# Monthly water situation report: Thames Area

## 1 Summary - July 2025

Thames area received 46mm of rainfall in July, which was 84% of the long term average (LTA). The majority of the areal units received normal rainfall, however the previous 6 months has been the fifth driest period for Thames area since 1871. Soil moisture deficits (SMD) continued to increase across the area and ended the month at 146mm. Monthly mean river flows decreased at all key indicator sites, with the majority of sites recording flows that were below normal or lower. Groundwater levels decreased at all of our indicator sites in July and ranged from exceptionally low (Inferior Oolite) to notably high (Lower Greensand). The Farmoor and Lower Thames reservoirs ended the month below the LTA.

### 1.1 Rainfall

Thames area received 46mm of rainfall in July, which was 84% of the LTA. The majority of the areal units received normal rainfall, except for the Cotswolds West and Upper Thames, which received below normal rainfall for the time of the year. The rainfall over the last 6 months, since February, was exceptionally low in all but one unit, and was the fifth driest period on record for Thames area since 1871. Rainfall over the last 3 months was notably low across most of Thames area.

### 1.2 Soil moisture deficit and recharge

SMD continued to increase across Thames area despite the normal rainfall, rising from 124mm in June to 146mm by the end of July. This was significantly higher than the LTA of 86mm for the time of year, indicating that soils are considerably drier than usual. The SMD for July was the second highest since 1961, second only to 1976.

### 1.3 River flows

Monthly mean flows decreased at all key indicator sites compared to last month, despite the normal rainfall received. This is largely due to declining groundwater levels and high SMDs across the area. The majority of sites were below normal or lower in July. One-third of the key indicator sites recorded notably low flows; and two sites (the River Coln at Bibury and River Thames at Windsor) recorded exceptionally low flows for the time of the year. In contrast to this, flows at Weybridge and Tilford on the River Wey remained normal; along with Abingdon on the River Ock, Banbury on the River Cherwell and Bourne End (Hedsor) on the River Wye.

### 1.4 Groundwater levels

Groundwater levels decreased at all of our indicator sites in July and ranged from exceptionally low (Jackaments Bottom, Inferior Oolite) to notably high (Frith Cottage and

Flashes, Lower Greensand). The groundwater level at Ampney Crucis (Great Oolite) dropped to notably low from below normal, whilst the groundwater level at our other Great Oolite site, Fringford was in the normal band. Overall, groundwater levels in the chalk continued to decline but remained normal or below normal, with the exception of Stonor Estate which was above normal. Levels of the slower responding Lower Greensands remained notably high for the time of year.

## 1.5 Reservoir stocks

Reservoir stocks in Farmoor reservoir decreased from 94.7% to 89.6% during July. Stocks in the Lower Thames reservoirs ended the month at 79.1%, compared to 90.1% at the end of June. The Farmoor reservoirs and Lower Thames reservoirs remained below the LTA for the time of the year.

## 1.6 Environmental impact

At the end of the month, 36 abstraction licences were being constrained in the area to protect water resources and the environment. There was 1 flood alerts in force by the end of July.

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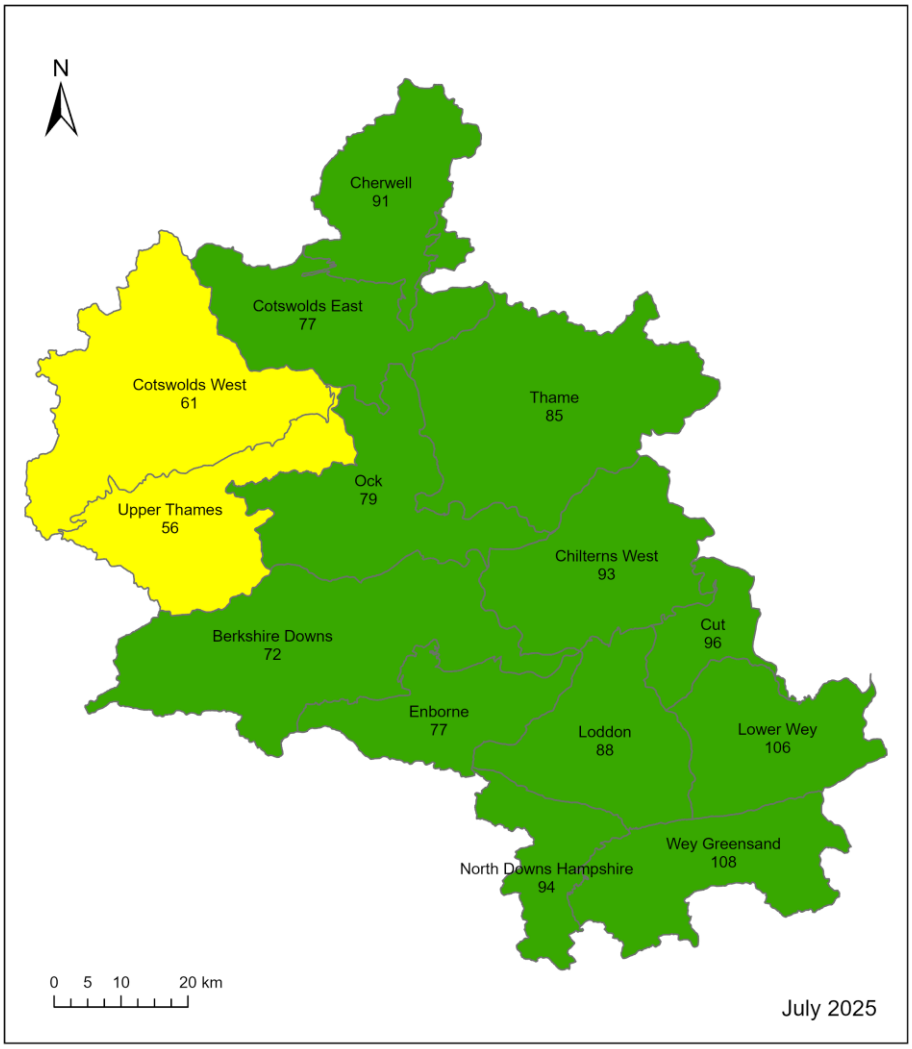
# 2 Rainfall

## 2.1 Rainfall map

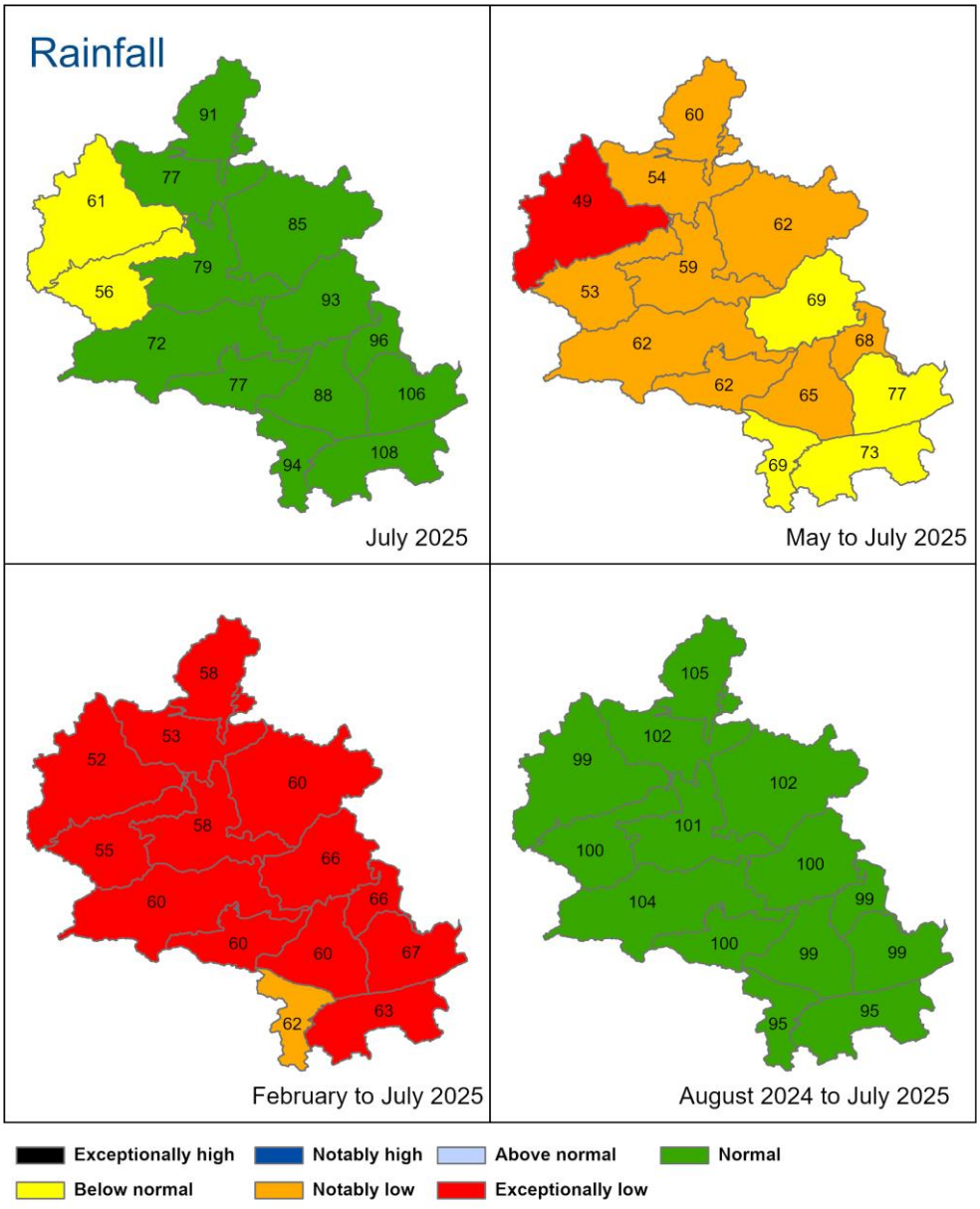
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 31 July 2025), classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.




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)

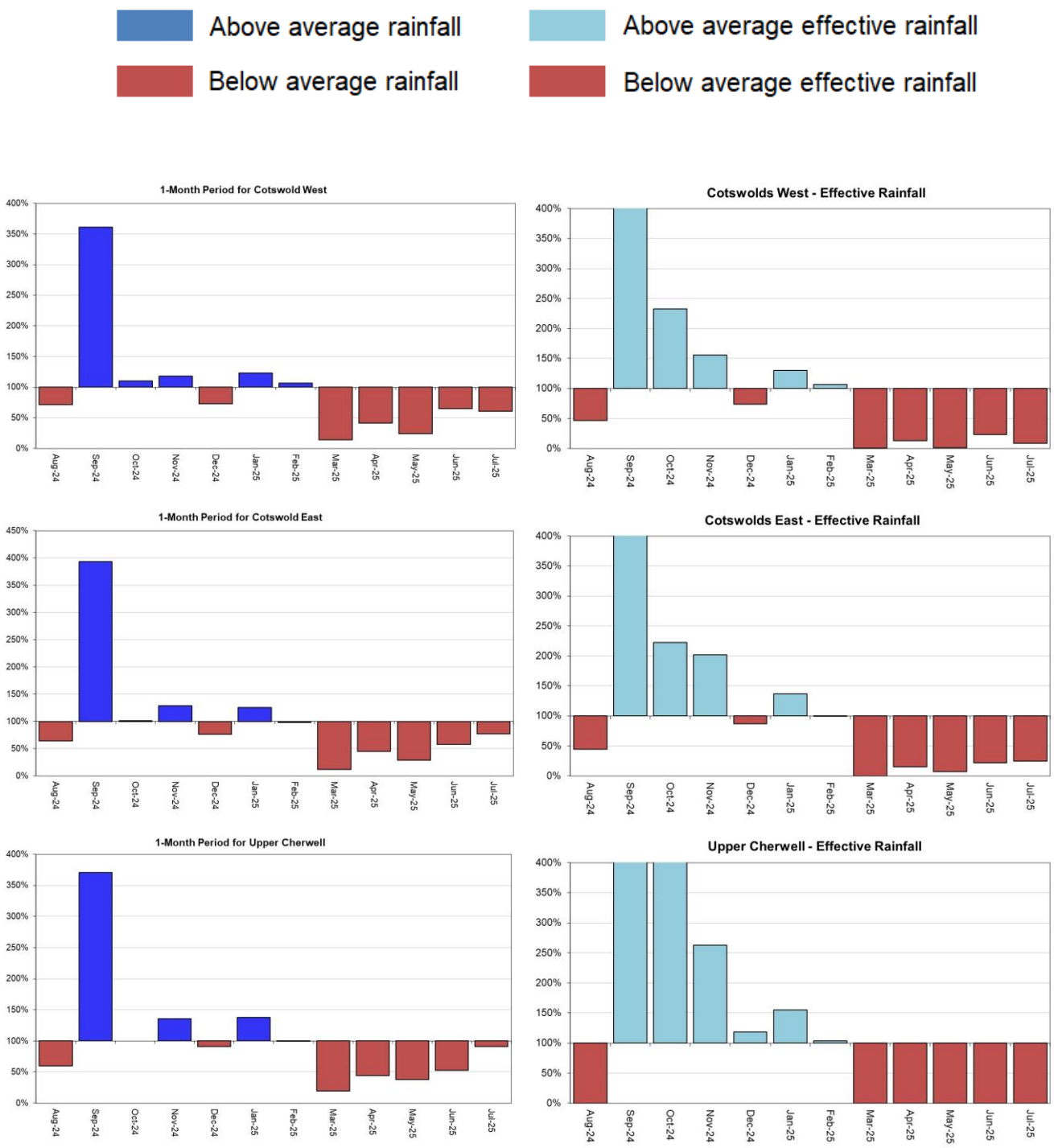
Figure 2.2: Total rainfall for hydrological areas for the current month (up to 31 July 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

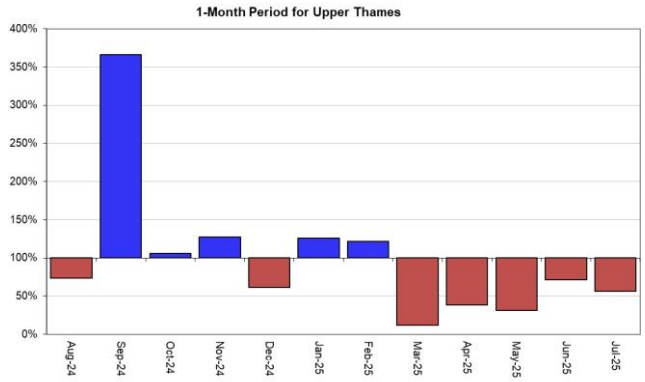


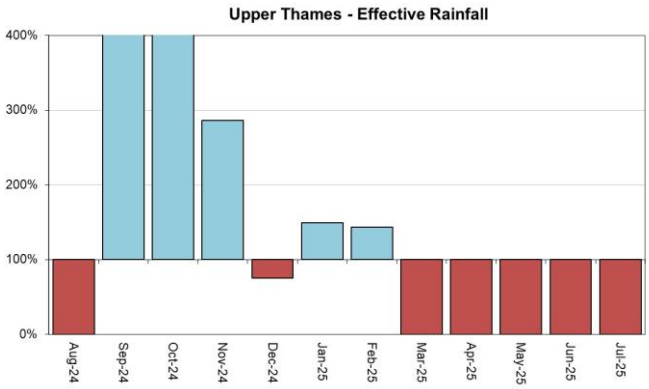

HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

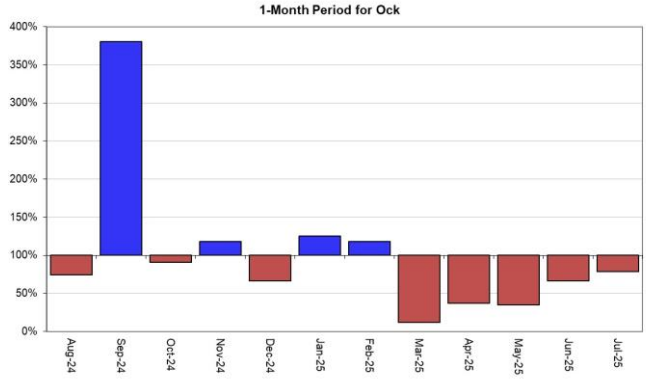
## 2.3 Rainfall charts

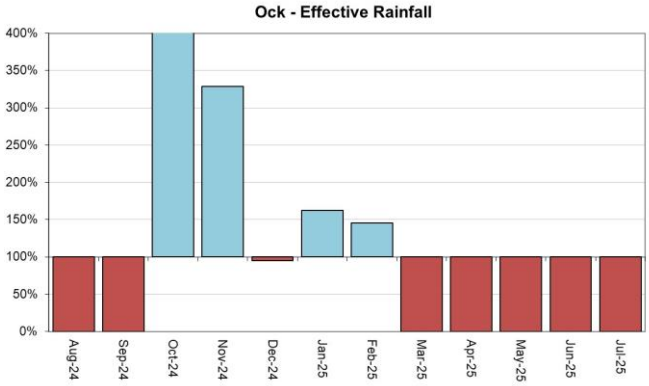
Figure 2.3: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average for each areal unit.

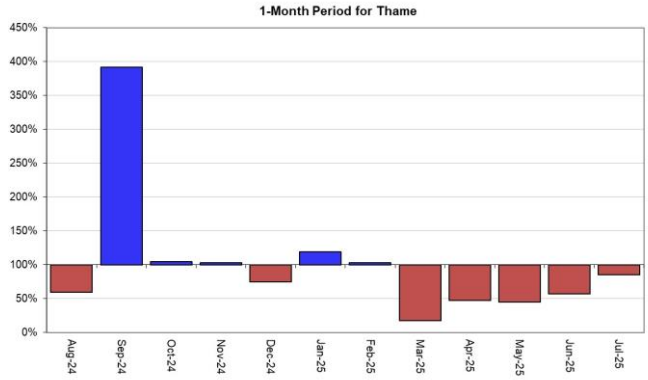


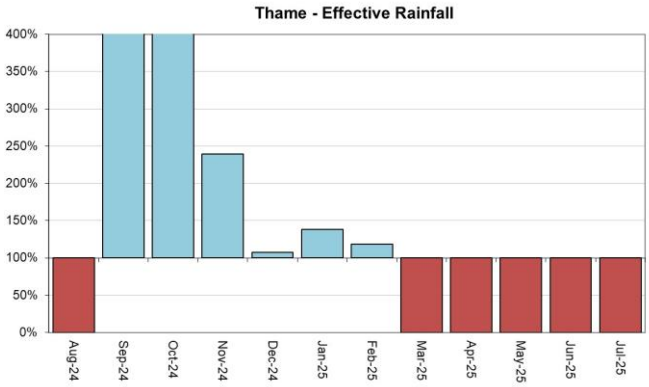

1-Month Period for Upper Thames
400%
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25

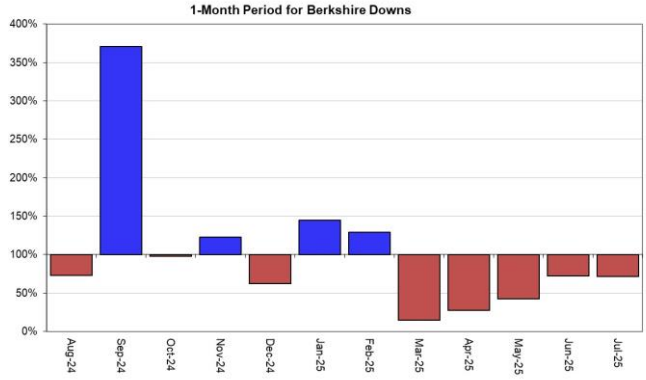

Upper Thames - Effective Rainfall
400%
300%
200%
100%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25

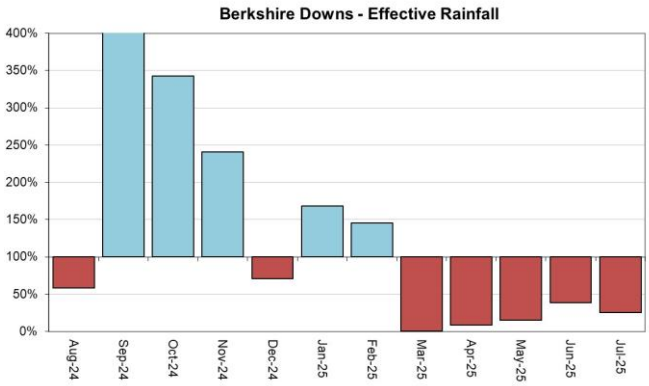

1-Month Period for Ock
400%
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25

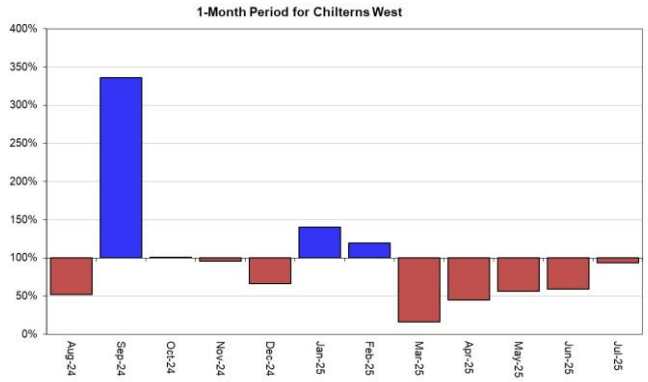

Ock - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25


1-Month Period for Thame
450%
400%
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25


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


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


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


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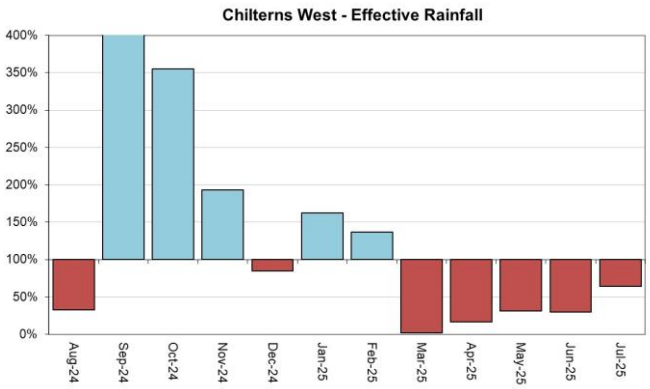
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25


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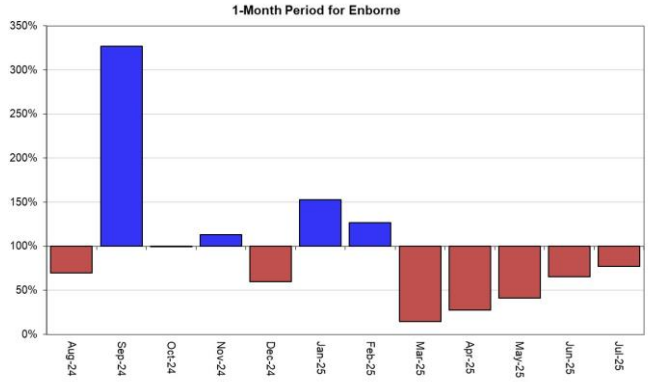
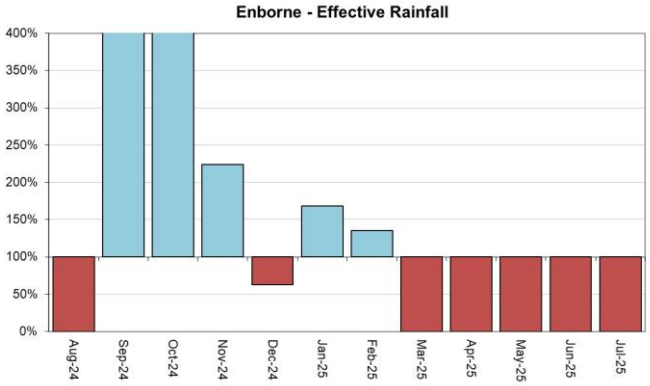
May-25
Jun-25
Jul-25


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


Enborne - Effective Rainfall
400%
350%
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100%
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0%
Aug-24
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Nov-24
Dec-24
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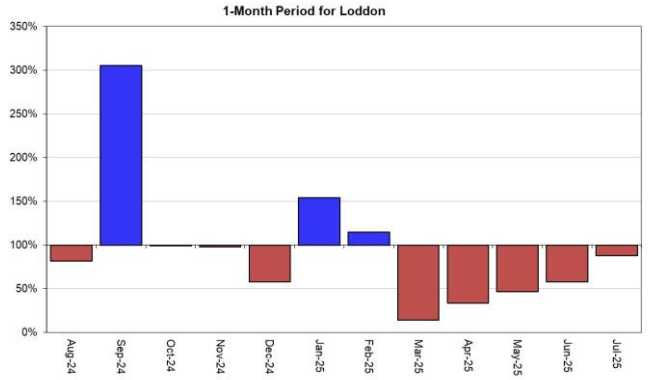
May-25
Jun-25
Jul-25


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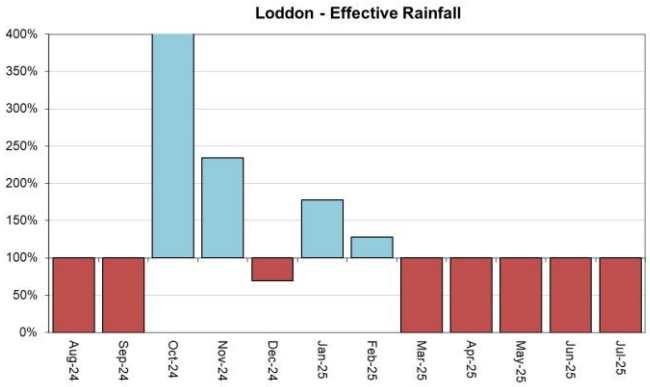
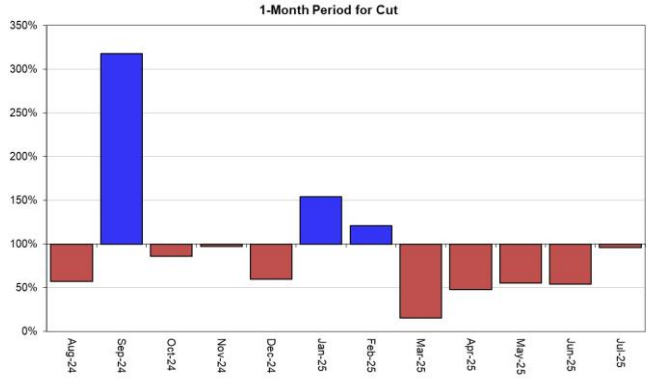
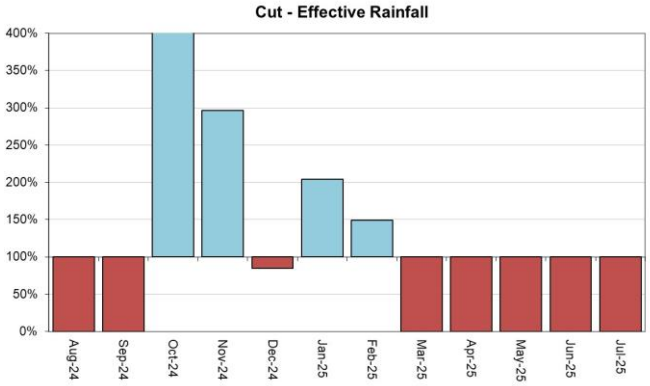
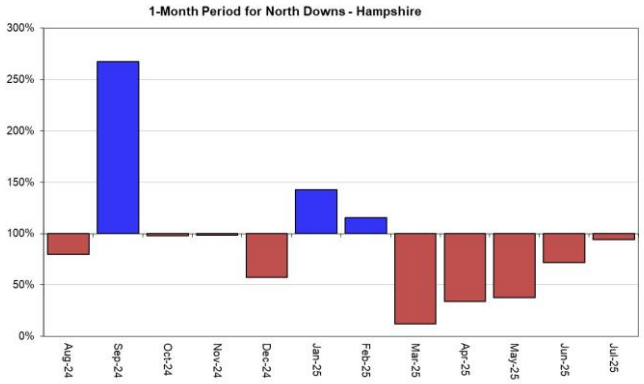
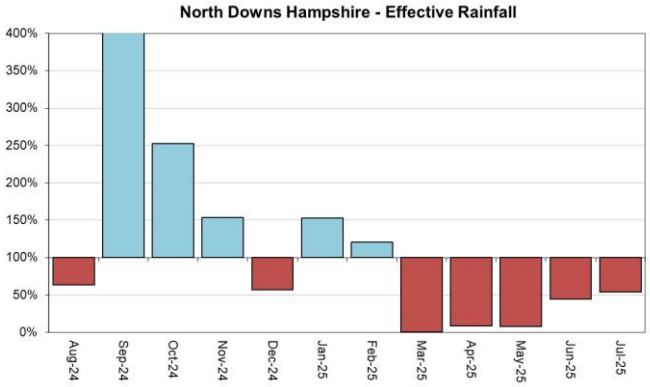
Mar-25
Apr-25
May-25
Jun-25
Jul-25

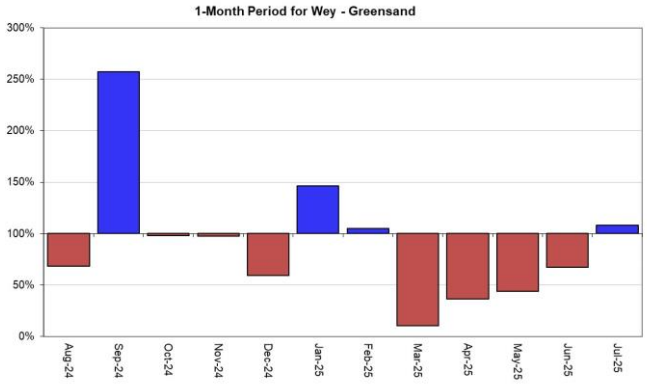

Loddon - Effective Rainfall
400%
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25

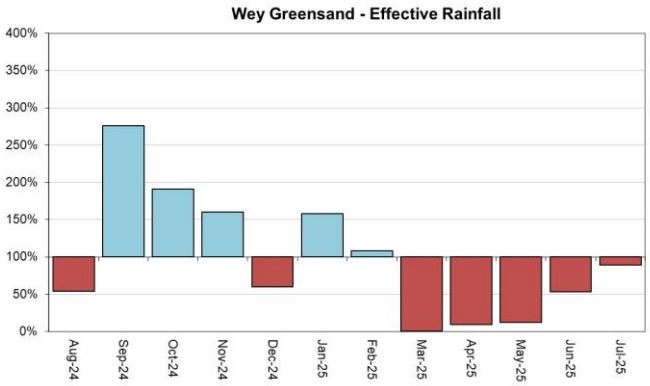

1-Month Period for Cut
350%
300%
250%
200%
150%
100%
50%
0%
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25


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

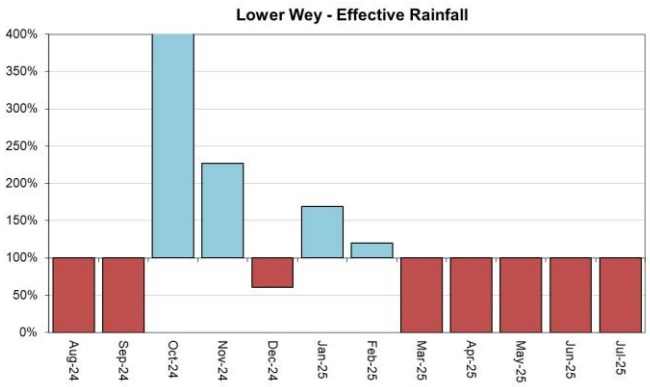






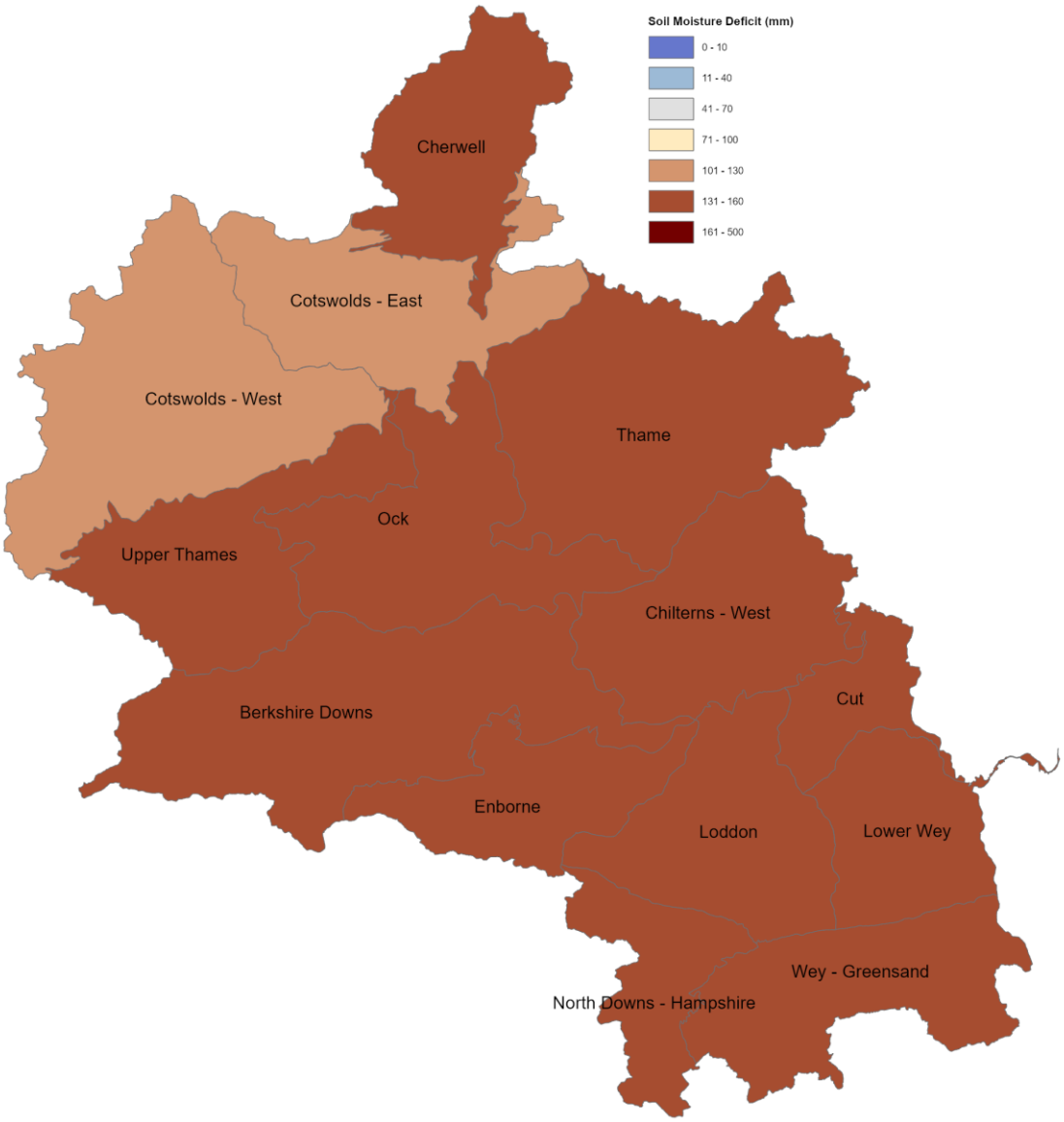

HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

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

# 3 Soil moisture deficit

## 3.1 Soil moisture deficit map

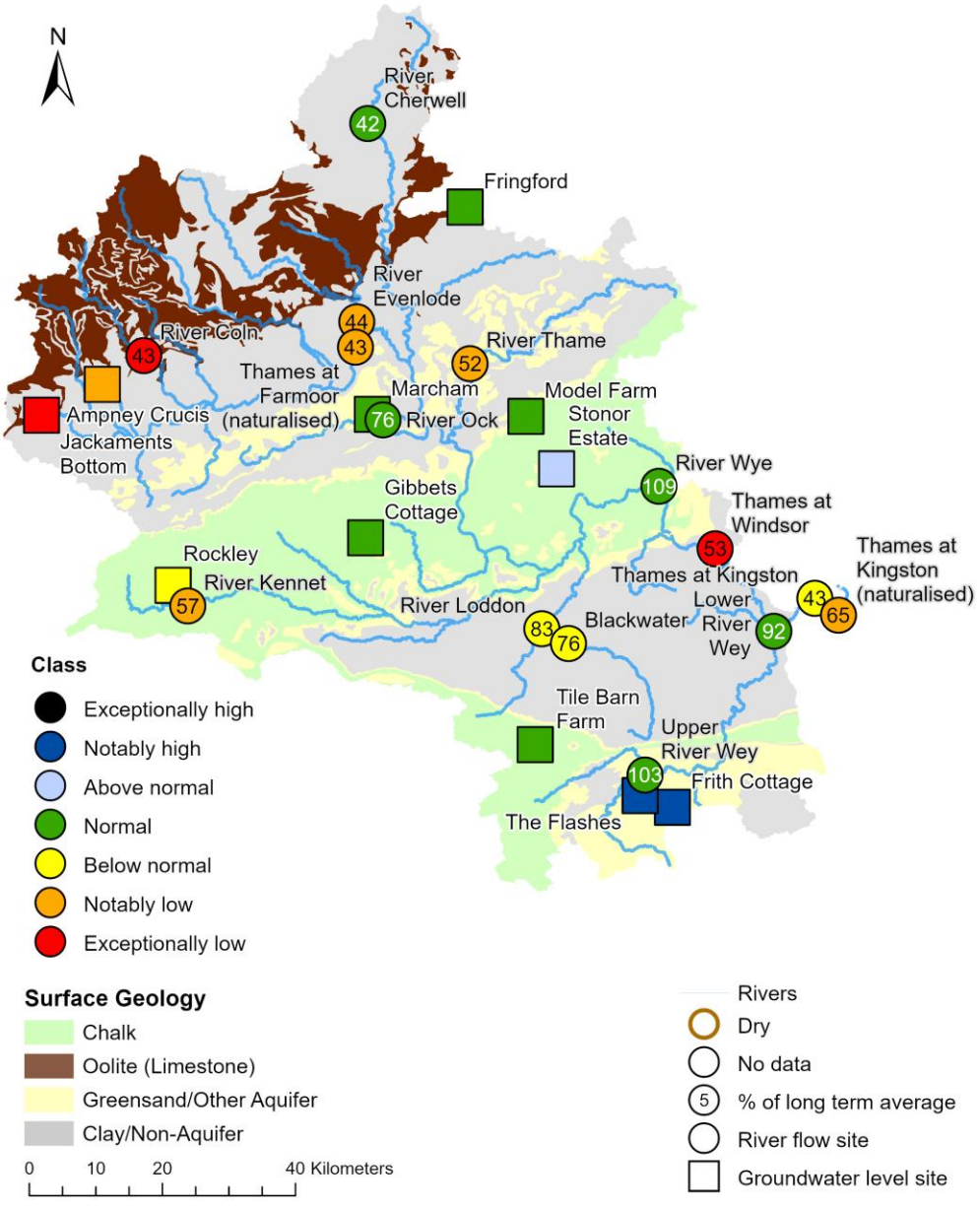
Figure 3.1: Soil moisture deficits for the week ending 31 July 2025. Shows the areal SMD estimate in millimetres.



# 4 River Flow and Groundwater Status

## 4.1 River flow and groundwater level map

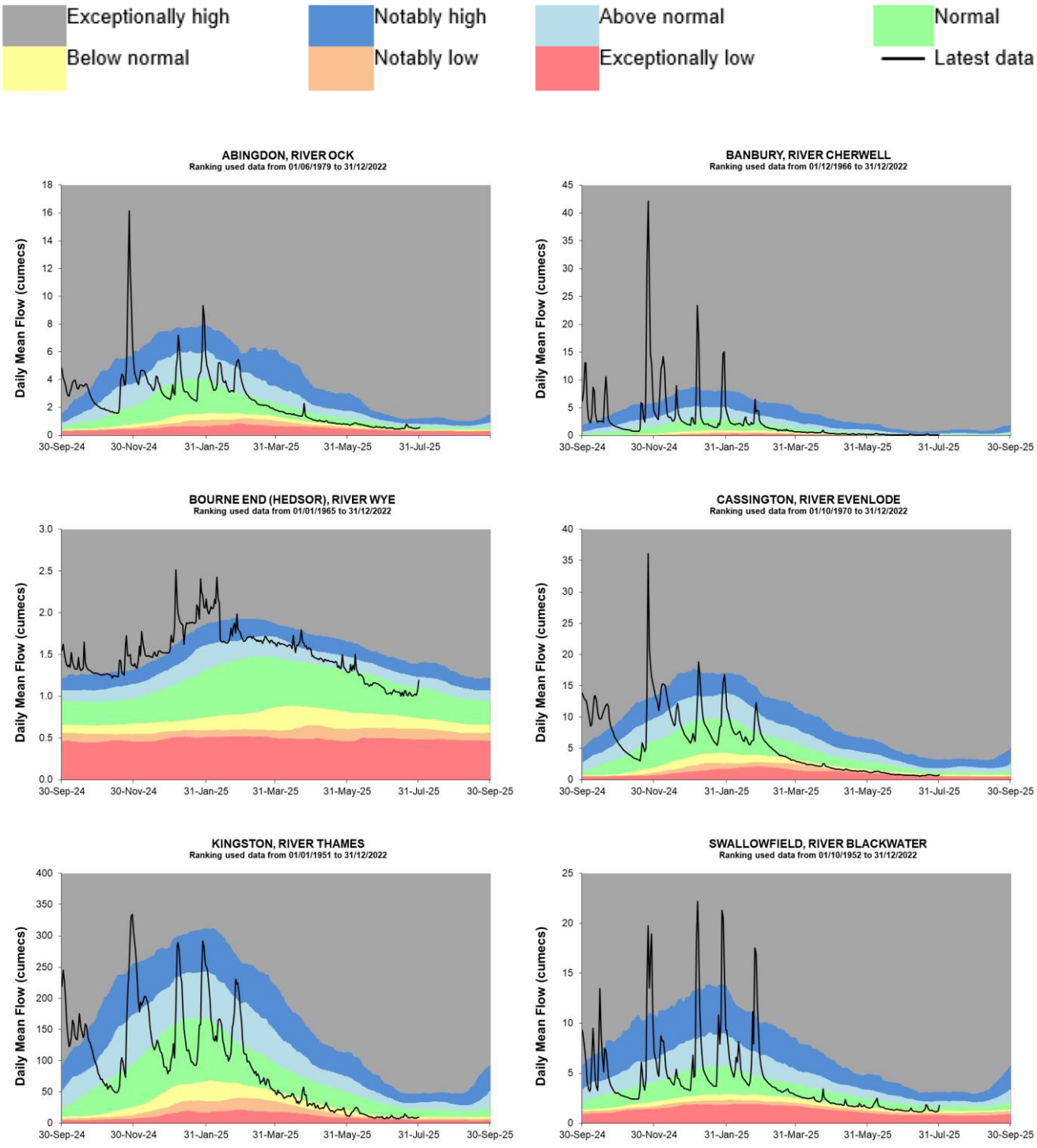
Figure 4.1: Monthly mean river flow for indicator sites and end of month groundwater levels for indicator sites for July 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic July means.

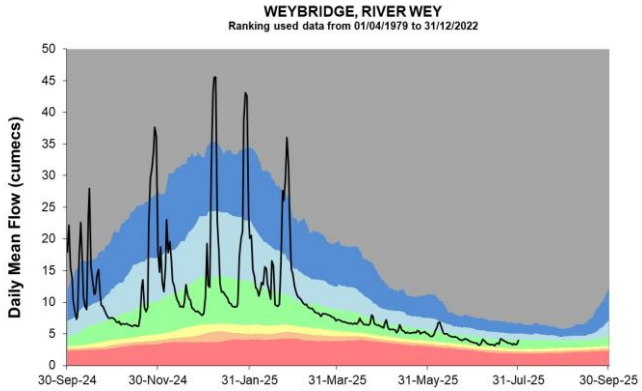


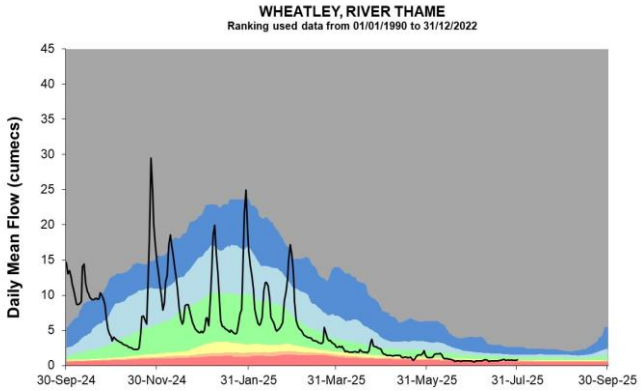
# 5 River flows

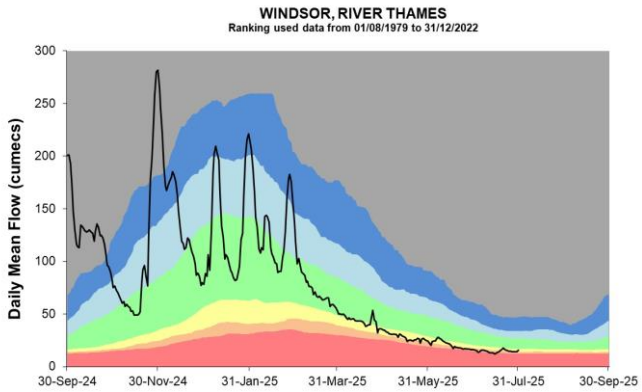
## 5.1 River flow charts

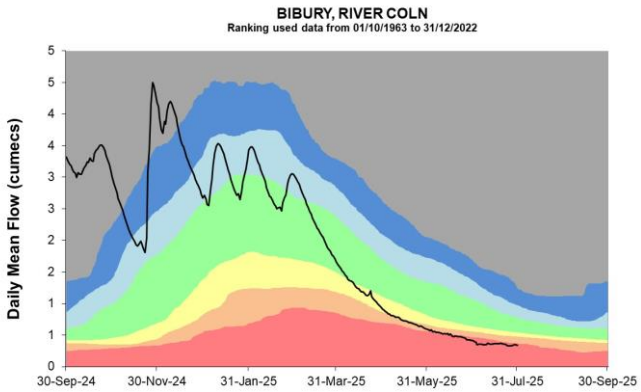
Figure 5.1: Daily mean river flows for indicator sites compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

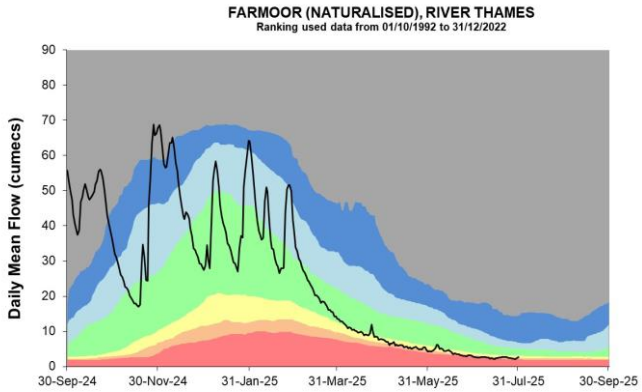


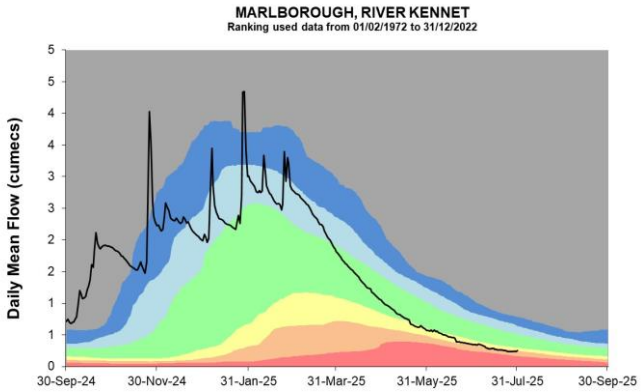

WEYBRIDGE, RIVER WEY
Ranking used data from 01/04/1979 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
35
40
45
50
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-25

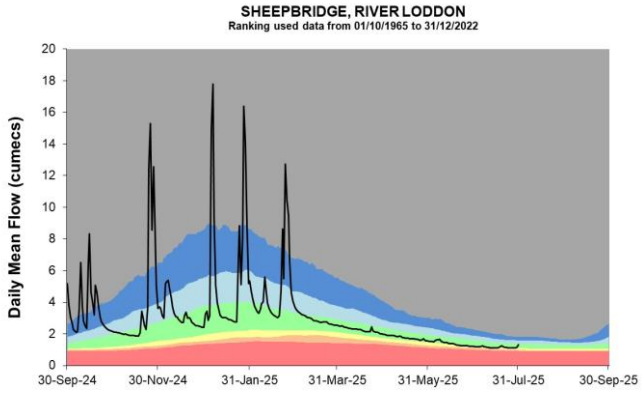

WHEATLEY, RIVER THAME
Ranking used data from 01/01/1990 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
35
40
45
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-25

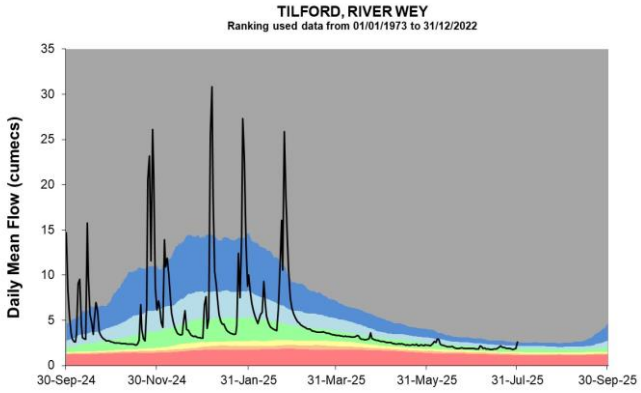

WINDSOR, RIVER THAMES
Ranking used data from 01/08/1979 to 31/12/2022
Daily Mean Flow (cumecs)
0
50
100
150
200
250
300
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-25

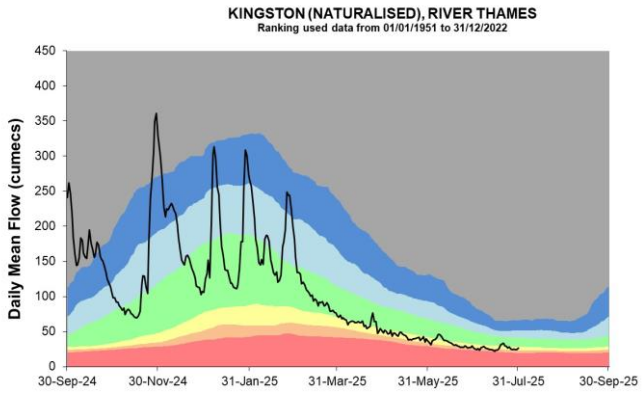

BIBURY, RIVER COLN
Ranking used data from 01/10/1963 to 31/12/2022
Daily Mean Flow (cumecs)
0
1
1
2
2
3
3
4
4
5
5
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-25


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
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-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
30-Sep-24
30-Nov-24
31-Jan-25
31-Mar-25
31-May-25
31-Jul-25
30-Sep-25



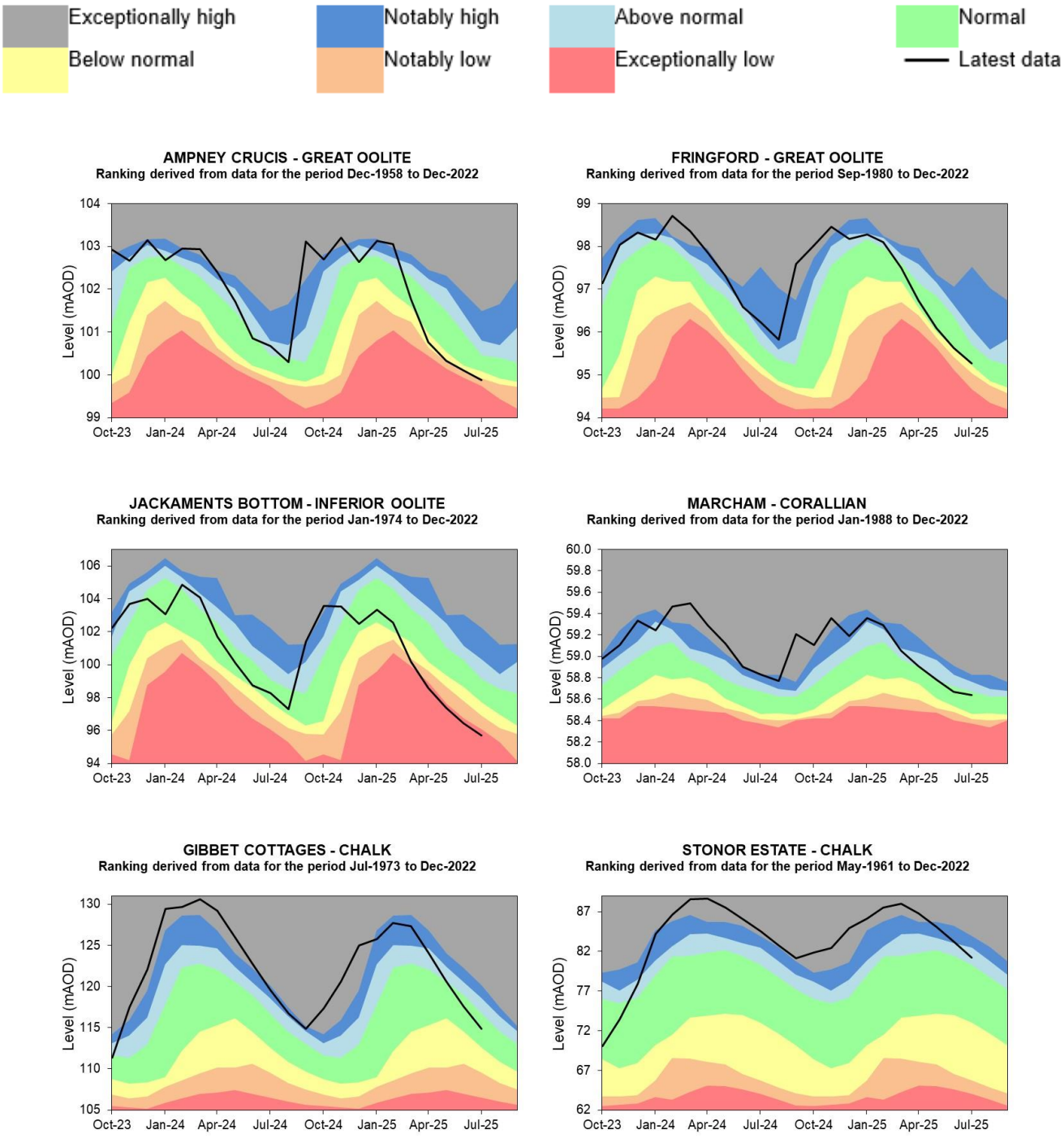



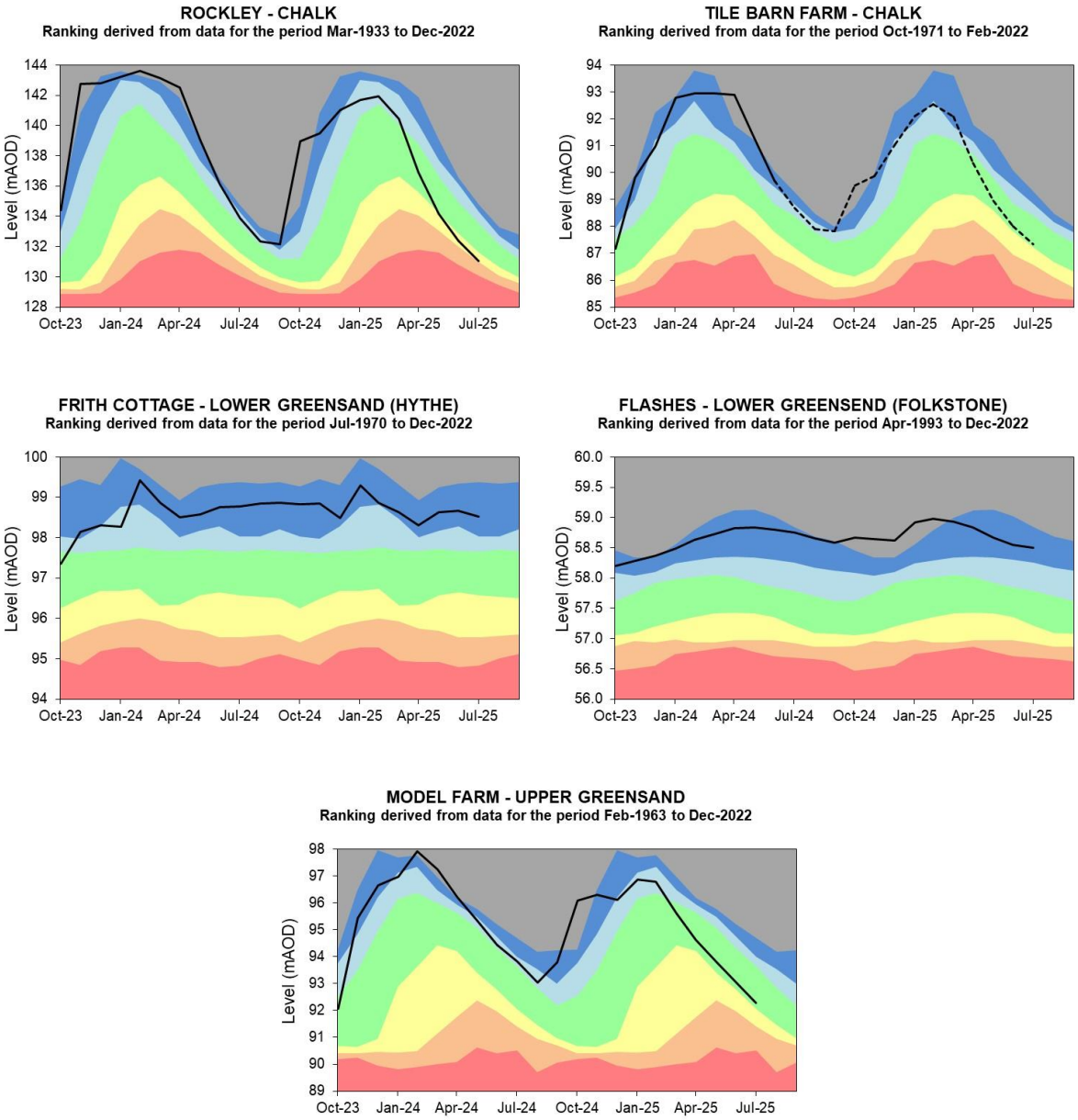

Source: Environment Agency.

# 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.



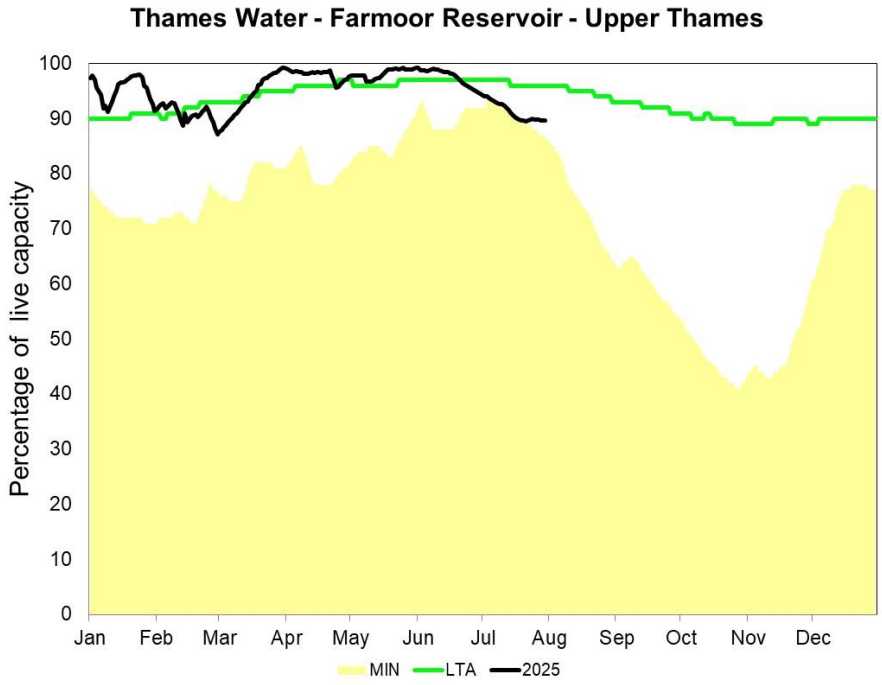


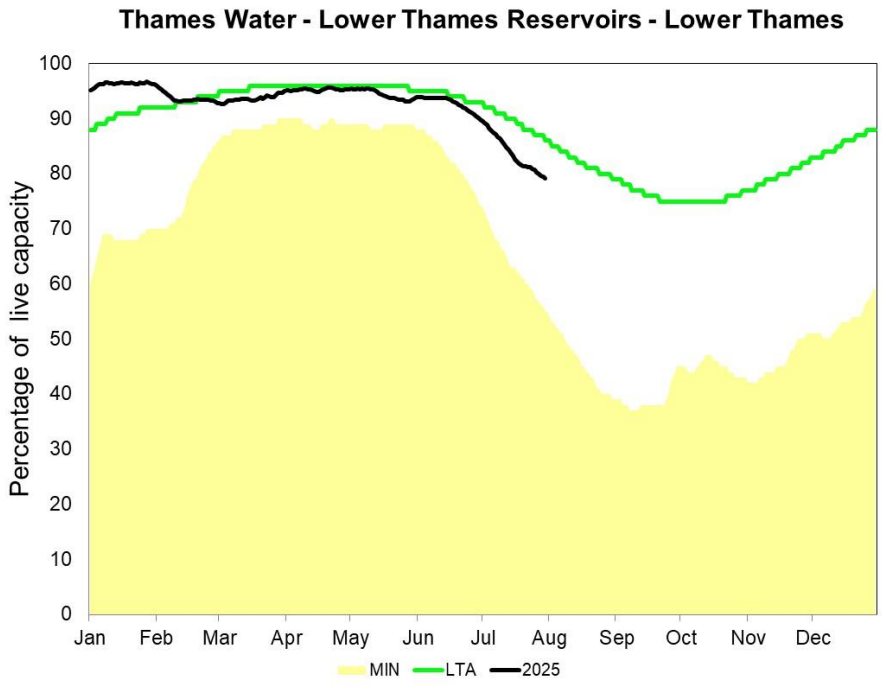

*Tile Barn Farm data has been estimated from two local sites since April 2022. A replacement is planned

Source: Environment Agency, 2025.

# 7 Reservoir stocks

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

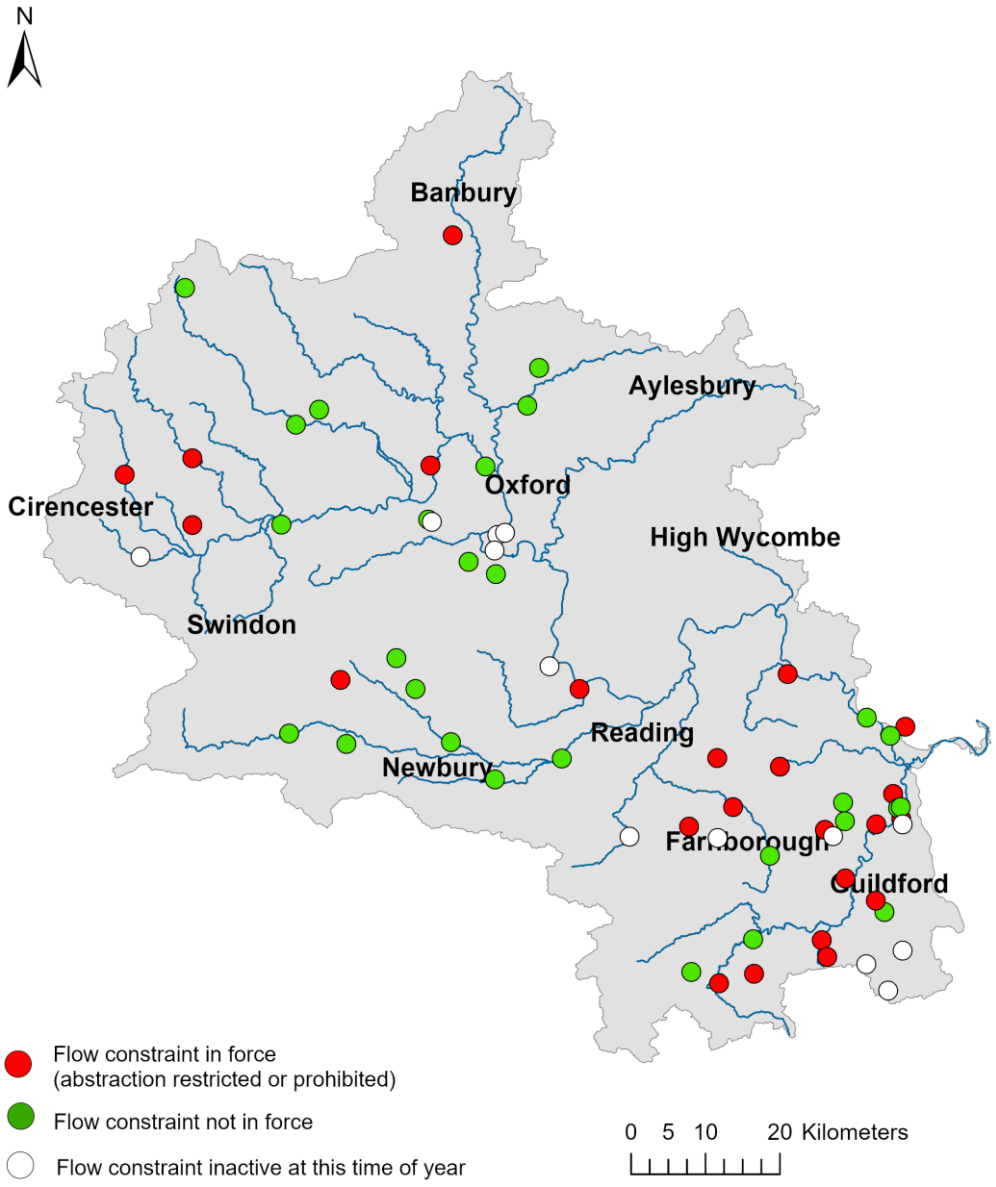



(Source: water companies).

# 8 Flow Constraints

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




## 8.2 Summary of flow constraints

| Week ending | 06/07/25 | 13/07/25 | 20/07/25 | 27/07/25 |
|---|---|---|---|---|
| Constraints | 34 | 35 | 29 | 36 |

# 9 Summary of rainfall, effective rainfall and soil moisture deficit

## 9.1 Rainfall and effective rainfall

| Area | Rainfall (mm) 31 day Total | Rainfall (mm) July LTA | Rainfall (mm) % LTA | Effective Rainfall (mm) 31 day total | Effective Rainfall (mm) July LTA | Effective Rainfall (mm) % LTA |
|---|---|---|---|---|---|---|
| Cotswolds - West | 39 | 64 | 60 | 1 | 11 | 9 |
| Cotswolds - East | 44 | 58 | 76 | 2 | 8 | 24 |
| Berkshire Downs | 42 | 58 | 71 | 2 | 8 | 25 |
| Chilterns - West | 49 | 52 | 93 | 3 | 5 | 64 |
| North Downs - Hampshire | 55 | 58 | 94 | 4 | 7 | 55 |
| Wey - Greensand | 60 | 55 | 109 | 5 | 5 | 88 |
| Upper Thames | 32 | 56 | 57 | 0 | 3 | 0 |
| Cherwell | 52 | 57 | 91 | 0 | 3 | 0 |
| Thame | 44 | 51 | 86 | 0 | 1 | 0 |
| Loddon | 45 | 51 | 88 | 0 | 1 | 0 |
| Lower Wey | 52 | 49 | 106 | 0 | 0 | 0 |
| Ock | 39 | 50 | 79 | 0 | 2 | 0 |
| Enborne | 40 | 52 | 77 | 0 | 3 | 0 |
| Cut | 45 | 47 | 96 | 0 | 0 | 0 |
| **Thames Area** | **46** | **54** | **84** | **1** | **4** | **29** |

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 31 | SMD (mm) LTA |
|---|---|---|
| Cotswolds - West | 123 | 55 |
| Cotswolds - East | 124 | 57 |
| Berkshire Downs | 150 | 88 |
| Chilterns - West | 145 | 93 |
| North Downs - Hampshire | 143 | 87 |
| Wey - Greensand | 142 | 90 |
| Upper Thames | 158 | 90 |
| Cherwell | 149 | 84 |
| Thame | 151 | 90 |
| Loddon | 151 | 95 |
| Lower Wey | 145 | 93 |
| Ock | 158 | 97 |
| Enborne | 152 | 89 |
| Cut | 155 | 102 |
| **Thames Area** | **146** | **86** |

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 31/07/2025 | | | | | | |
|---|---|---|---|---|---|---|
| **Area** | Rainfall (mm) Total | Rainfall (mm) LTA | Rainfall (mm) % LTA | Effective Rainfall (mm) Total | Effective Rainfall (mm) LTA | Effective Rainfall (mm) % LTA |
| Cotswolds - West | 117 | 248 | 47 | 6 | 47 | 12 |
| Cotswolds - East | 117 | 227 | 52 | 7 | 39 | 17 |
| Berkshire Downs | 122 | 229 | 53 | 6 | 36 | 17 |
| Chilterns - West | 134 | 213 | 63 | 8 | 28 | 29 |
| North Downs - Hampshire | 139 | 234 | 59 | 9 | 42 | 21 |
| Wey - Greensand | 142 | 223 | 64 | 10 | 37 | 27 |
| Upper Thames | 107 | 216 | 49 | 0 | 14 | 0 |
| Cherwell | 124 | 220 | 57 | 0 | 19 | 0 |
| Thame | 119 | 203 | 59 | 0 | 11 | 0 |
| Loddon | 114 | 199 | 57 | 0 | 11 | 0 |
| Lower Wey | 132 | 195 | 68 | 0 | 10 | 0 |
| Ock | 108 | 201 | 54 | 0 | 10 | 0 |
| Enborne | 112 | 214 | 52 | 0 | 19 | 0 |
| Cut | 119 | 188 | 63 | 0 | 7 | 0 |
| **Thames Area** | **122** | **215** | **57** | **3** | **24** | **14** |

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 | Jul 2025 rainfall % of long term average 1991 to 2020 | Jul 2025 band | May 2025 to July cumulative band | Feb 2025 to July cumulative band | Aug 2024 to July cumulative band |
|---|---|---|---|---|---|
| Berkshire Downs | 72 | Normal | Notably low | Exceptionally low | Normal |
| Chilterns West | 93 | Normal | Below normal | Exceptionally low | Normal |
| Cotswold East | 77 | Normal | Notably low | Exceptionally low | Normal |
| Cotswold West | 61 | Below Normal | Exceptionally low | Exceptionally low | Normal |
| Cut | 96 | Normal | Notably low | Exceptionally low | Normal |
| Enborne | 77 | Normal | Notably low | Exceptionally low | Normal |
| Loddon | 88 | Normal | Notably low | Exceptionally low | Normal |
| Lower Wey | 106 | Normal | Below normal | Exceptionally low | Normal |
| North Downs - Hampshire | 94 | Normal | Below normal | Notably low | Normal |

| | | | | | |
|---|---|---|---|---|---|
| Ock | 79 | Normal | Notably low | Exceptionally low | Normal |
| Thame | 85 | Normal | Notably low | Exceptionally low | Normal |
| Upper Cherwell | 91 | Normal | Notably low | Exceptionally low | Normal |
| Upper Thames | 56 | Below Normal | Notably low | Exceptionally low | Normal |
| Wey - Greensand | 108 | Normal | Below normal | Exceptionally low | Normal |

## 11.2 River flows table

| Site name | River | Catchment | Jul 2025 band | Jun 2025 band |
|---|---|---|---|---|
| Abingdon | River Ock | Ock | Normal | Normal |
| Banbury | River Cherwell | Cherwell Upper | Normal | Normal |
| Bibury | River Coln | Cotswolds West | Exceptionally low | Exceptionally low |
| Bourne End (hedsor) | River Wye | Wye Bucks | Normal | Normal |
| Cassington | River Evenlode | Evenlode | Notably low | Notably low |
| Farmoor (naturalised) | River Thames | Thames | Notably low | Below normal |
| Kingston | River Thames | Thames North Bank | Below normal | Below normal |
| Marlborough | River Kennet | Kennet | Notably low | Below normal |
| Sheepbridge | River Loddon | Loddon | Below normal | Below 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 | Notably low |

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

## 11.3 Groundwater table

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