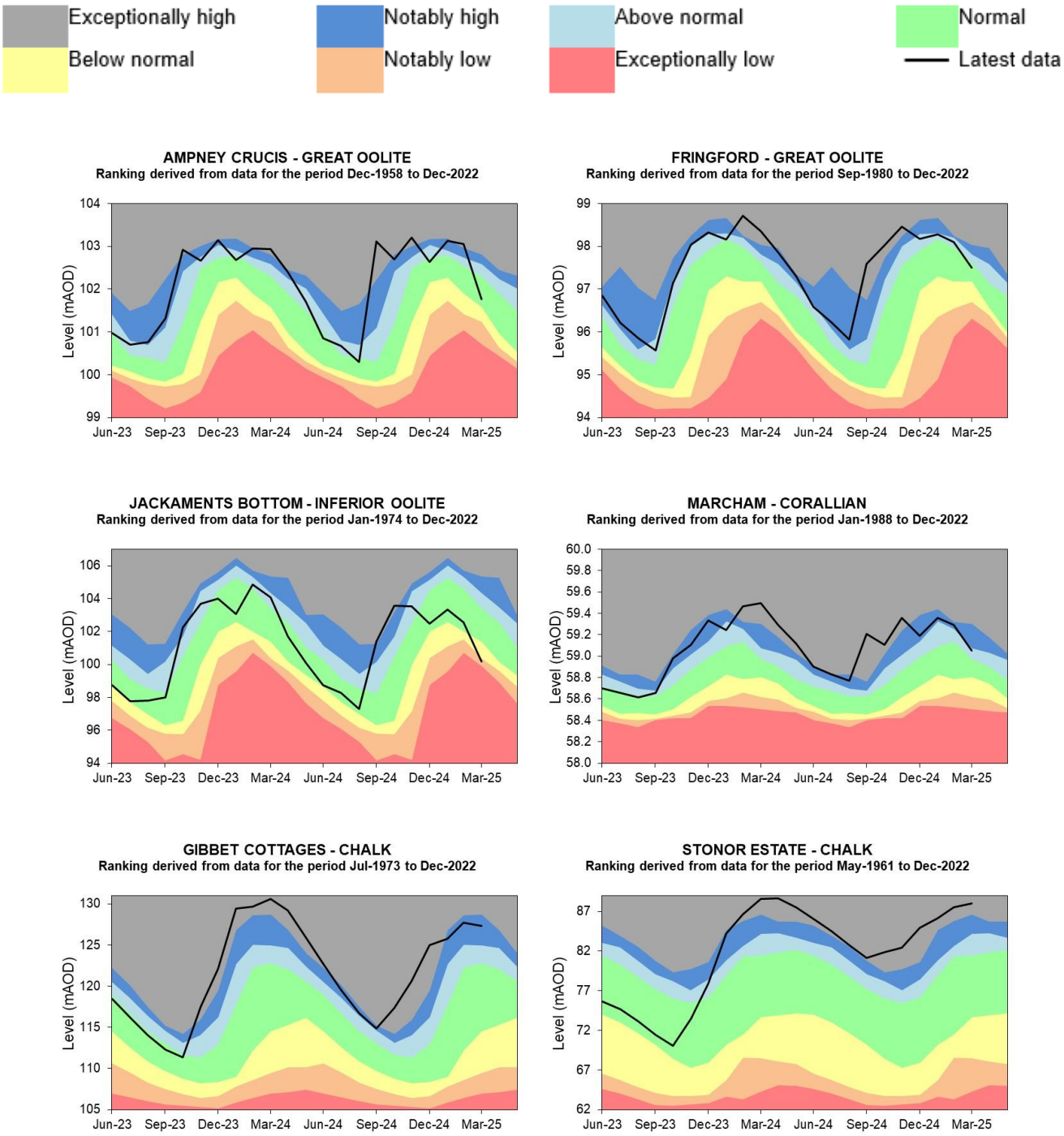


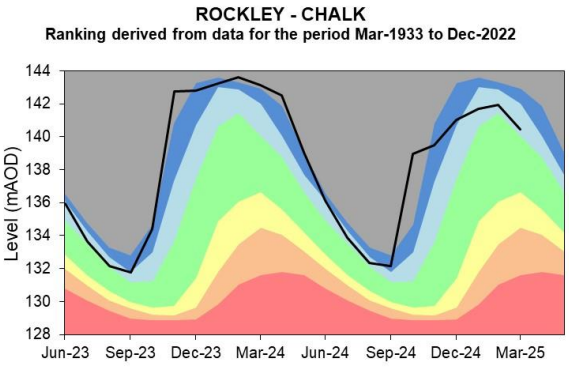
Source: Environment Agency.

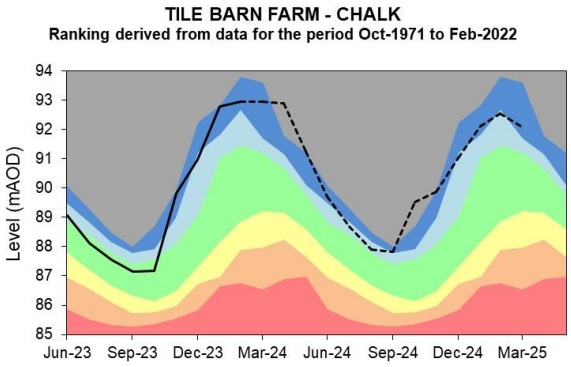
6 Groundwater levels

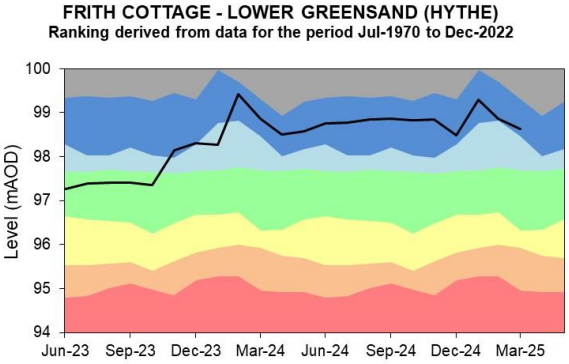
6.1 Groundwater level charts

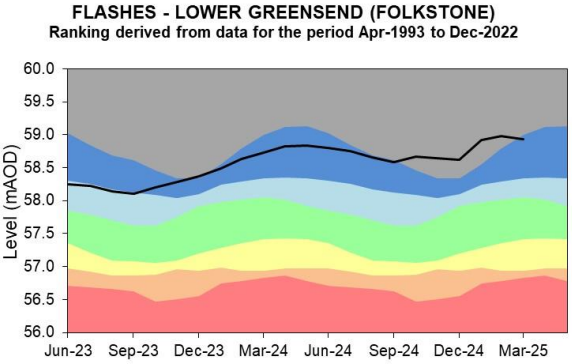
Figure 6.1: End of month groundwater levels for indicator sites, compared to an analysis of historic end of month levels, and long term maximum and minimum levels.

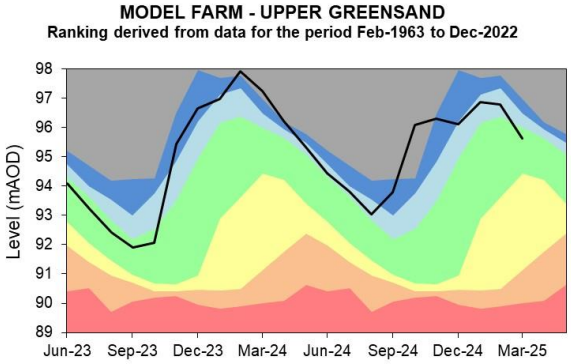










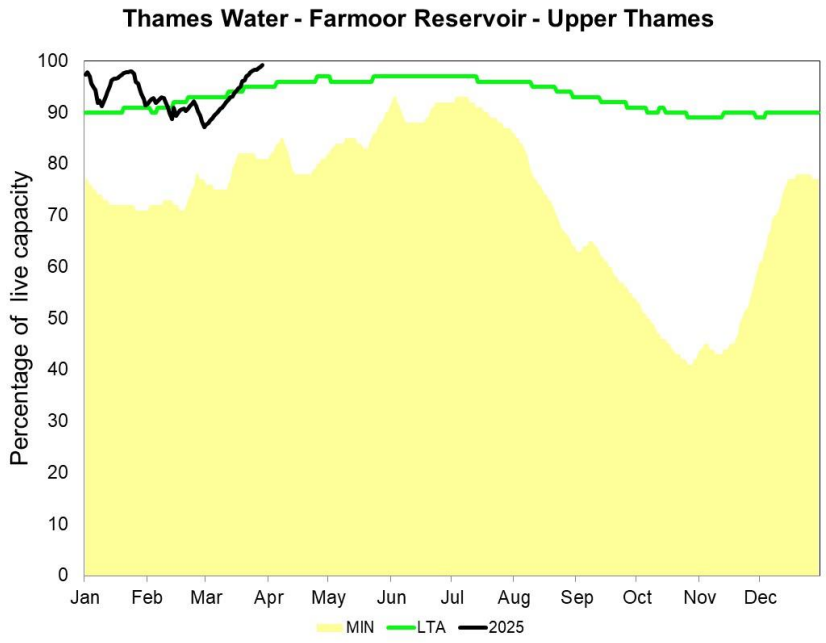


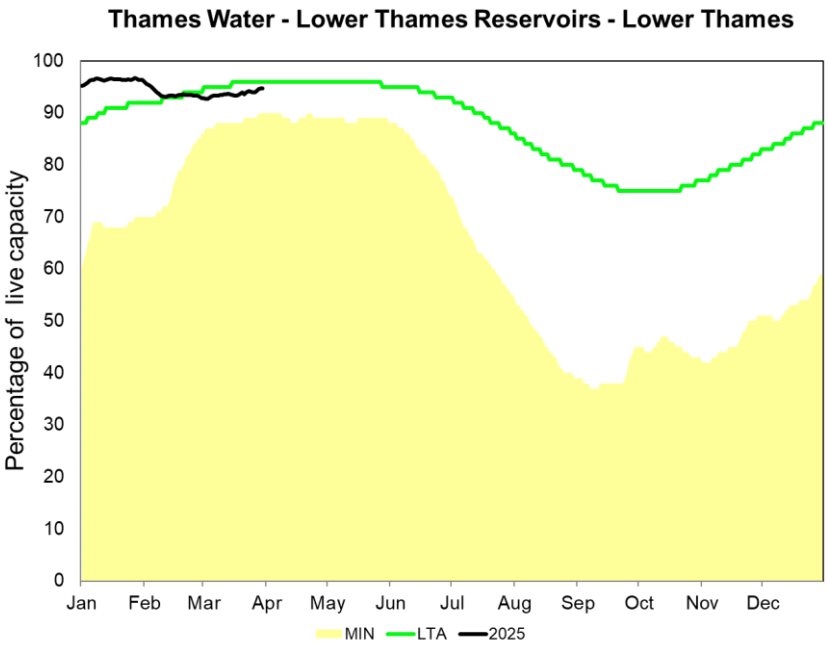
*Tile Barn Farm data has been estimated from two local sites since April 2022. A replacement is planned

Source: Environment Agency, 2025.

7 Reservoir stocks

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

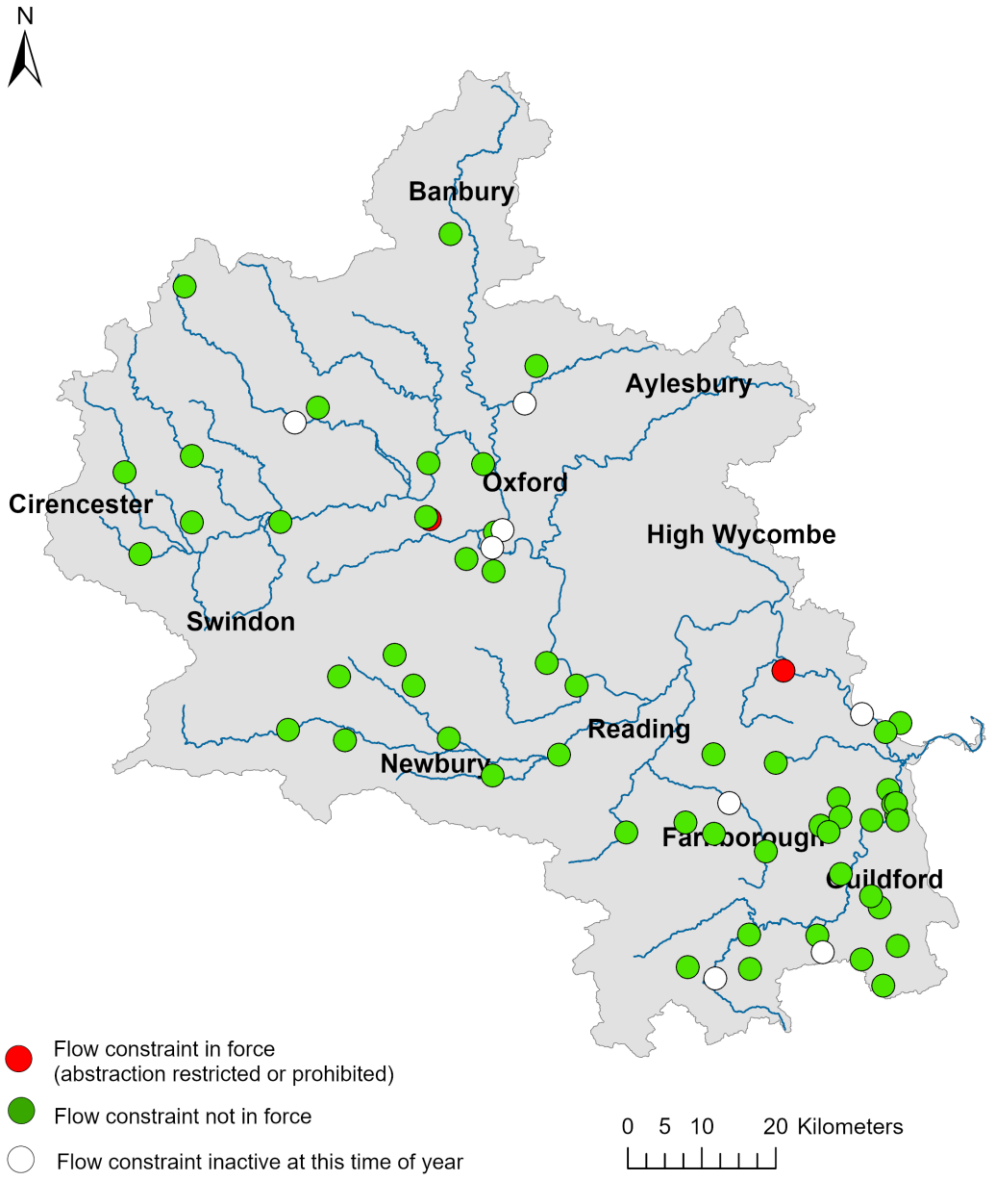




(Source: water companies).

8 Flow Constraints

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



8.2 Summary of flow constraints

Week Ending	02/03/2025	09/03/2025	16/03/2025	23/03/2025	30/03/2025
Constraint	1	1	1	1	3

9 Summary of rainfall, effective rainfall and soil moisture deficit

9.1 Rainfall and effective rainfall

Area	Rainfall (mm) 31 day Total	Rainfall (mm) March LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) 31 day total	Effective Rainfall (mm) March LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	8	66	13	0	38	0
Cotswolds - East	6	58	10	0	31	0
Berkshire Downs	8	64	12	0	36	0
Chilterns - West	8	59	13	0	30	1
North Downs - Hampshire	7	71	10	0	43	1
Wey - Greensand	6	68	8	0	41	0
Upper Thames	5	55	10	0	26	0
Cherwell	9	56	16	0	29	0
Thame	7	51	14	0	23	0
Loddon	6	56	11	0	27	0
Lower Wey	5	54	10	0	25	0
Ock	5	50	10	0	21	0
Enborne	7	61	12	0	32	0
Cut	6	53	12	0	22	0
Thames Area	**7**	**59**	**11**	**0**	**30**	**0**

HadUK rainfall data (Source: Met Office Crown copyright 2023)
EA effective rainfall data (Source: EA Soil Moisture Model)

9.2 Soil moisture deficit

Area	SMD (mm) Day 31	SMD (mm) LTA
Cotswolds - West	29	7
Cotswolds - East	30	9
Berkshire Downs	30	8
Chilterns - West	30	8
North Downs - Hampshire	31	7
Wey - Greensand	31	7
Upper Thames	34	10
Cherwell	28	8
Thame	30	10
Loddon	33	8
Lower Wey	32	8
Ock	34	12
Enborne	31	7
Cut	33	11
Thames Area	**31**	**8**

HadUK rainfall data (Source: Met Office Crown copyright 2023)
EA effective rainfall data (Source: EA Soil Moisture Model)

9.3 Winter rainfall and effective rainfall

Winter period: 01/10/2024 to 31/03/2025						
Area	Rainfall (mm) Total	Rainfall (mm) LTA	Rainfall (mm) % LTA	Effective Rainfall (mm) Total	Effective Rainfall (mm) LTA	Effective Rainfall (mm) % LTA
Cotswolds - West	446	425	105	347	268	129
Cotswolds - East	386	366	105	290	204	143
Berkshire Downs	451	412	109	354	225	157
Chilterns - West	388	380	102	291	191	153
North Downs - Hampshire	487	476	102	386	290	133
Wey - Greensand	466	459	102	355	275	129
Upper Thames	376	355	106	277	156	177
Cherwell	379	344	110	282	164	172
Thame	321	325	99	224	138	162
Loddon	380	365	104	281	166	169
Lower Wey	354	350	101	254	160	158
Ock	323	320	101	224	118	190
Enborne	434	404	107	334	214	156
Cut	331	335	99	222	131	170
Thames Area	**394**	**380**	**104**	**294**	**193**	**153**

HadUK rainfall data (Source: Met Office Crown copyright 2023)
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 1961 to 1990. However, the period used may vary by parameter being reported on (see figure captions for details).

mAOD

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

MORECS

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

Naturalised flow

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

NCIC

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

Recharge

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

Reservoir gross capacity

The total capacity of a reservoir.

Reservoir live capacity

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

Soil moisture deficit (SMD)

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

10.2 Categories

Exceptionally high

Value likely to fall within this band 5% of the time.

Notably high

Value likely to fall within this band 8% of the time.

Above normal

Value likely to fall within this band 15% of the time.

Normal

Value likely to fall within this band 44% of the time.

Below normal

Value likely to fall within this band 15% of the time.

Notably low

Value likely to fall within this band 8% of the time.

Exceptionally low

Value likely to fall within this band 5% of the time.

11 Appendices

11.1 Rainfall table

Hydrological area	Mar 2025 rainfall % of long term average 1961 to 1990	Mar 2025 band	Jan 2025 to March cumulative band	Oct 2024 to March cumulative band	Apr 2024 to March cumulative band
Berkshire Downs	12	Exceptionally Low	Normal	Normal	Notably high
Chilterns West	13	Exceptionally Low	Normal	Normal	Above normal
Cotswold East	10	Exceptionally Low	Normal	Normal	Notably high
Cotswold West	13	Exceptionally Low	Normal	Normal	Notably high
Cut	12	Exceptionally Low	Normal	Normal	Above normal
Enborne	12	Exceptionally Low	Normal	Normal	Above normal
Loddon	11	Exceptionally Low	Normal	Normal	Above normal
Lower Wey	10	Exceptionally Low	Normal	Normal	Above normal
North Downs - Hampshire	10	Exceptionally Low	Normal	Normal	Above normal
Ock	10	Exceptionally Low	Normal	Normal	Above normal
Thame	14	Exceptionally Low	Normal	Normal	Notably high
Upper Cherwell	17	Exceptionally Low	Normal	Normal	Notably high
Upper Thames	10	Exceptionally Low	Normal	Normal	Above normal
Wey - Greensand	9	Exceptionally Low	Normal	Normal	Above normal

11.2 River flows table

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

11.3 Groundwater table

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