Monthly water situation report: England

1 Summary - September 2023

September rainfall totals were in the normal range across most of England, with almost all catchments receiving average or above average rainfall. Soil moisture deficits (SMD) reduced across England during September as soils became wetter in many areas. River flows reduced at most of sites we report on but the majority of sites recorded normal or higher monthly mean flows. Groundwater levels decreased at almost all sites, but remain classed at normal at more than two–thirds of sites for the time of year. Reservoir stocks declined at three-quarters of the reservoirs or reservoir groups we report on, with almost two-thirds of reservoirs classed as normal for the time of year.

1.1 Rainfall

The September rainfall total for England was 81.7mm which represents 116% of the 1961 to 1990 Long Term Average (LTA) for the time of year (119% of the 1991 to 2020 LTA). Nearly all catchments received average or above average rainfall during September, while only six catchments received below average rainfall. The wettest hydrological area relative to the LTA was the Lower Welland and Nene catchment in east England which received 178% of LTA rainfall. The driest hydrological area was the Thanet Chalk in south-east England which received only 37% of LTA rainfall in September (Figure 2.1).

September rainfall totals were classed as normal for the time of year in the most catchments across England. Nearly a third of catchments were classed as above normal and seven catchments, predominately in the north-west were classed as notably high for the time of year. Across south-east and east England, six hydrological areas received below normal rainfall during September. All regions, with the exception of north-west England, where rainfall was above normal, received normal rainfall in September, as did England as whole (Figure 2.2).

The 3 month cumulative rainfall totals were above normal or higher at nearly three quarters of catchments across England. Nine catchments mainly in the north-west have rainfall totals classed as exceptionally high for July to September. The 6 month cumulative rainfall totals were normal or above normal or higher across most all of England. The twelve month cumulative rainfall totals were above normal or higher totals in the majority of catchments. Most of the south coast and large parts of the north-west and central England have recorded notably or exceptionally high rainfall totals over the past twelve months, with England as a whole recording notably high cumulative rainfall. It is of interest to note that the 12 month cumulative rainfall total (October 2022 to September 2023) was the wettest since records began in 1891 for the River Bourne and the Upper Hampshire Avon in south-west England (Figure 2.3).

1.2 Soil moisture deficit

Soil moisture deficits (SMD) reduced across England during September as soils became wetter in many areas, due to above average rainfall. There is a clear north-west to south-east divide, with wettest soils in the north-west and driest soils in the south-east (Figure 3.1).

Across most of England SMDs were below the LTA, leaving soils wetter than expected at the end of September. SMDs in the south-east are near or below LTA, meaning soils were drier than would be expected for the time of year (Figure 3.2).

1.3 River flows

September monthly mean river flows decreased at more than two-thirds of indicator sites we report on. The majority of sites were normal for the time of year, with more than a third of sites classed as above normal. Four sites, all in east or south-east England, were classed as below normal. The River Earmont and the River Weaver in the north-west as well as the River Tone in south-west England all had monthly mean river flows classed as notably high for the time of year (Figure 4.1).

Monthly mean river flows increased at all except two of the regional index sites in September, with Marston-on-Dove in central England on the River Dove and Horton on the Great Stour in south-east England seeing an decrease in flows which meant they were classed as normal and below normal respectively for the time of year. The Exe in south-west England, the Bedford Ouse in east England and the naturalised flows on the River Thames in the south-east, were all above normal for the time of year. The River Lune in north-west England recorded normal monthly mean river flows while Haydon Bridge on the River South Tyne in the north-east recorded notably high flows for September (Figure 4.2).

1.4 Groundwater levels

By the end of September, groundwater levels had decreased at all but three of the indicator sites we report on. More than two-thirds of groundwater sites were classed as normal for the time of year at the end of September. The remaining sites were all above normal or higher. Groundwater levels at Clanville Lodge Gate in the Test Chalk in south-east England remain notably high and levels in Skerne Magnesian Limestone at Aycliffe in north–east England and in the Dorset Stour Chalk at Woodyates in south-west England groundwater levels are above normal for the time of year. The West Cheshire Sandstone at Priors Heyes in north-west England continue to recover from the effects of historic abstraction and remains in the exceptionally high classification (Figure 5.1).

With the exception of two sites, Skirwith in the Carlisle Basin and Eden Valley Sandstone, and Little Bucket in the East Kent Stour Chalk, which were classed as notably high and above

normal respectively, all the major aquifer index sites remained as normal for the time of year (Figure 5.2).

1.5 Reservoir storage

Reservoir storage during September declined at more than three-quarters of the reservoirs or reservoir groups we report on. At the end of September, nearly two-thirds reservoirs or reservoir groups are classed as normal. Two reservoirs Hanningfield in east England and Bewl in south-east England recorded storage decreases of 11% and 10% respectively. The Teesdale group in north-east England recorded a 10% increase in storage. Five reservoirs were above normal and three were notably high at the end of September with the Lower Lee group in south-east England classed as exceptionally high for the time of year. In contrast, four sites remain below normal or lower, Colliford and Roadford in south-west England were below normal, Ardingly in south-east England was notably low as was the Dee System in Wales as a result on ongoing reservoir safety maintenance works expected to last until 2025 (Figure 6.1).

At a regional scale, total reservoir storage in north-east and north-west England increased slightly at the end of September and decreased across the rest of England. For England as a whole, total reservoir storage decreased slightly to 81%. (Figure 6.2)

1.6 Forward look

October began with a period of unseasonably warm weather, with settled conditions in many places. Towards the middle of the month conditions will become less settled, with wet weather expected to spread across England from the south west. This trend of unsettled weather is expected to continue, with conditions generally being wetter than average. Temperatures are expected to remain slightly above average, with lower than expected chances of overnight frosts.

For the 3 month period for the UK from October to December there is a slightly higher than normal chance of the 3 month period being wetter than expected. There is a higher chance of conditions being mild than cold, although later in the period cold spells are still possible. Stormy spells are still likely, particularly near the end of the period.

1.7 Projections for river flows at key sites

By the end of March 2024, river flows are projected to be normal across most of England, although in the south-east, river flows have a greater likelihood of being above normal or higher. By the end of September 2024, river flows are projected to be above normal or higher in south-

east, central and north-west England. In east and north-east England, river flows have a greater likelihood of being below normal or lower.

For scenario based projections of cumulative river flows at key sites by March 2024 see Figure 7.1.

For scenario based projections of cumulative river flows at key sites by September 2024 see Figure 7.2.

For probabilistic ensemble projections of cumulative river flows at key sites by March 2024 see Figure 7.3.

For probabilistic ensemble projections of cumulative river flows at key sites by September 2024 see Figure 7.4

1.8 Projections for groundwater levels in key aquifers

By the end of March 2024, groundwater levels are projected to have a greater likelihood to be below normal or lower in parts of Lincolnshire and Yorkshire, while in south-west, north-west and east England groundwater levels have a greater likelihood of being above normal or higher. By the end of September 2024, groundwater levels in south-east and north-west England have a greater likelihood of being above normal or higher. In east, central and north-east England groundwater levels are projected to be below normal or lower.

For scenario based projections of groundwater levels in key aquifers in March 2024 see Figure 7.5.

For scenario based projections of groundwater levels in key aquifers in September 2024 see Figure 7.6.

For probabilistic ensemble projections of groundwater levels in key aquifers in March 2024 see Figure 7.7.

For probabilistic ensemble projections of groundwater levels in key aquifers in September 2024 see Figure 7.8

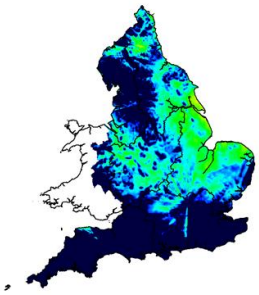
Author: National Water Resources Hydrology Team, Nationalhydrology@environment-agency.gov.uk

2 Rainfall

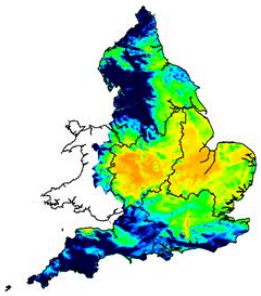
2.1 Rainfall map

Figure 2.1: Monthly rainfall across England and Wales for the past 11 months. UKPP radar data Note: Radar beam blockages in some regions may give anomalous totals in some areas.

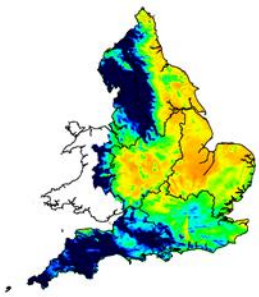
November 2022



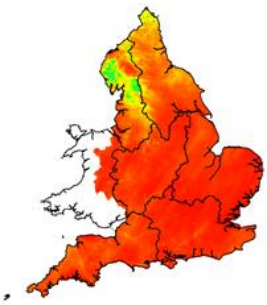
December 2022



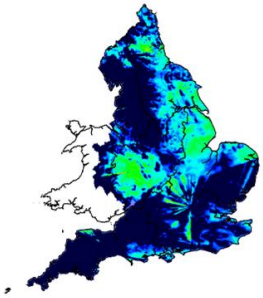
January 2023



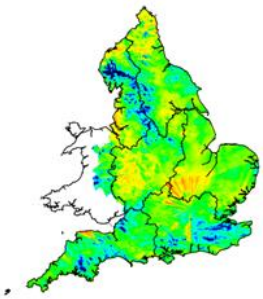
February 2023



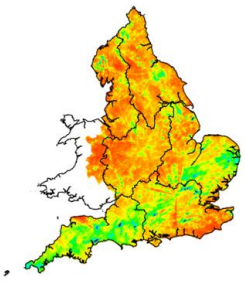
March 2023



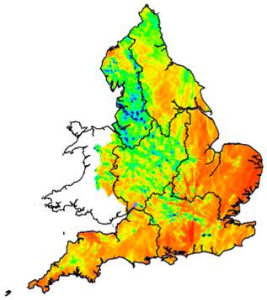
April 2023



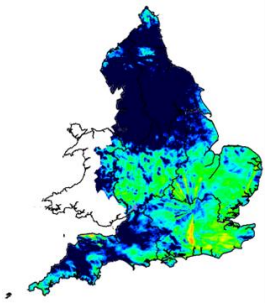
May 2023



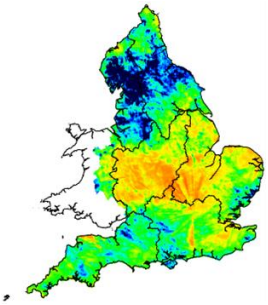
June 2023



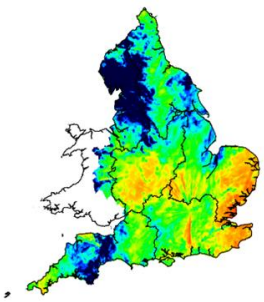
July 2023



August 2023



September 2023



Map Legend

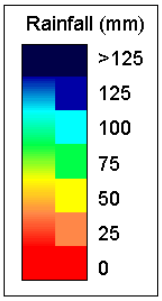
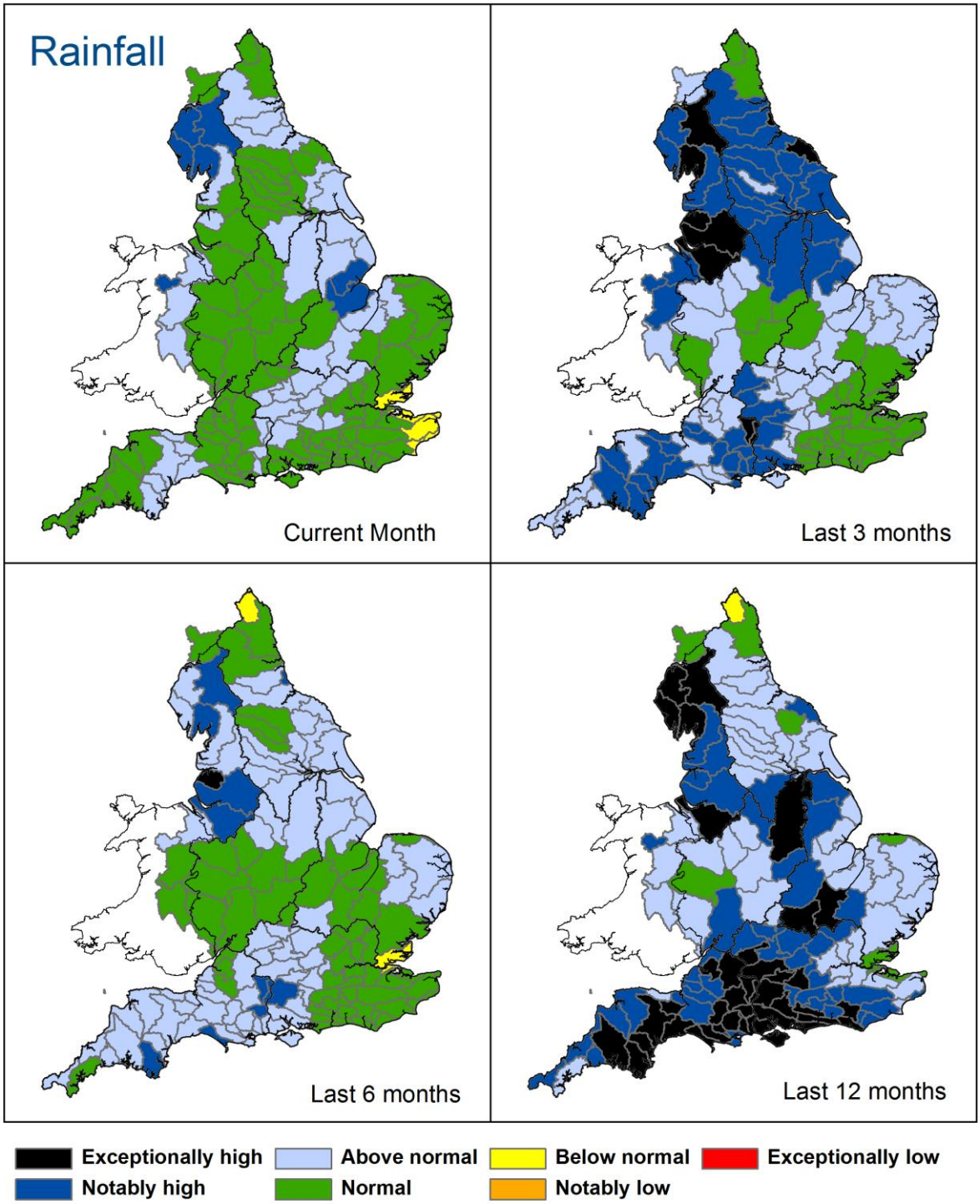


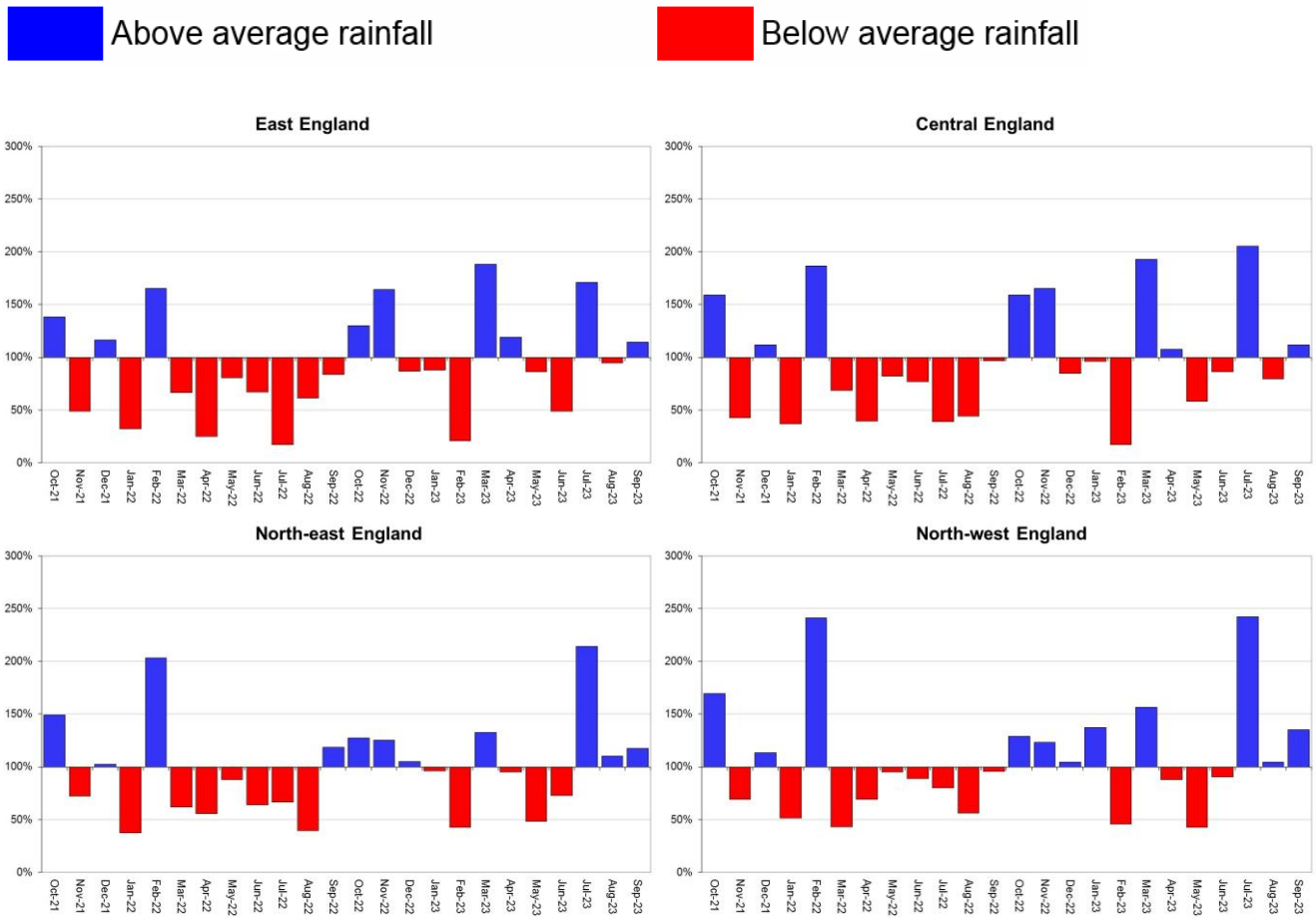
Figure 2.2: Total rainfall for hydrological areas across England for the current month (up to 30 September 2023), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals.

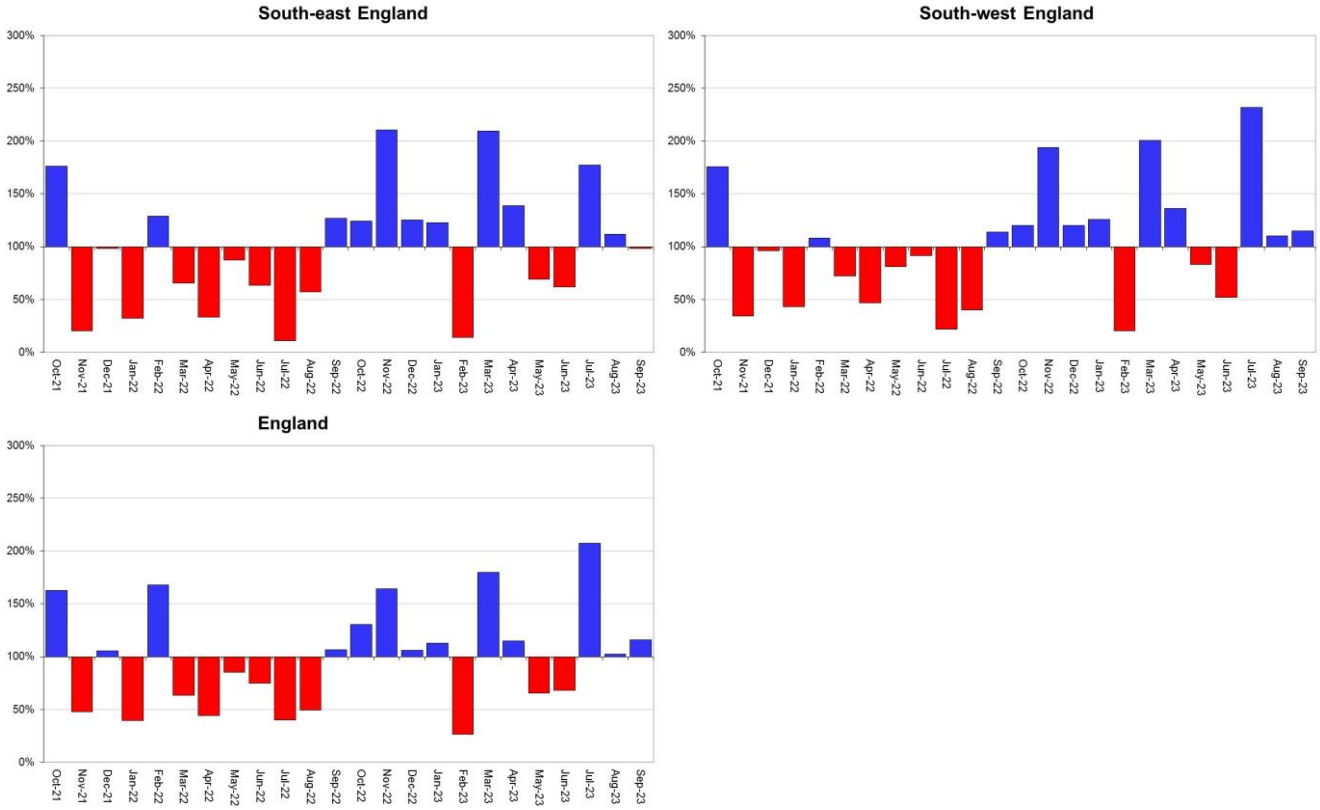


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2023). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved. Environment Agency, 100024198, 2023.

2.2 Rainfall charts

Figure 2.3: Monthly rainfall totals for the past 24 months as a percentage of the 1961 to 1990 long term average for each region and for England.





HadUK rainfall data. (Source: Met Office. Crown copyright, 2023).

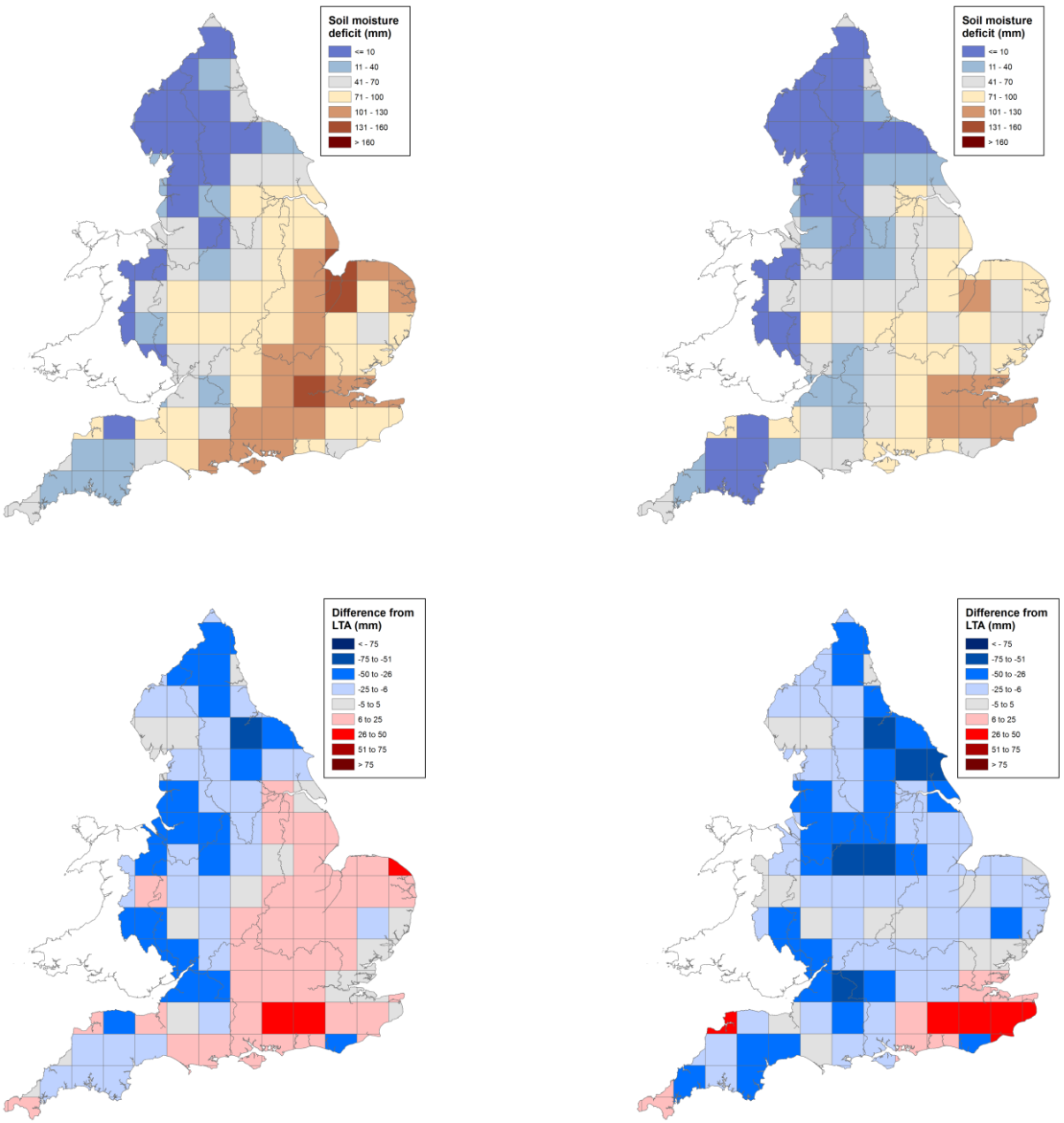
3 Soil moisture deficit

3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for weeks ending, 30 August 2023 (left panel) and 27 September 2023 (right panel). Top row shows actual soil moisture deficits (mm) and bottom row shows the difference (mm) of the actual from the 1961 to 1990 long term average soil moisture deficits. MORECS data for real land use.

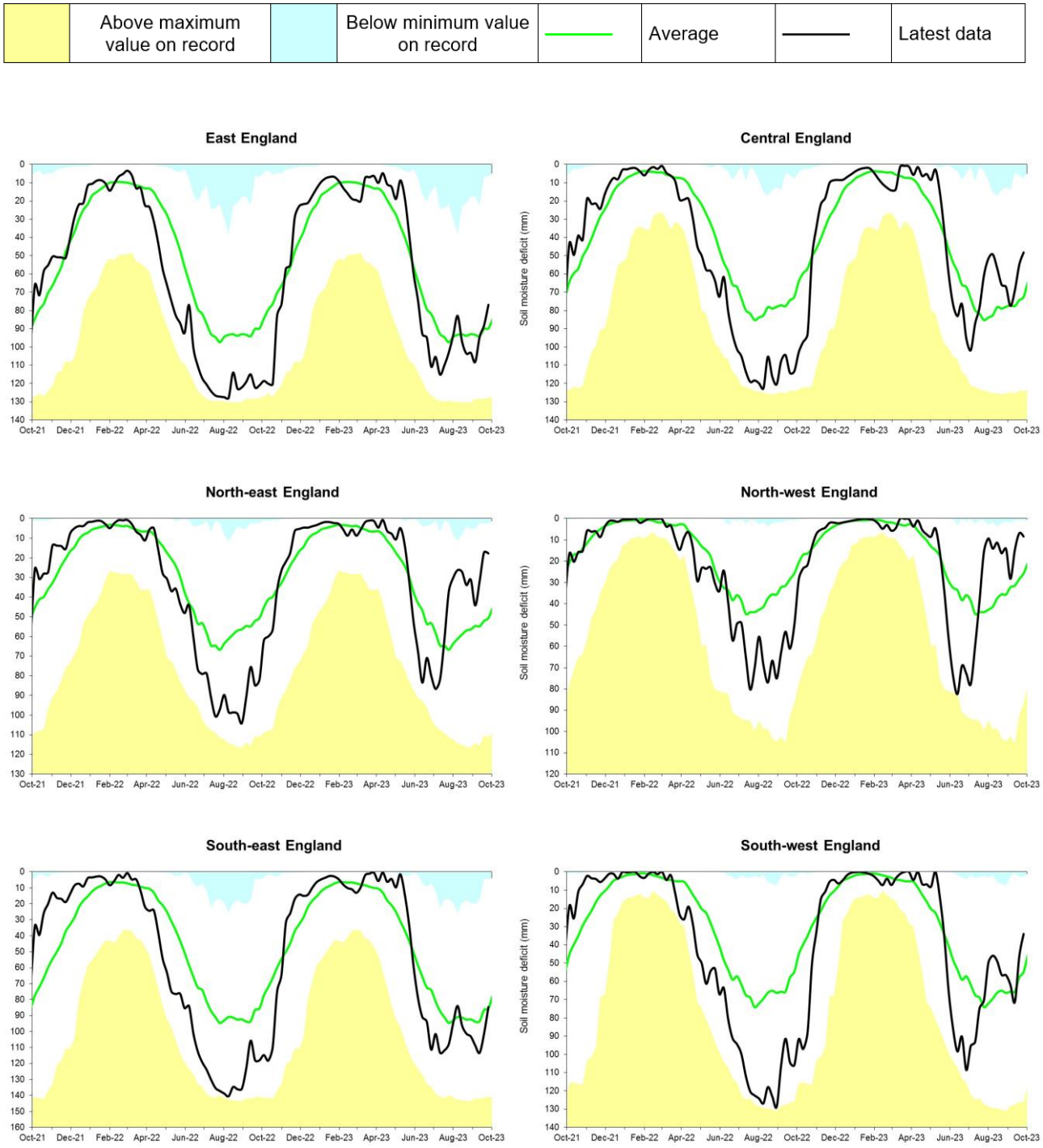
End of August 2023

End of September 2023



3.2 Soil moisture deficit charts

Figure 3.2: Latest soil moisture deficits for all geographic regions compared to maximum, minimum and 1961 to 1990 long term average. Weekly MORECS data for real land use.



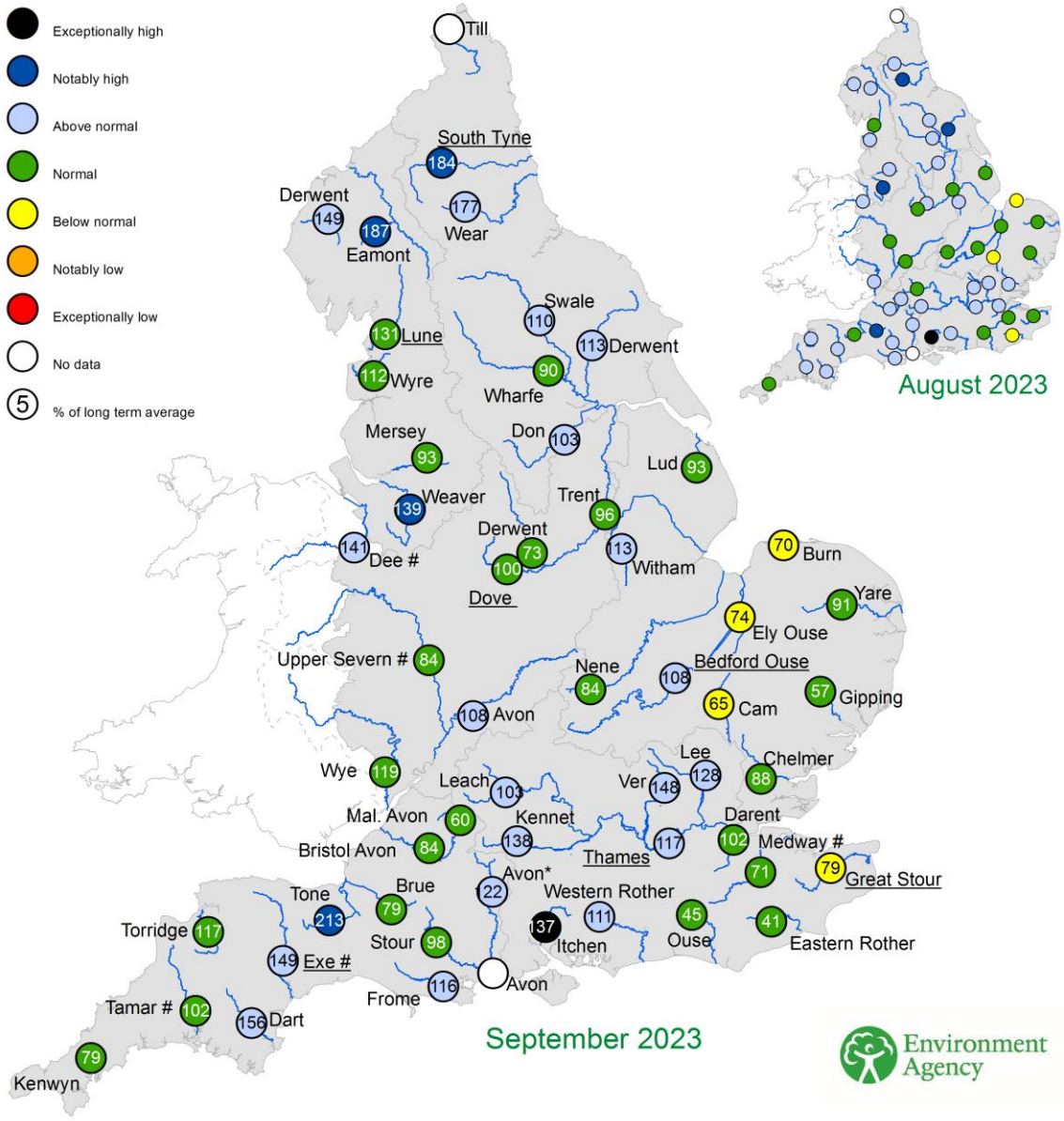
(Source: Met Office. Crown copyright, 2023).

4 River flows

4.1 River flow map

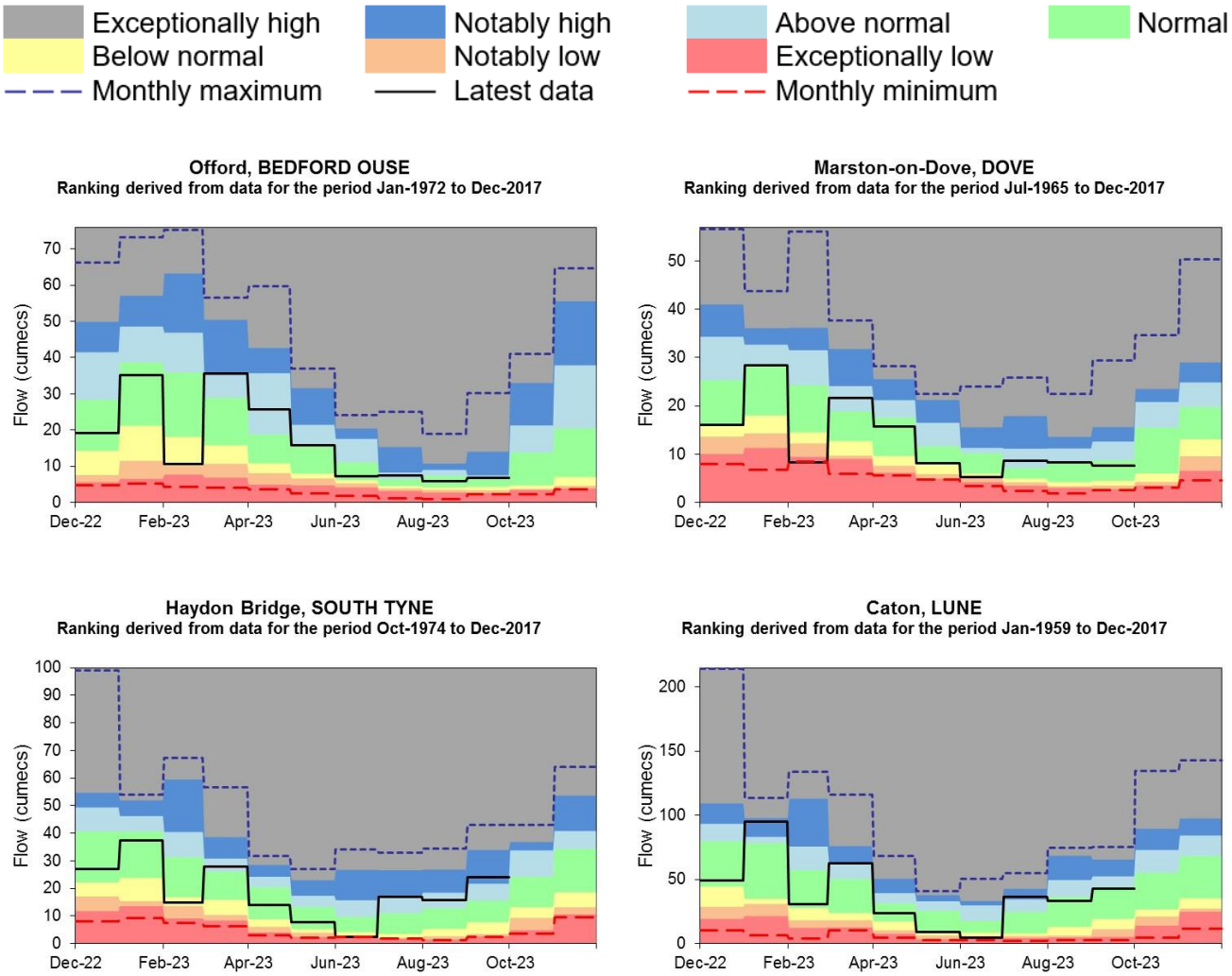
Figure 4.1: Monthly mean river flow for indicator sites for August 2023 and September 2023, expressed as a percentage of the respective long term average and classed relative to an analysis of historic August and September monthly means. Table available in the appendices with detailed information. Regional index sites are underlined and shown in the hydrographs in Figure 4.2.

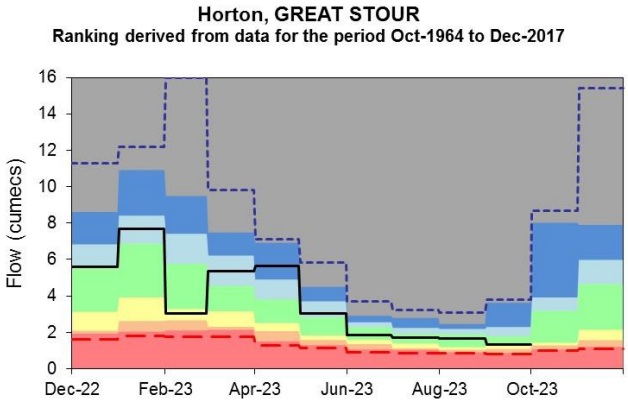
Naturalised flows are provided for the River Thames and the River Lee. +/- Monthly mean flow is the highest/lowest on record for the current month (note that record length varies between sites). * Flows may be overestimated at these sites – data should be treated with caution.
Flows may be impacted at these sites by water releases from upstream reservoirs.

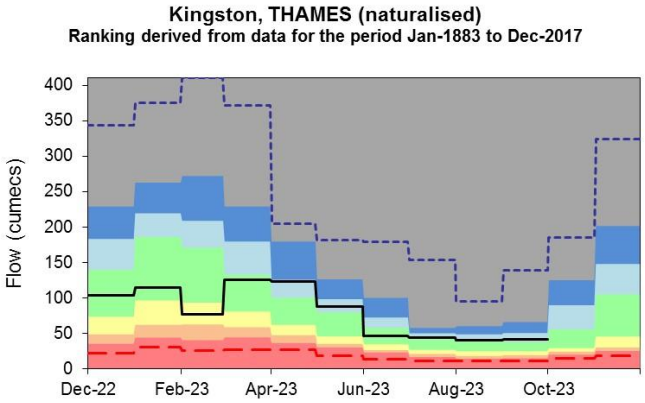


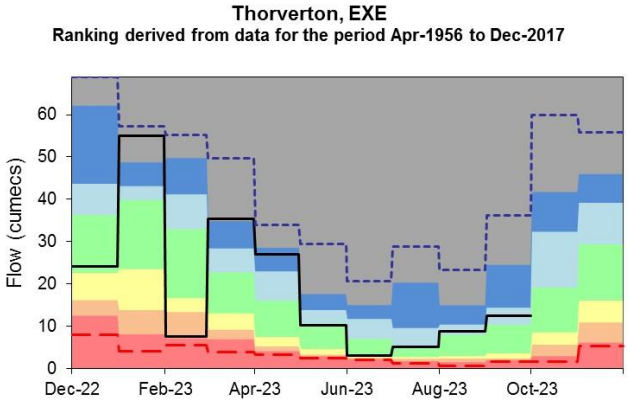
4.2 River flow charts

Figure 4.2: Monthly mean river flow for index sites over the past year for each geographic region, compared to an analysis of historic monthly mean flows, and long term maximum and minimum flows.









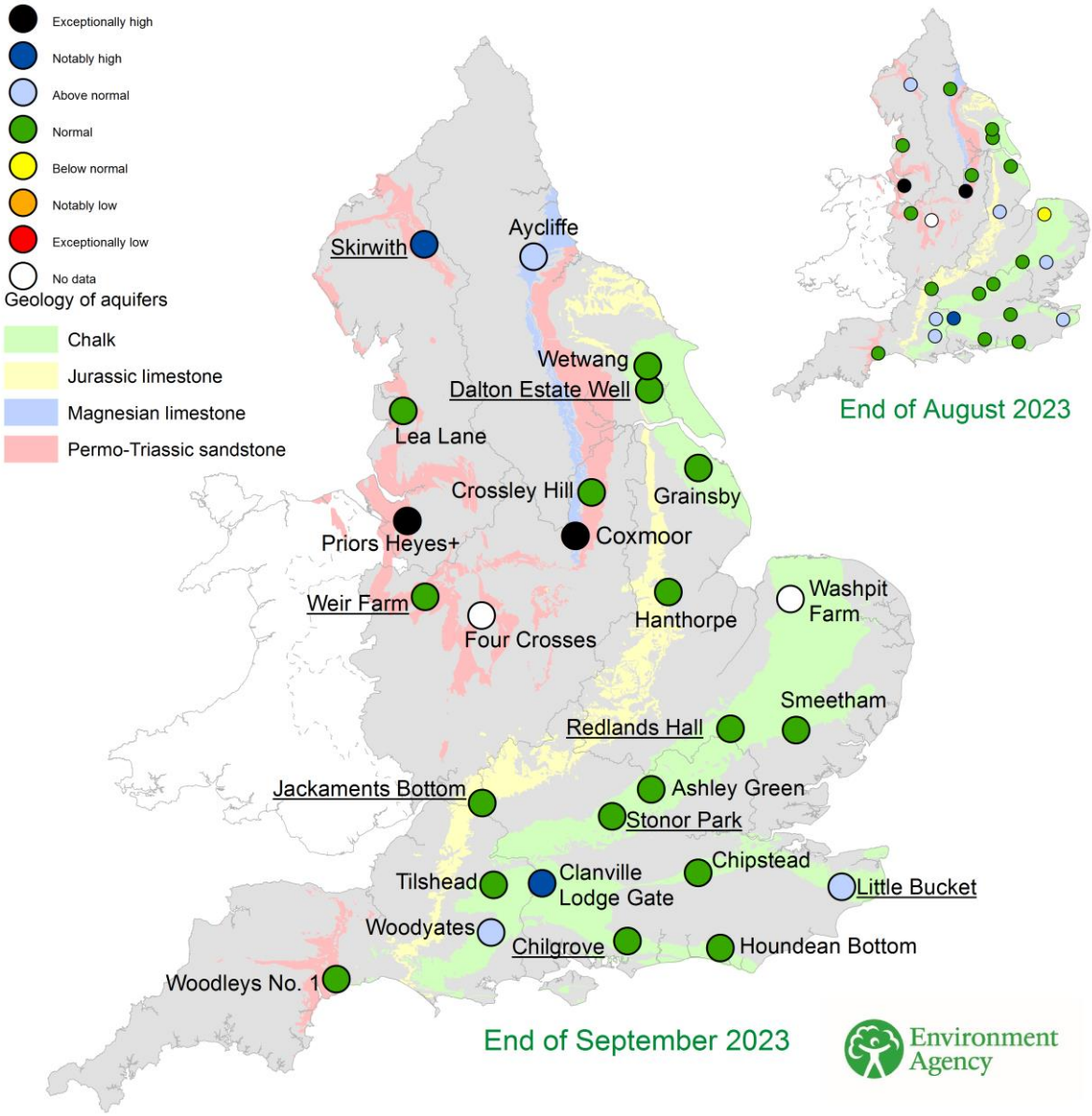
(Source: Environment Agency).

5 Groundwater levels

5.1 Groundwater levels map

Figure 5.1: Groundwater levels for indicator sites at the end of August 2023 and September 2023, classed relative to an analysis of respective historic August and September levels. Major aquifer index sites are underlined and shown in groundwater level charts in Figure 5.2.

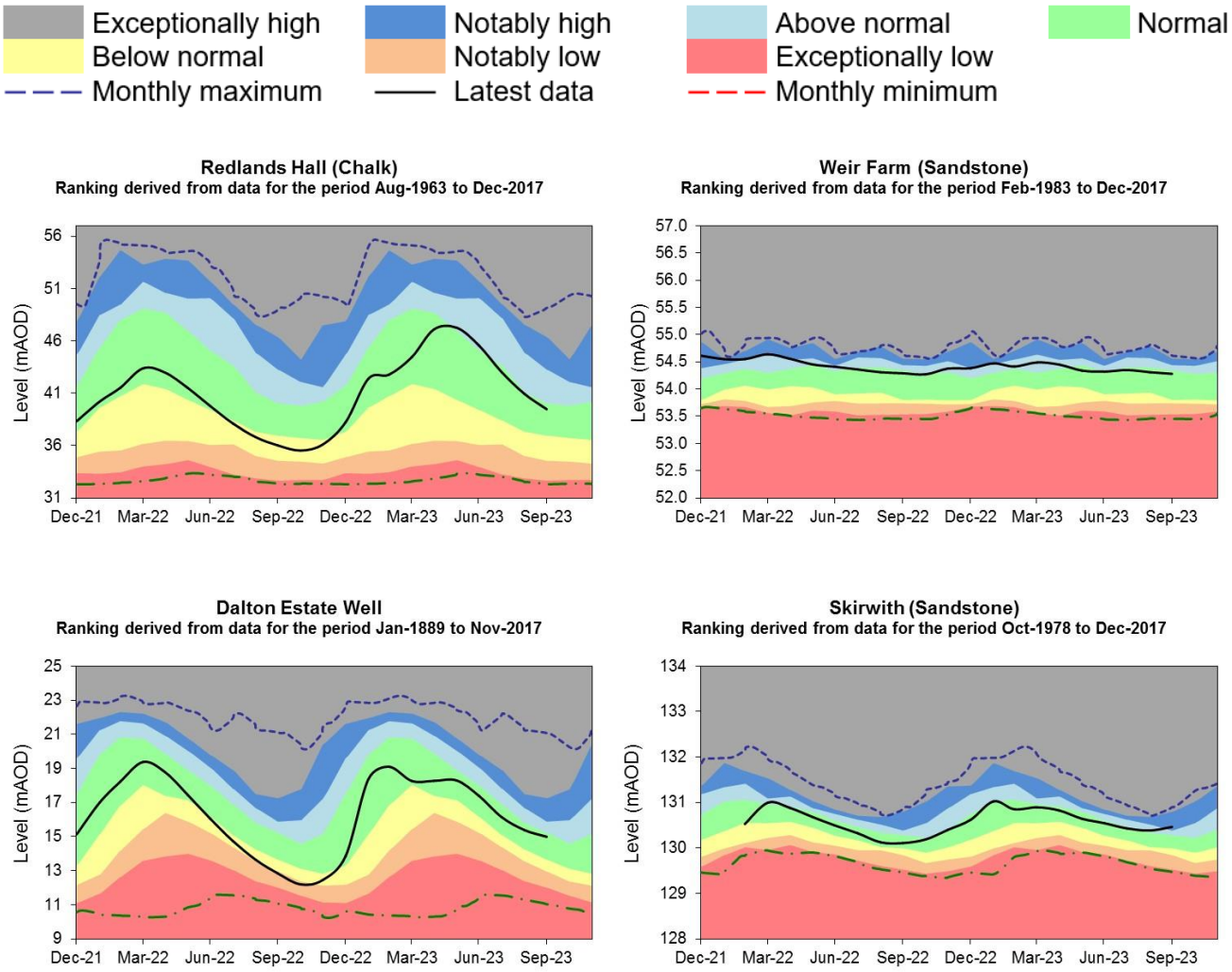
Redlands Hall is manually dipped at different times during the month and so may not be fully representative of month end levels. Levels at Priors Heyes remain high compared to historic levels because the aquifer is recovering from the effects of historic abstraction. +/- End of month groundwater level is the highest/lowest on record for the current month (note that record length varies between sites).

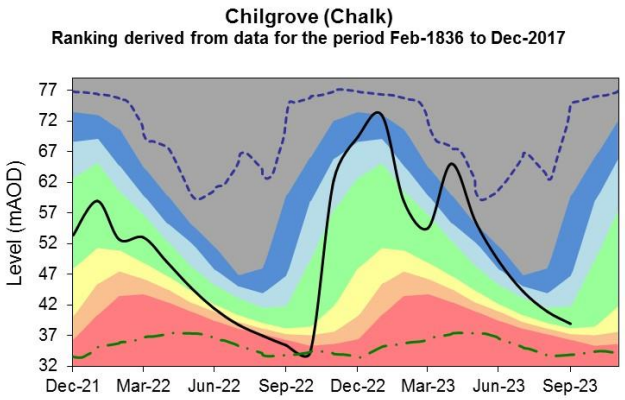


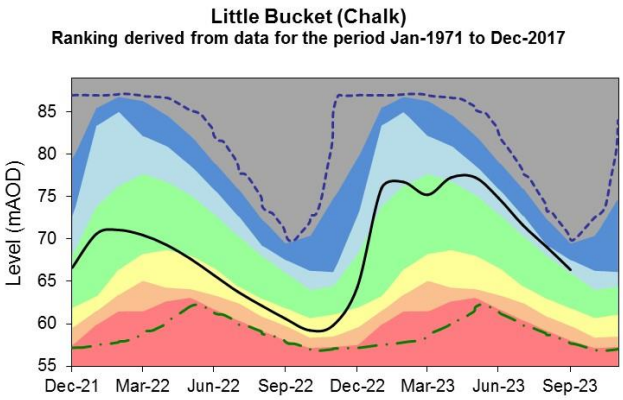
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2023.

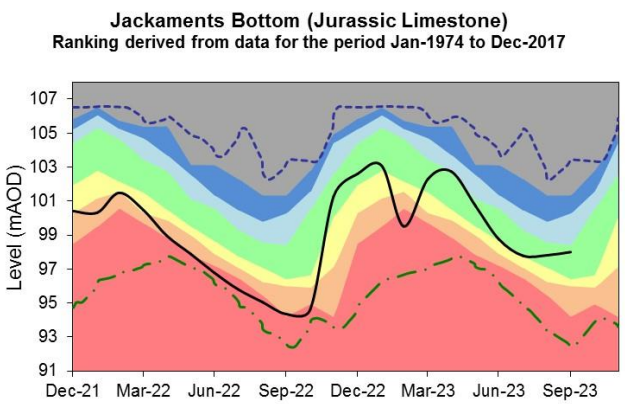
5.2 Groundwater level charts

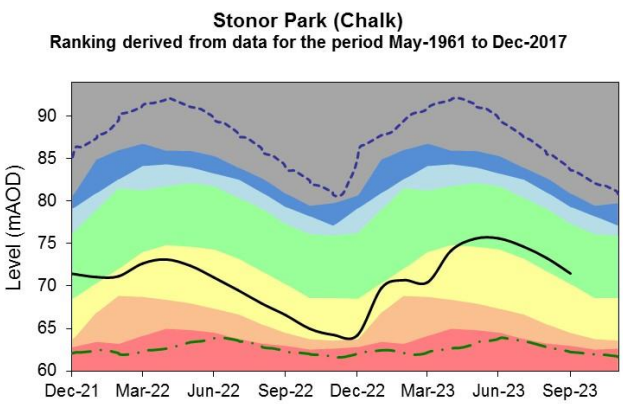
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. Past 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.









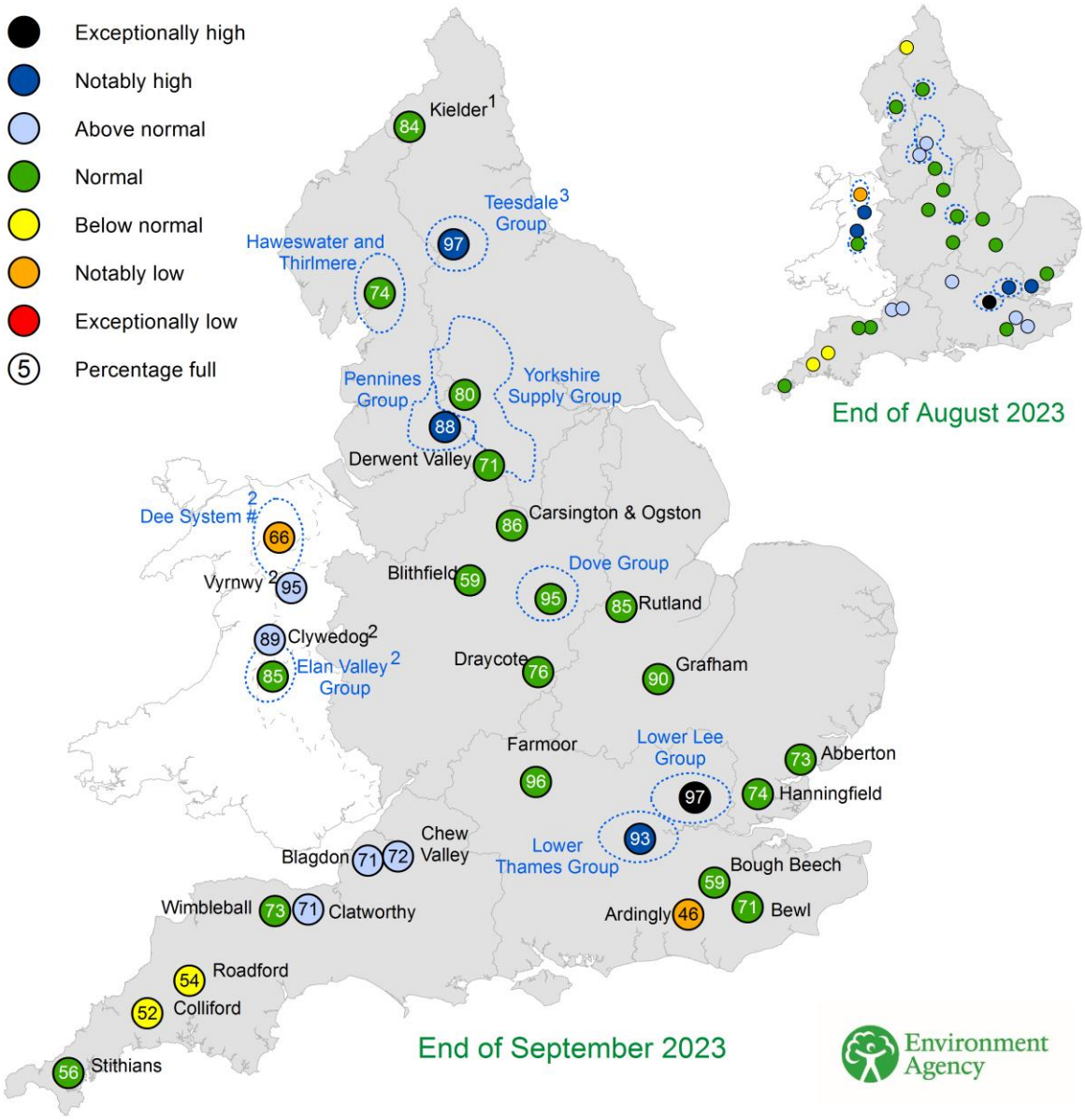


(Source: Environment Agency, 2023)

6 Reservoir storage

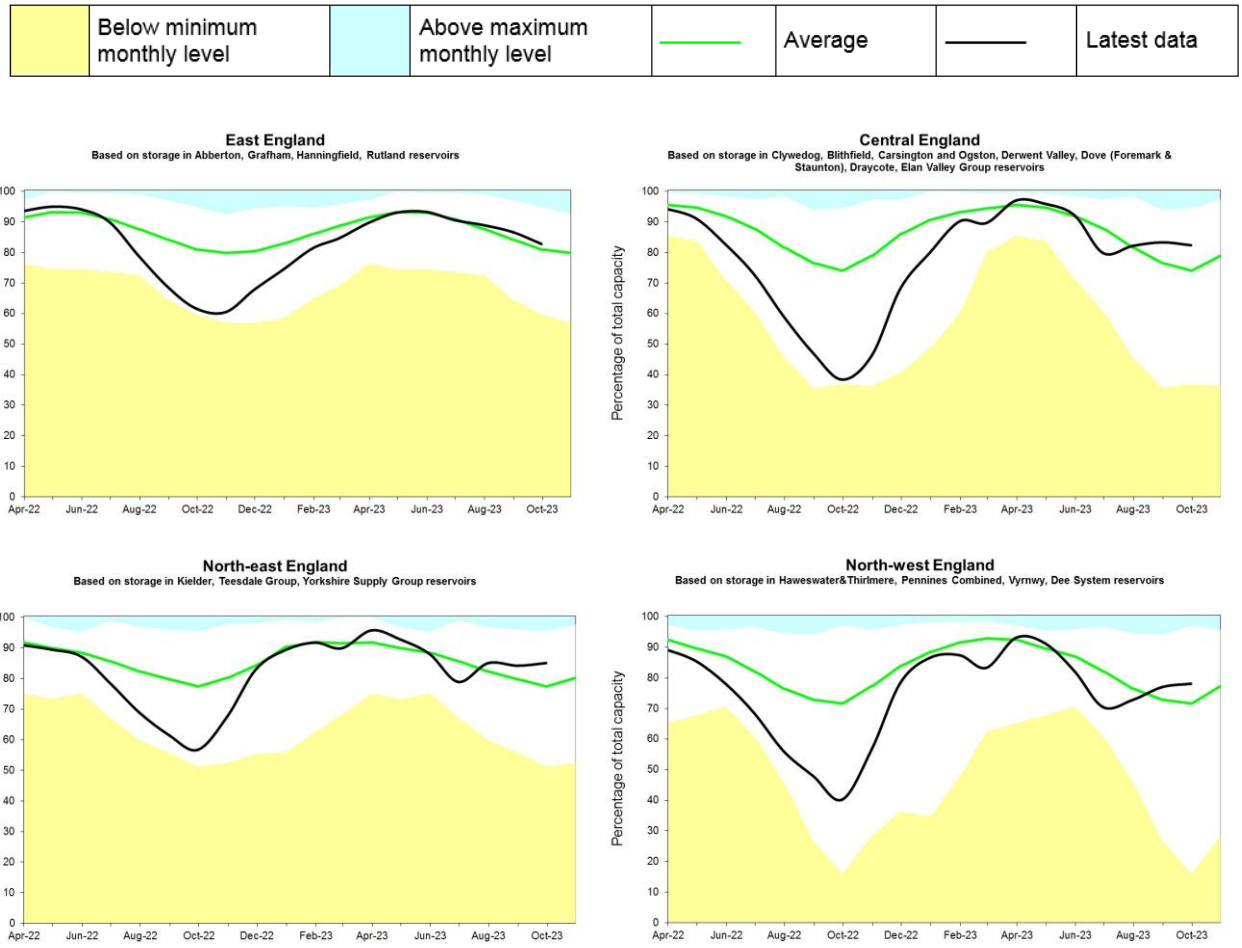
6.1 Reservoir storage map

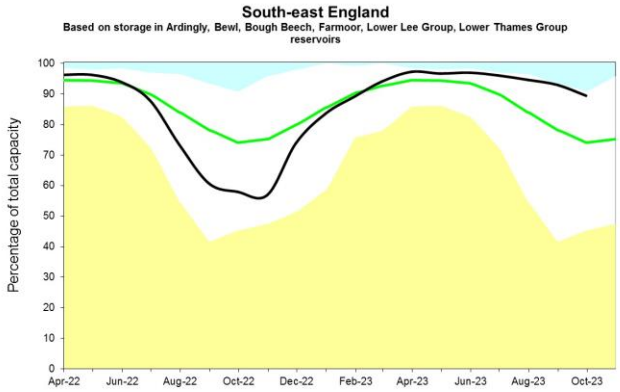
Figure 6.1: Reservoir stocks at key individual and groups of reservoirs at the end of August 2023 and September 2023 as a percentage of total capacity and classed relative to an analysis of historic August and September values respectively. Note: Classes shown may not necessarily relate to control curves or triggers for drought actions. As well as for public water supply, some reservoirs are drawn down to provide flood storage, river compensation flows or for reservoir safety inspections. In some cases current reservoir operating rules may differ from historic ones. The Dee system has been drawn down as part of reservoir safety works which are expected to continue until 2025.

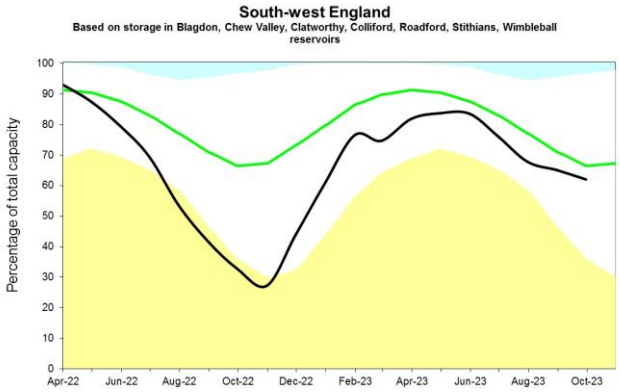


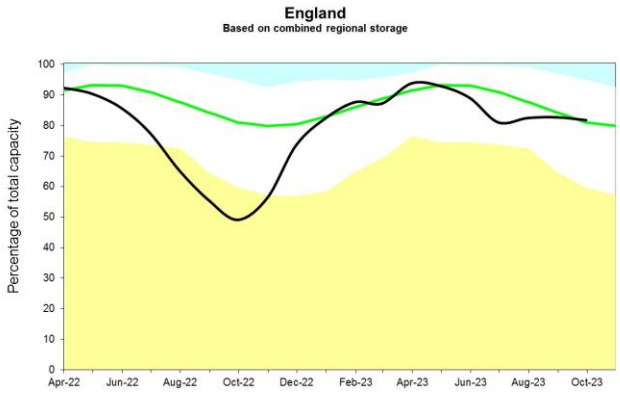
6.2 Reservoir storage charts

Figure 6.2: Regional reservoir stocks. End of month reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs/reservoir groups making up the regional values vary in length.







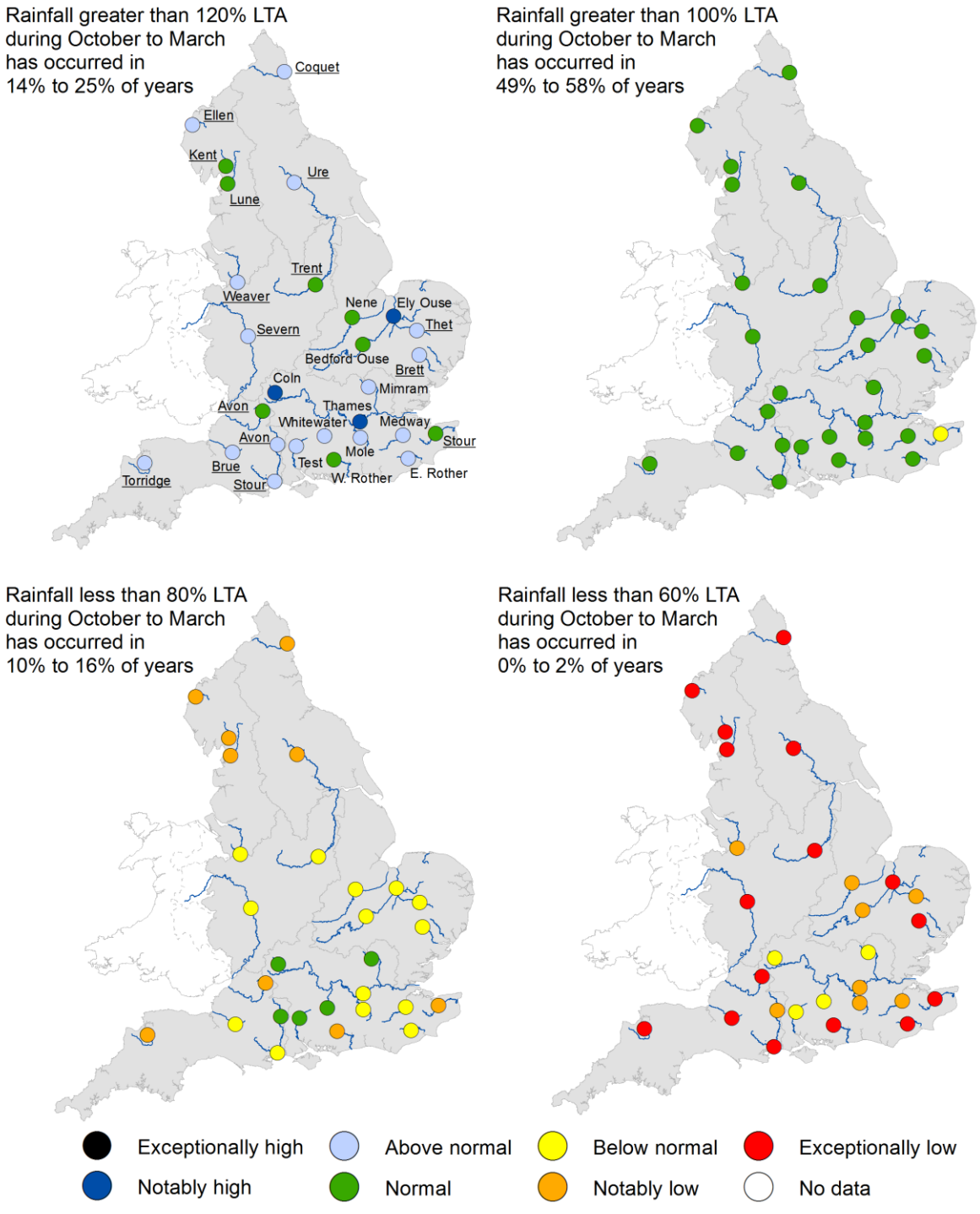


(Source: Water Companies).

7 Forward look

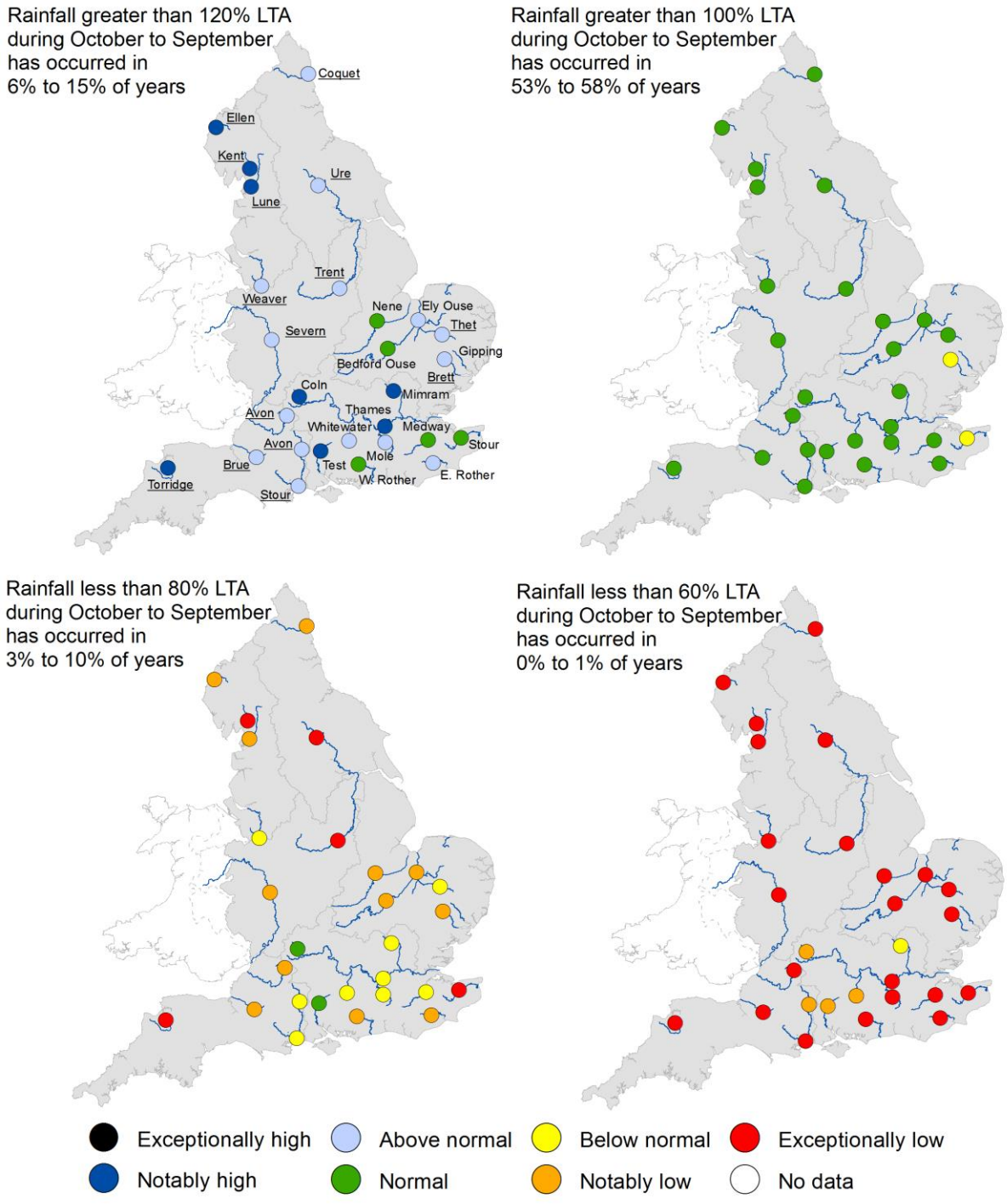
7.1 River flow

Figure 7.1: Projected river flows at key indicator sites up until the end of March 2024. Projections based on four scenarios: 120%, 100%, 80% and 60% of long term average rainfall between October 2023 and March 2024. Rainfall statistics based on occurrence in the historic record since 1891. Projections for underlined sites produced by CEH.



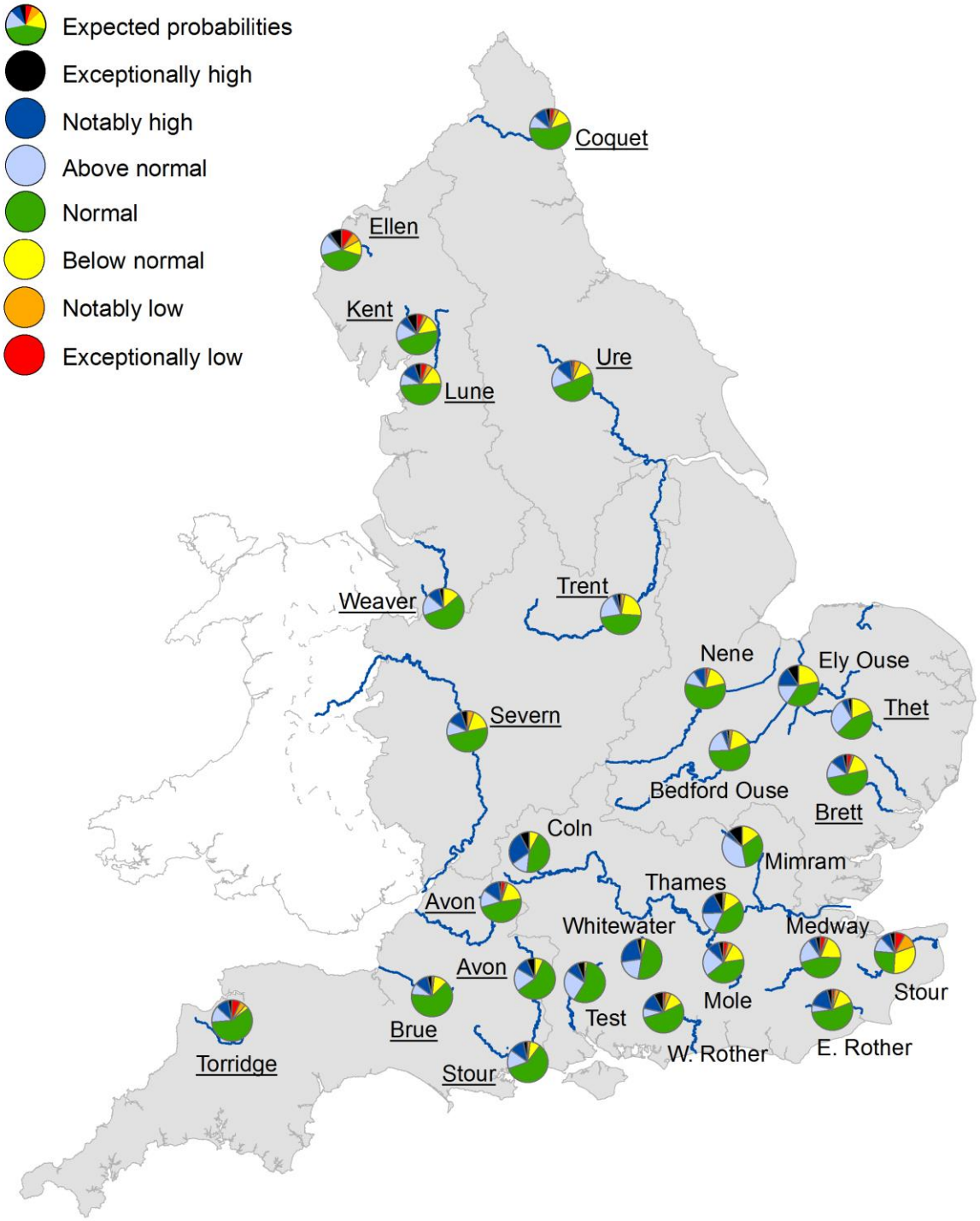
(Source: UK Centre for Ecology and Hydrology, Environment Agency).

Figure 7.2: Projected river flows at key indicator sites up until the end of September 2024. Projections based on four scenarios: 120%, 100%, 80% and 60% of long term average rainfall between October 2023 and September 2024. Rainfall statistics based on occurrence in the historic record since 1891. Projections for underlined sites produced by CEH.



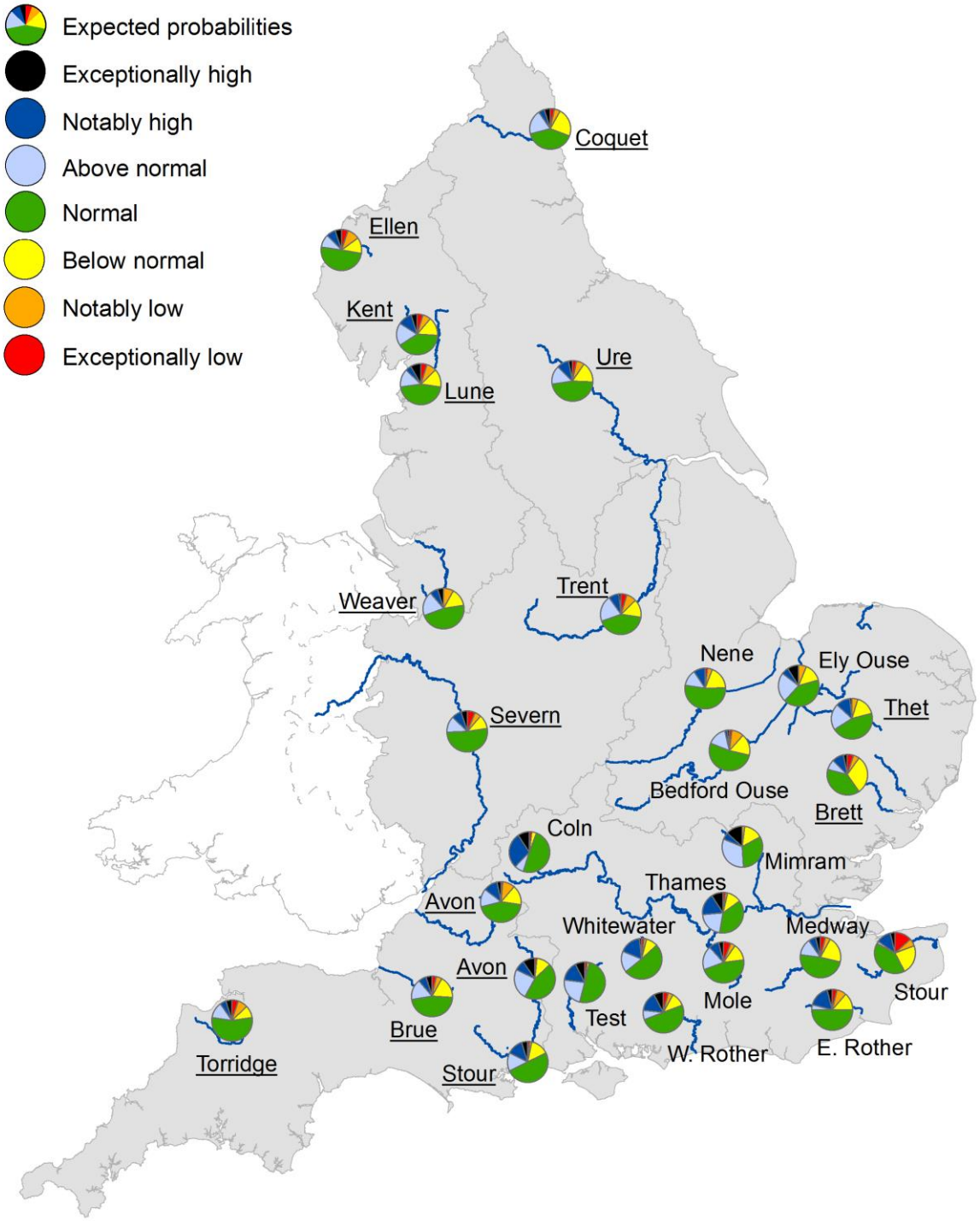
(Source: UK Centre for Ecology and Hydrology, Environment Agency)

Figure 7.3: Probabilistic ensemble projections of river flows at key indicator sites up until the end of March 2024. Pie charts indicate probability, based on climatology, of the surface water flow at each site being e.g. exceptionally low for the time of year. Projections for underlined sites produced by CEH.



(Source: UK Centre for Ecology and Hydrology, Environment Agency).

Figure 7.4: Probabilistic ensemble projections of river flows at key indicator sites up until the end of September 2024. Pie charts indicate probability, based on climatology, of the surface water flow at each site being e.g. exceptionally low for the time of year. Projections for underlined sites produced by CEH.



(Source: UK Centre for Ecology and Hydrology, Environment Agency).

7.2 Groundwater

Figure 7.5: Projected groundwater levels at key indicator sites at the end of March 2024. Projections based on four scenarios: 120%, 100%, 80% and 60% of long term average between October 2023 and March 2024. Rainfall statistics based on occurrence in the historic record since 1891. Projections for underlined sites produced by BGS.

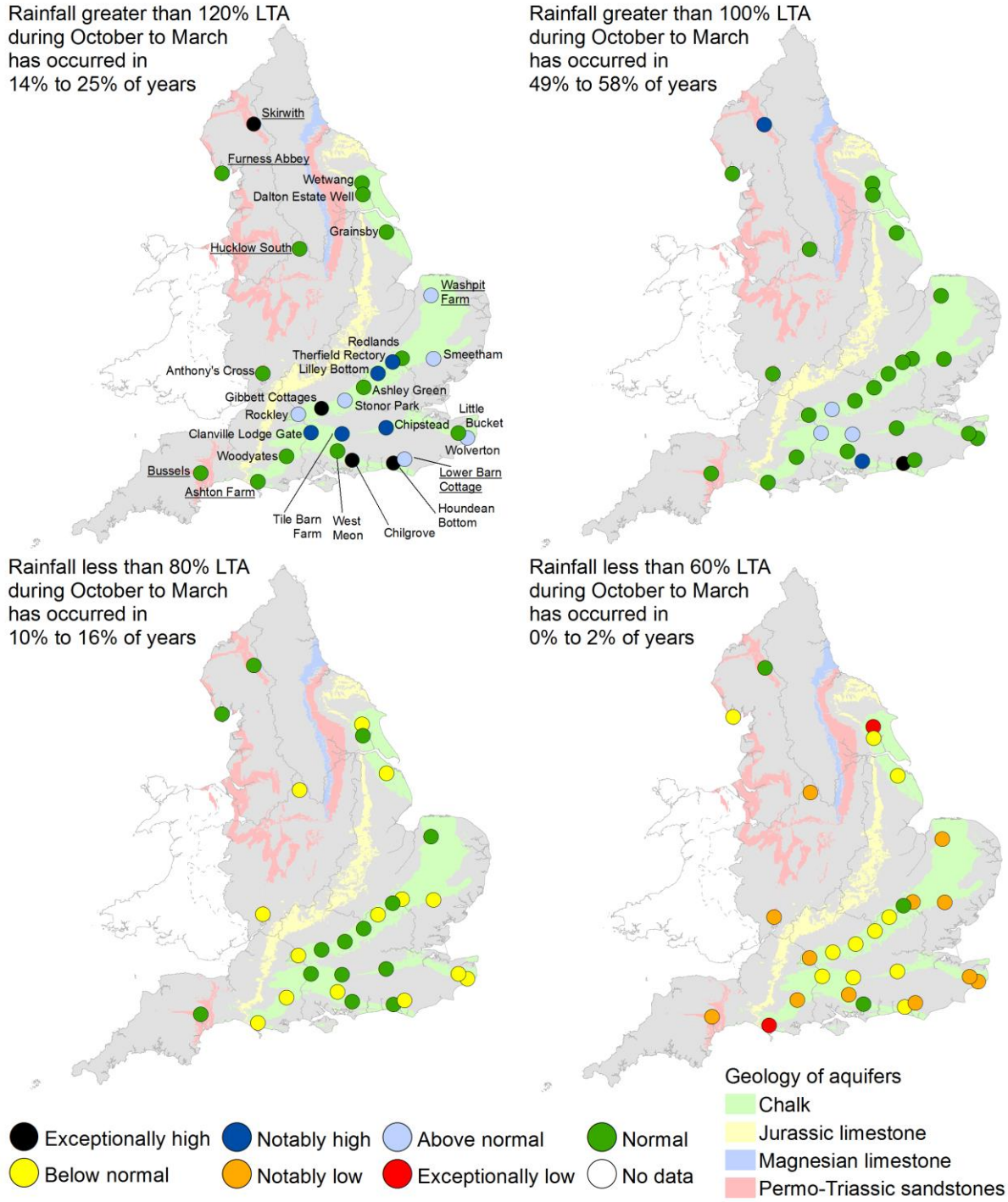


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Figure 7.6: Projected groundwater levels at key indicator sites at the end of September 2024. Projections based on four scenarios: 120%, 100%, 80% and 60% of long term average rainfall between October 2023 and September 2024. Rainfall statistics based on occurrence in the historic record since 1891. Projections for underlined sites produced by BGS.

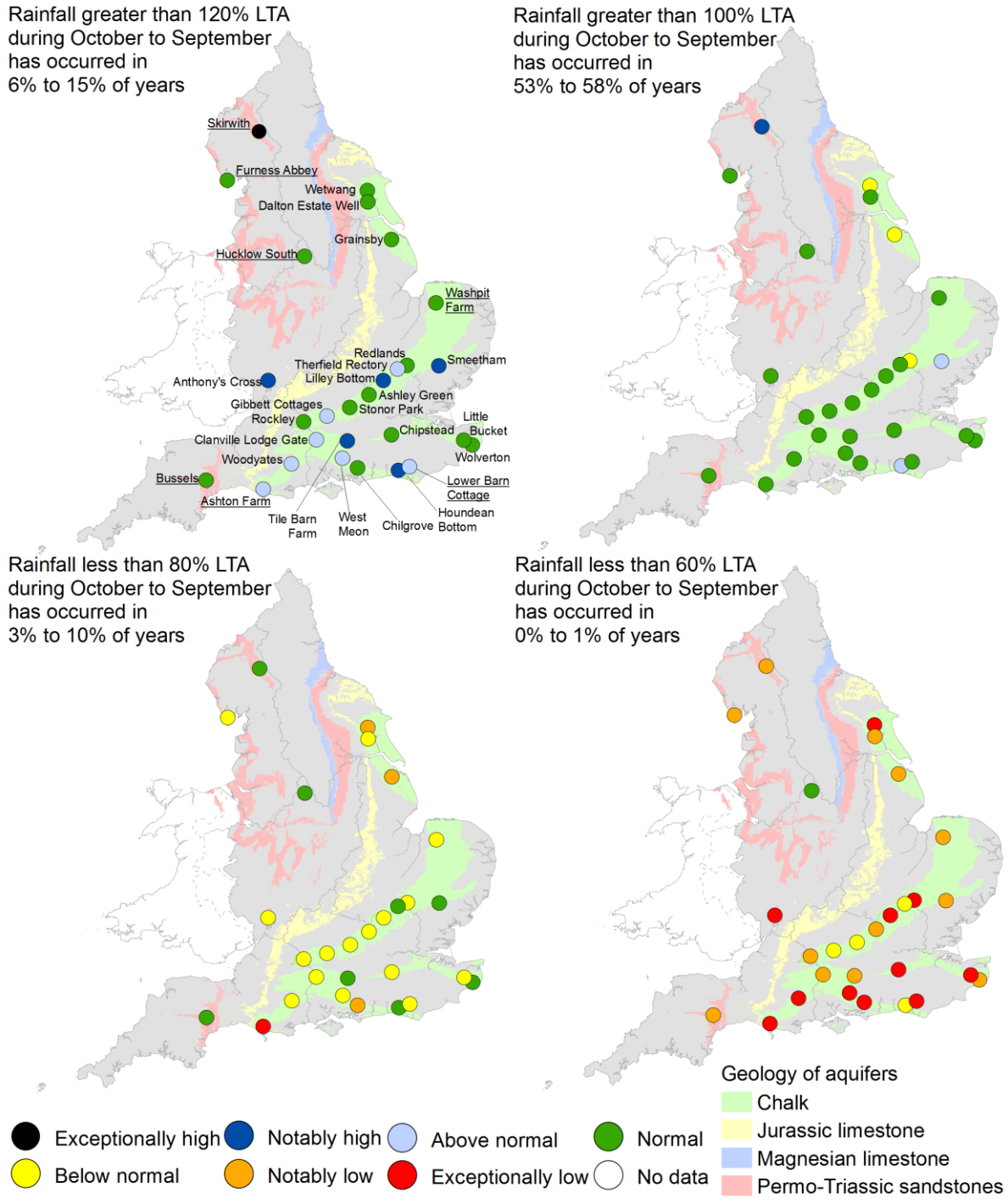

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Figure 7.7: Probabilistic ensemble projections of groundwater levels at key indicator sites at the end of March 2024. Pie charts indicate probability, based on climatology, of the groundwater level at each site being e.g. exceptionally low for the time of year. Projections for underlined sites produced by BGS.

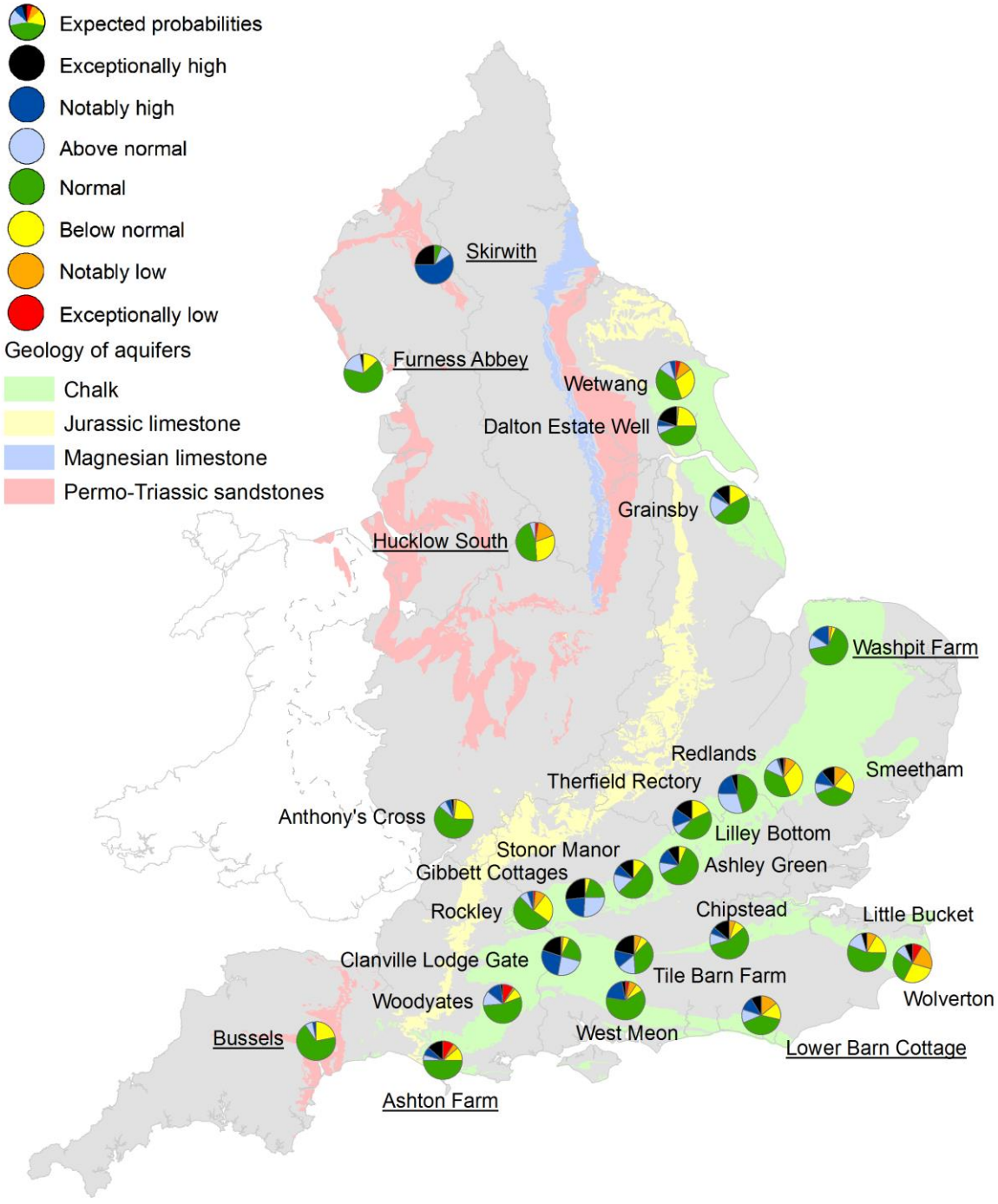

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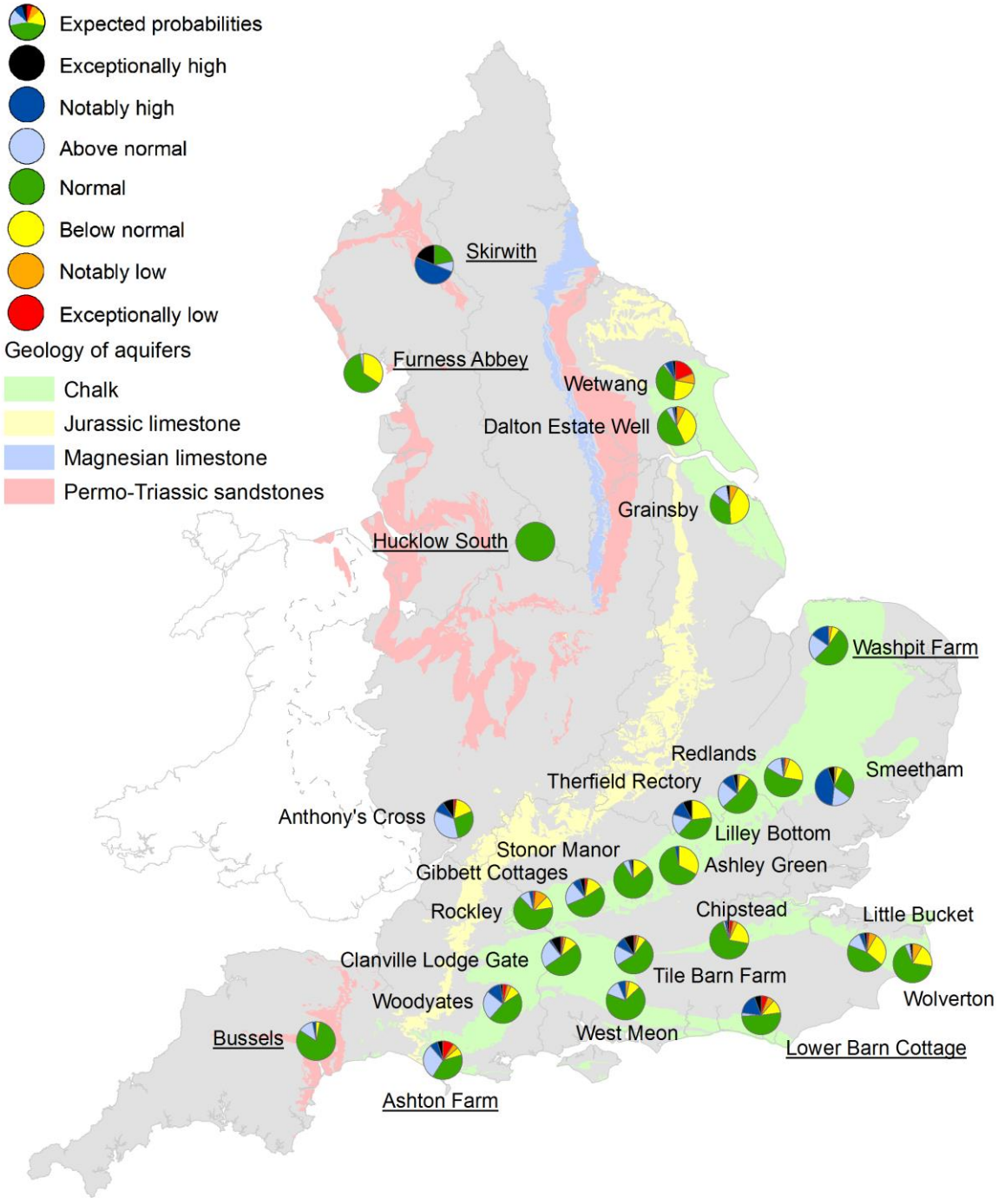
Figure 7.8: Probabilistic ensemble projections of groundwater levels at key indicator sites at the end of September 2024. Pie charts indicate probability, based on climatology, of the groundwater level at each site being e.g. exceptionally low for the time of year. Projections for underlined sites produced by BGS.



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8 Glossary

8.1 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} or m^3/s).

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 1961-1990. 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 x 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 (e.g. 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).

8.2 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.

8.3 Geographic regions

Throughout this report regions of England are used to group Environment Agency areas together. Below the areas in each region are listed, and Figure 8.1 shows the geographical extent of these regions.

East includes: Cambridgeshire and Bedfordshire, Lincolnshire and Northamptonshire, and Essex, Norfolk and Suffolk areas.

South east includes: Solent and South Downs, Hertfordshire and North London, Thames, and Kent and South London areas.

South west includes: Devon and Cornwall, and Wessex areas.

Central includes: Shropshire, Herefordshire, Worcestershire and Gloucestershire, Staffordshire, Warwickshire and West Midlands, and Derbyshire, Nottinghamshire and Leicestershire areas.

North west includes: Cumbria and Lancashire, and Greater Manchester, Merseyside and Cheshire areas.

North east includes: Yorkshire, and Northumberland Durham and Tees areas.

Figure 8.1: Geographic regions

9 Appendices

9.1 Rainfall table

Region	Sep 2023 rainfall % of long term average 1961 to 1990	Sep 2023 band	Jul 2023 to September 2023 cumulative band	Apr 2023 to September 2023 cumulative band	Oct 2022 to September 2023 cumulative band
East England	114	Normal	Normal	Normal	Normal
Central England	112	Normal	Above normal	Normal	Above normal
North-east England	118	Normal	Notably high	Normal	Normal
North-west England	135	Above Normal	Notably high	Above normal	Notably high
South-east England	98	Normal	Normal	Normal	Notably high
South-west England	115	Normal	Notably high	Above normal	Exceptionally high
England	116	Normal	Above normal	Above normal	Notably high

9.2 River flows table

Geographic area	Site name	River	Sep 2023 band	Aug 2023 band
East	Burnham	Burn	Below normal	Below normal
East	Claypole	Upper Witham	Above normal	Above normal
East	Colney	Yare	Normal	Normal
East	Denver	Ely Ouse	Below normal	Normal
East	Dernford	Cam	Below normal	Below normal
East	Louth Weir	Lud	Normal	Normal
East	Offord	Bedford Ouse	Above normal	Normal
East	Springfield	Chelmer	Normal	Above normal
East	Stowmarket	Gipping	Normal	Normal
East	Upton Mill	Nene	Normal	Normal
Central	Bewdley	Severn	Normal	Normal
Central	Derby St Marys	Derwent	Normal	Above normal
Central	Evesham	Avon	Above normal	Normal
Central	Marston-on-dove	Dove	Normal	Normal
Central	North Muskham	Trent	Normal	Normal
North East	Buttercrambe	Derwent	Above normal	Notably high

North East	Crakehill Topcliffe	Swale	Above normal	Above normal
North East	Heaton Mill	Till	No Data	No Data
North East	Doncaster	Don	Above normal	Above normal
North East	Haydon Bridge	South Tyne	Notably high	Above normal
North East	Tadcaster	Wharfe	Normal	Above normal
North East	Witton Park	Wear	Above normal	Notably high
North West	Ashton Weir	Mersey	Normal	Above normal
North West	Caton	Lune	Normal	Normal
North West	Ouse Bridge	Derwent	Above normal	Above normal
North West	Pooley Bridge	Eamont	Notably high	Above normal
North West	St Michaels	Wyre	Normal	Above normal
North West	Ashbrook	Weaver	Notably high	Notably high
South East	Allbrook + Highbridge	Itchen	Exceptionally high	Exceptionally high
South East	Feildes Weir	Lee	Above normal	Above normal
South East	Hansteads	Ver	Above normal	Above normal
South East	Hawley	Darent	Normal	Above normal
South East	Horton	Great Stour	Below normal	Normal
South East	Kingston	Thames	Above normal	Above normal
South East	Lechlade	Leach	Above normal	Normal

South East	Teston + Farleigh	Medway	Normal	Normal
South East	Marlborough	Kennet	Above normal	Above normal
South East	Udiam	Rother	Normal	Below normal
South East	Ardingley Gs	Ouse	Normal	Normal
South East	Princes Marsh Gs	Rother	Above normal	Above normal
South West	Amesbury	Upper Avon	Above normal	Above normal
South West	Bathford	Avon	Normal	Above normal
South West	Bishops Tull	Tone	Notably high	Normal
South West	East Stoke	Frome	Above normal	Above normal
South West	Great Somerford	Avon	Normal	Above normal
South West	Gunnislake	Tamar	Normal	Above normal
South West	Hammoon	Middle Stour	Normal	Above normal
South West	Knapp Mill	Avon	No Data	No Data
South West	Lovington	Upper Brue	Normal	Notably high
South West	Thorverton	Exe	Above normal	Above normal
South West	Torrington	Torridge	Normal	Above normal
South West	Truro	Kenwyn	Normal	Normal
South West	Austins Bridge	Dart	Above normal	Above normal
EA Wales	Manley Hall	Dee	Above normal	Above normal

EA Wales	Redbrook	Wye	Normal	Above normal

9.3 Groundwater table

Geographic area	Site name	Aquifer	End of Sep 2023 band	End of Aug 2023 band
East	Grainsby	Grimsby Ancholme Louth Chalk	Normal	Normal
East	Redlands Hall (chalk)	Cam Chalk	Normal	Normal
East	Hanthorpe	Cornbrash (South)	Normal	Above normal
East	Smeetham Hall Cott.	North Essex Chalk	Normal	Above normal
East	Washpit Farm Rougham	North West Norfolk Chalk		Below normal
Central	Four Crosses	Grimsby Ancholme Louth Limestone	Below normal	Below normal
Central	Weir Farm (sandstone)	Bridgnorth Sandstone Formation	Normal	Normal
Central	Coxmoor	Permo Triassic Sandstone	Exceptionally high	Exceptionally high
Central	Crossley Hill	Permo Triassic Sandstone	Normal	Normal
North East	Dalton Estate Well	Hull & East Riding Chalk	Normal	Normal

North East	Aycliffe Nra2	Skerne Magnesian Limestone	Above normal	Normal
North East	Wetwang	Hull & East Riding Chalk	Normal	Normal
North West	Priors Heyes	West Cheshire Permo-Triassic Sandstone	Exceptionally high	Exceptionally high
North West	Skirwith (sandstone)	Carlisle Basin Permo-Triassic sandstone	Notably high	Above normal
North West	Lea Lane	Fylde Permo-Triassic Sandstone	Normal	Normal
South East	Chilgrove (chalk)	Chichester-Worthing-Portsdown Chalk	Normal	Normal
South East	Clanville Gate Gwl	River Test Chalk	Notably high	Notably high
South East	Houndean Bottom Gwl	Brighton Chalk Block	Normal	Normal
South East	Little Bucket (chalk)	East Kent Chalk - Stour	Above normal	Above normal
South East	Jackaments Bottom (jurassic Limestone)	Burford Oolitic Limestone (Inferior)	Normal	Normal
South East	Ashley Green Stw Obh	Mid-Chilterns Chalk	Normal	Normal

South East	Stonor Park (chalk)	South-West Chilterns Chalk	Normal	Normal
South East	Chipstead Gwl	Epsom North Downs Chalk	Normal	Normal
South West	Tilshead	Upper Hampshire Avon Chalk	Normal	Above normal
South West	Woodleys No1	Otterton Sandstone Formation	Normal	Normal
South West	Woodyates	Dorset Stour Chalk	Above normal	Above normal

9.4 Reservoir table

Geographic region	% Full	Average comparison
East England	83	Above average
Central England	82	Above average
North-east England	85	Above average
North-west England	78	Above average
South-east England	89	Above average
South-west England	62	Below average
England	82	Above average