Monthly water situation report: England

1 Summary - December 2023

It was the wettest December since 2012 with rainfall totals well above normal across England, with all catchments receiving above average rainfall. Soil moisture deficits (SMD) reduced across England during December as soils became saturated due to the above average rainfall. River flows increased at more than three-quarters of the sites we report on, with the majority of sites exceptionally high for the time of year. Groundwater levels increased at four-fifths of the sites we report on, with all groundwater levels classed as normal or higher for the time of year. Reservoir stocks increased at three quarters of the reservoirs or reservoir groups we report on, with almost two-thirds of reservoirs classed as above normal or higher for the time of year.

1.1 Rainfall

The December rainfall total for England was 145mm which represents 172% of the 1961 to 1990 LTA (Long Term Average) for the time of year (158% of the 1991 to 2020 LTA). All catchments throughout the country received above average rainfall during December. The wettest hydrological area relative to the LTA was the Witham and Chapel Hill catchment in east England, which received 219% of LTA rainfall. The driest hydrological area was South London in south-east England which received 124% of LTA rainfall in October. (Figure 2.1)

December rainfall totals were classed as above normal or higher for the time of year in the majority of the hydrological areas across England with only three areas classed as normal. The majority of hydrological areas, predominately in the northern, central and south-western areas of the country, were classed as receiving notably or exceptionally high rainfall for the time of year. Over a quarter of hydrological areas, spread mainly across east and south-east England reported above normal rainfall during the month. Rainfall totals at a regional scale during December, was classed as exceptionally high at central, north-west, and north-east England. December rainfall was notably high at east and south-west England and above normal in the south-east. December's rainfall total for England as whole was notably high. (Figure 2.2)

The 3-month cumulative rainfall totals for all but two hydrological areas throughout the country were classified as either notably high or exceptionally high. Over three-quarters of hydrological areas recorded rainfall totals classed as exceptionally high for this period. The 6-month cumulative rainfall totals show a similar picture, with rainfall classed as above normal or higher across all hydrological areas in England with over four-fifths classed as exceptionally high. Both the 3 and 6 month cumulative totals to December were the third wettest for England since records began in 1871 and the wettest since 2000. 13 hydrological areas had their wettest second half to the year on record (since 1871). The twelve-month cumulative rainfall totals were exceptionally high in nearly two-thirds of hydrological areas across England. 7

hydrological areas predominately across central southern England, the Avon Dart and Erme, the River Bourne, the Isle of Wight, the River Test, the Upper Hampshire Avon, the Mid Hampshire Avon and the Berkshire Downs, had their wettest year on record (since 1871). The remaining hydrological areas were either above normal or notably high with only one catchment classed as normal the Esk (Dumfries) in north-west England. (Figure 2.3)

1.2 Soil moisture deficit

Soil moisture deficits (SMD) continued to decrease throughout England during December, as soils throughout the country became saturated in response to the above average rainfall during December. Soil moisture deficits across the south-east and east England experienced the greatest decreases during December. (Figure 3.1)

Across all of England, SMDs were below the LTA, leaving soils wetter than expected at the end of December. Soils across most of England were at saturation levels. (Figure 3.2)

1.3 River flows

December monthly mean river flows increased at more than three-quarters of indicator sites we report on compared to the previous month. All sites were classed as above normal or higher flows for the time of year. The majority of sites were classed as exceptionally high predominantly across northern and central England. The highest monthly mean December flows on record were recorded on the River Derwent at Derby St Marys (record since 1970), the River Trent at North Muskham (record since 1969), the River Till at Heaton Mill (record since 2001), the River Mersey at Ashton Weir (record since 1976), the River Weaver at Ashbrook (record since 1977) and the River Frome at East Stoke (record since 1965). Over a third of sites, mainly in south-west and south-east England were classed as above normal (Figure 4.1)

Monthly mean river flows increased at all but two of the regional index sites in December compared to November. Flows increased at Marston-on-Dove in central England on the River Dove and are classed exceptionally high. Flows at Haydon Bridge on the River South Tyne, Carlton on the River Lune and the naturalised flows at Kingston on the River Thames increased to be classed as notably high for the time of year. Flows also increased at Offord on the Bedford Ouse which was classed as above normal. Flows decreased at Horton on the Great Stour in south-east England, and Thorverton on the Exe in south-west England and monthly flows for both sites are classed as above normal for the time of year. (Figure 4.2)

1.4 Groundwater levels

By the end of December, groundwater levels had increased at over four-fifths of indicator sites we report on, with all groundwater sites classed as normal or higher by the end of December. Two thirds of indicator sites, mainly in the central, east and north-east England, were classed as exceptionally high. The highest ever groundwater levels for December were recorded at Hanthorpe (Lincolnshire Limestone) in east England (record since 1972) and Coxmoor (Idle Torne Nottinghamshire & Doncaster Permo Triassic Sandstone) in central England (record

since 1990). Priors Heyes in north-west England continued to experience the exceptionally high groundwater levels, as the West Cheshire Sandstone continues to recover from the effects of historic abstraction. (Figure 5.1)

Groundwater levels at the end of December increased at all major aquifer index sites. Dalton Estate in the Hull and East Riding Chalk and Skirwith in the Carlisle Basin Sandstone were classed as exceptionally high and Chilgrove in the Chichester Chalk, and Little Bucket in the Stour chalk were classed as notably high. Stonor Park in the South West Chilterns chalk and Jackaments Bottom in the Burford Jurassic Limestone reported above normal and normal groundwater levels respectively. (Figure 5.2)

1.5 Reservoir storage

Reservoir storage during December increased at over three-quarters of the reservoirs or reservoir groups we report on. By the end of December storage at almost two-thirds of reservoirs or reservoir groups was classed as above normal or higher. Eight reservoirs recorded storage increases greater than 10% with Ardingly in south-east England recording the largest increase of 24%. Refill at some reservoirs has been impacted by high turbidity levels for example at Farmoor in south east England. Planned operational work at Bewl Water is impacting reservoir levels there. The Dee System in Wales remains notably low due to ongoing reservoir maintenance. (Figure 6.1)

At a regional scale, total reservoir storage increased across all of England by the end of December, with the south-west of England reporting a largest increase of 8%. For England as a whole, reservoir storage has increased by 5% to a total of 92%. (Figure 6.2)

1.6 Forward look

January started with very wet conditions across England. This wet weather will be followed by a more settled, cold period moving into the middle of the month. There will still be a chance of showers, although they may fall as snow with ongoing cold conditions. Towards the end of the month unsettled conditions are likely to return from the west, bringing rain and possibly snow with ongoing cold conditions.

For the 3 month period for the UK from January to March, there is a slightly higher than normal chance of cold conditions bringing with it an increased chance of impacts from ice, fog and snow. The period is unlikely to be wet, with precipitation likely to be around average for the time of year. It is also likely to be calm, with a low chance of a windy season.

1.7 Projections for river flows at key sites

By the end of March 2024, river flows in the south-east, south-west, east and central England have a higher than expected chance of being above normal or higher. This is particularly true for those in groundwater fed catchments where groundwater levels are currently higher than expected for the time of year and can support river flows over the next three months.

By the end of September 2024, across most of England have the greatest chance of being above normal or higher, except in the north-west where flows are more likely to be normal.

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 in the east, south-east and north-east England have a greater likelihood of being above normal or higher. Sites in chalk aquifers are likely to be notably high or higher. In south-west, north-west and central England groundwater levels have a greater likelihood of being normal or higher.

By the end of September 2024, groundwater levels have a greater likelihood of being above normal or higher in north-west, north-east, south-east and east England. In south-west and central England, groundwater levels have a greater likelihood of being normal or higher.

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.

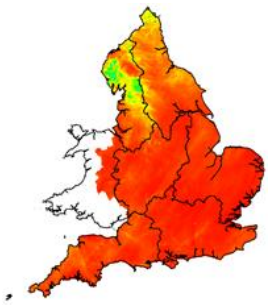
Author: National Water Resources Hydrology Team, Nationalhydrology@environment-agency.gov.uk

2 Rainfall

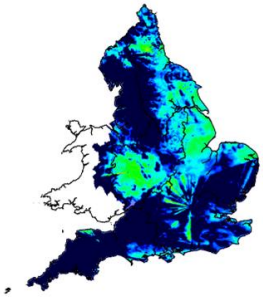
2.1 Rainfall map

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.

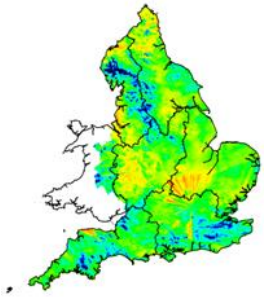
February 2023



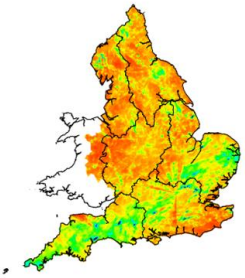
March 2023



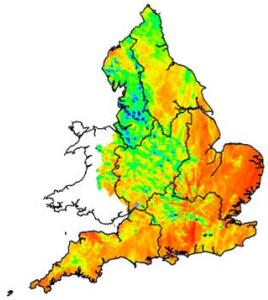
April 2023



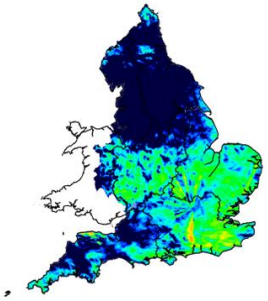
May 2023



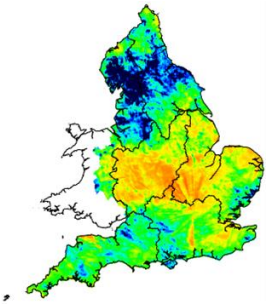
June 2023



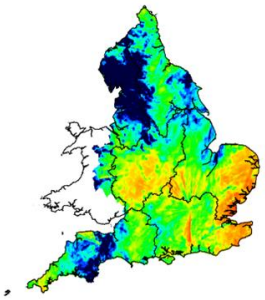
July 2023



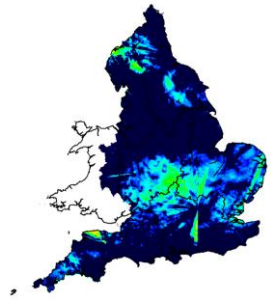
August 2023



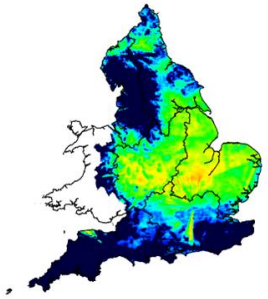
September 2023



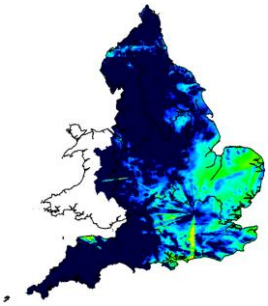
October 2023



November 2023



December 2023



Map Legend

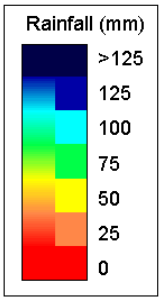
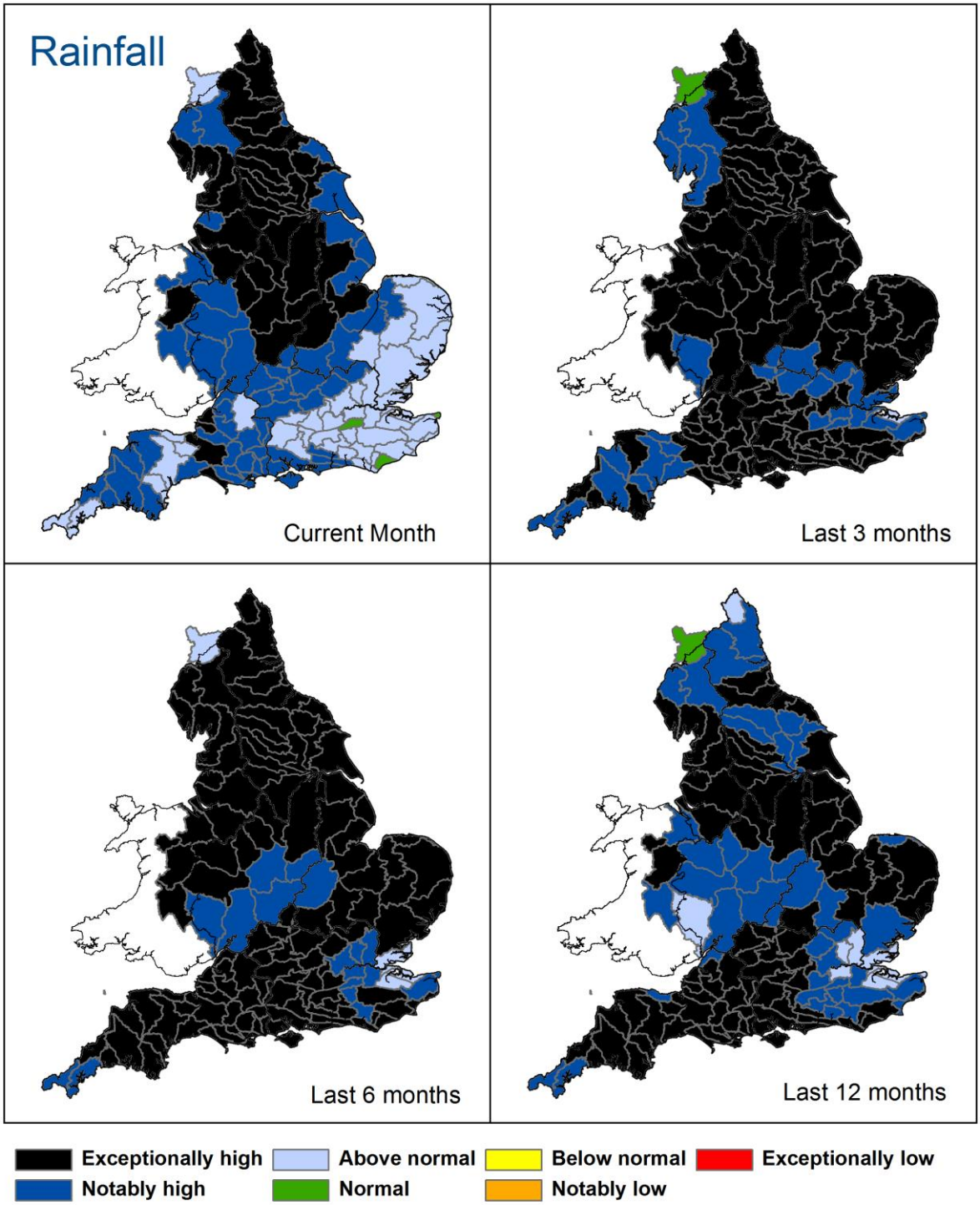


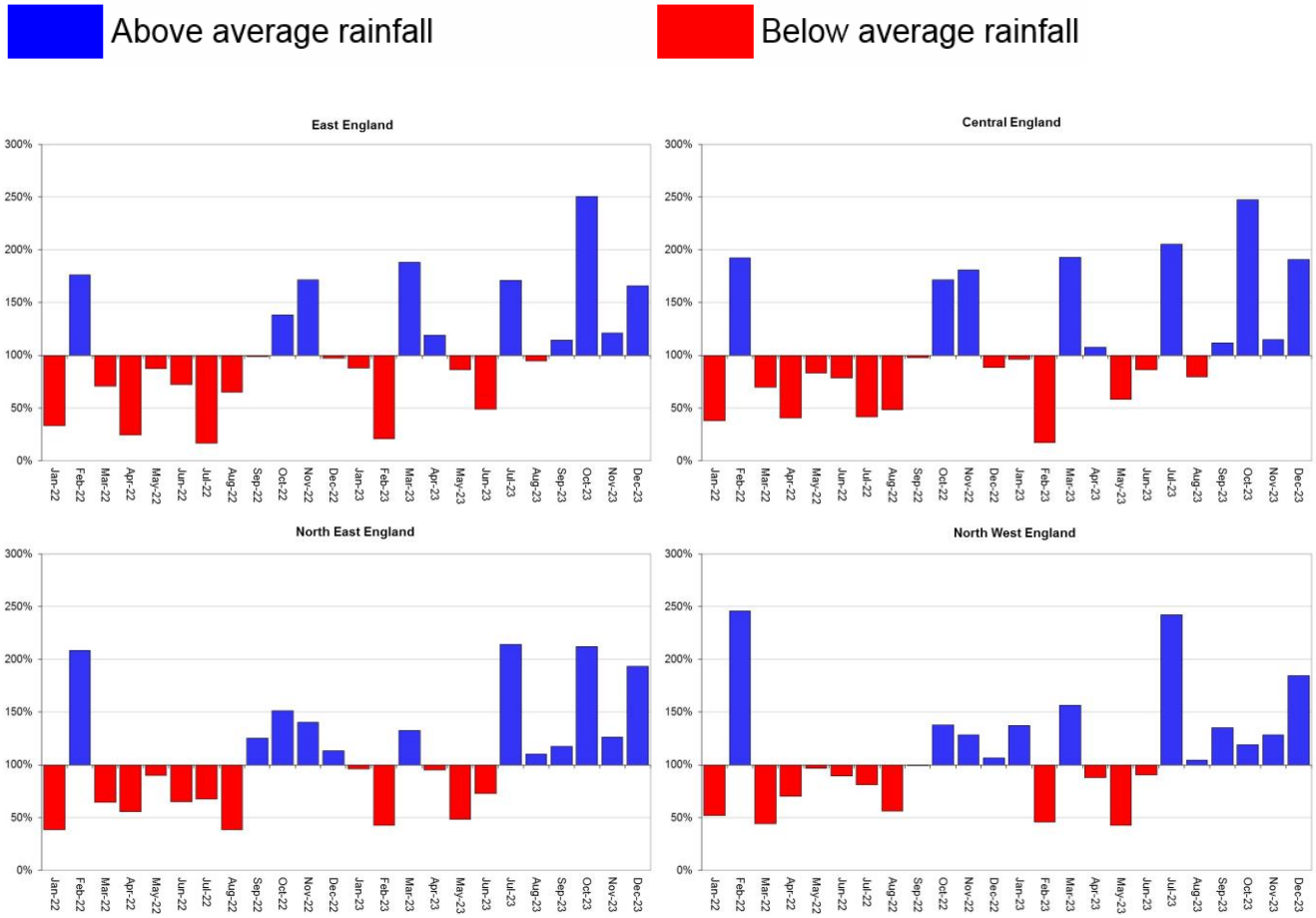
Figure 2.2: Total rainfall for hydrological areas across England for the current month (up to 31 December 2023), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals.

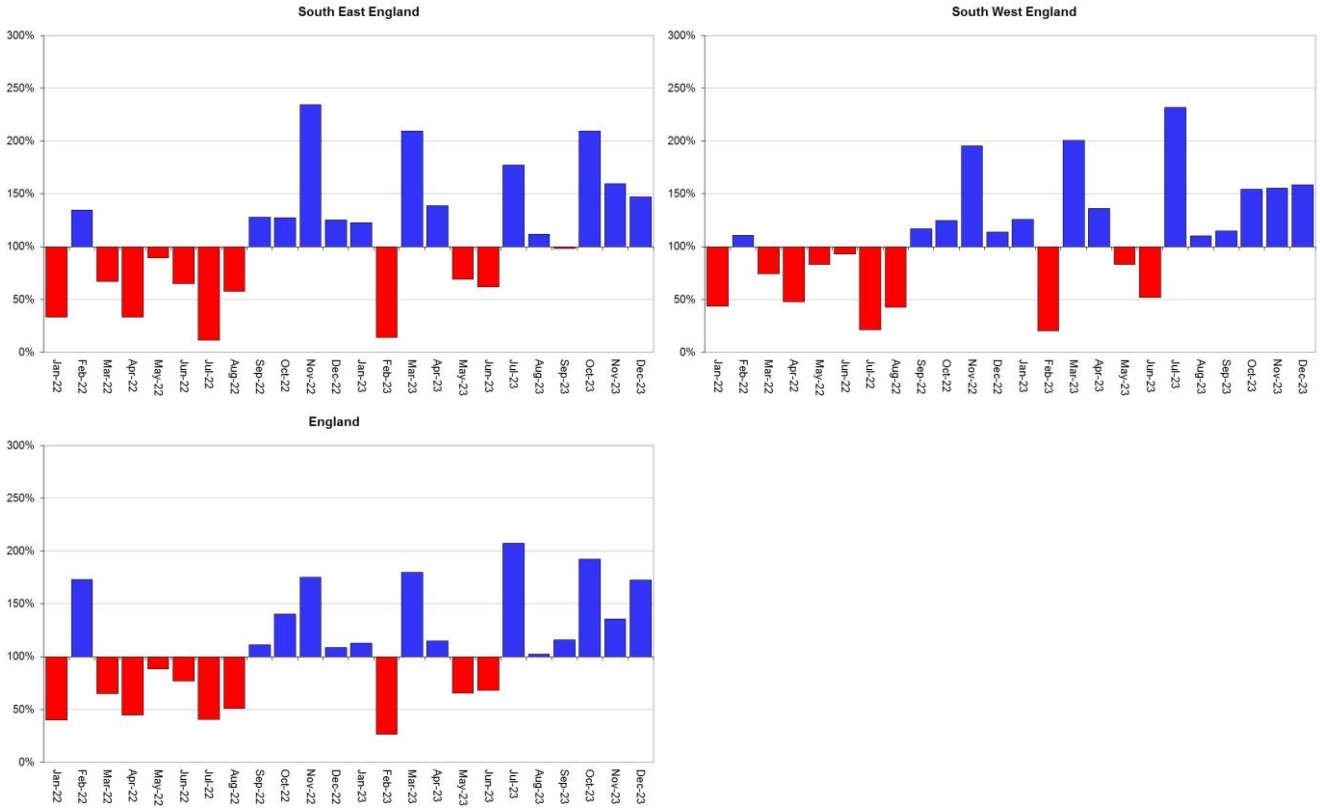


Rainfall data for 2023, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2024). Rainfall data prior to 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2024).

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.





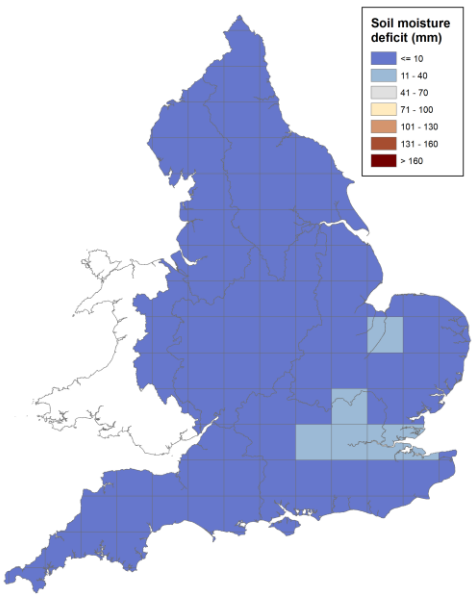
Rainfall data for 2023, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2024). Rainfall data prior to 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2024).

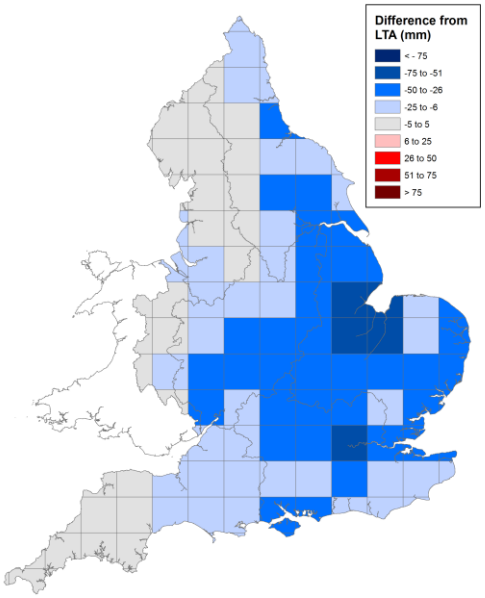
3 Soil moisture deficit

3.1 Soil moisture deficit map

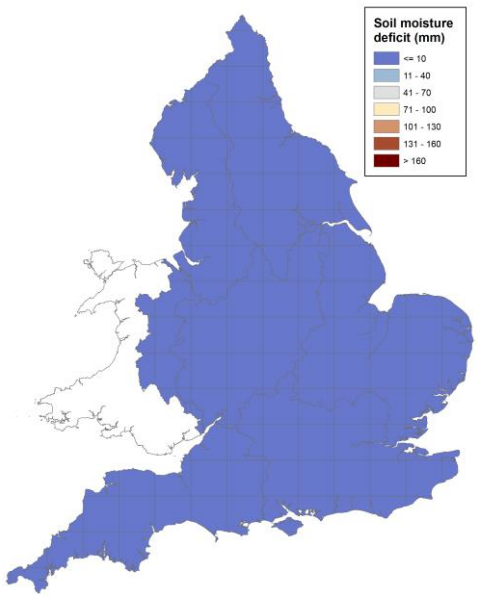
Figure 3.1: Soil moisture deficits for weeks ending, 29 November 2023 (left panel) and 03 January 2024 (right panel). Top row shows actual soil moisture deficits (mm) and bottom row shows the difference (mm) of the actual from the 1961 to 1990 long term average soil moisture deficits. MORECS data for real land use.

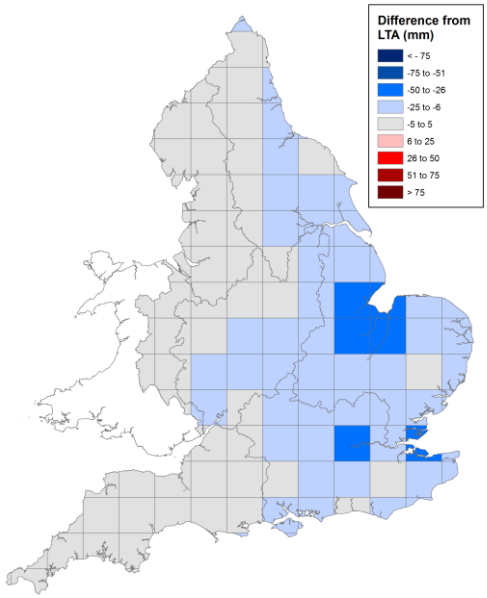
End of November 2023





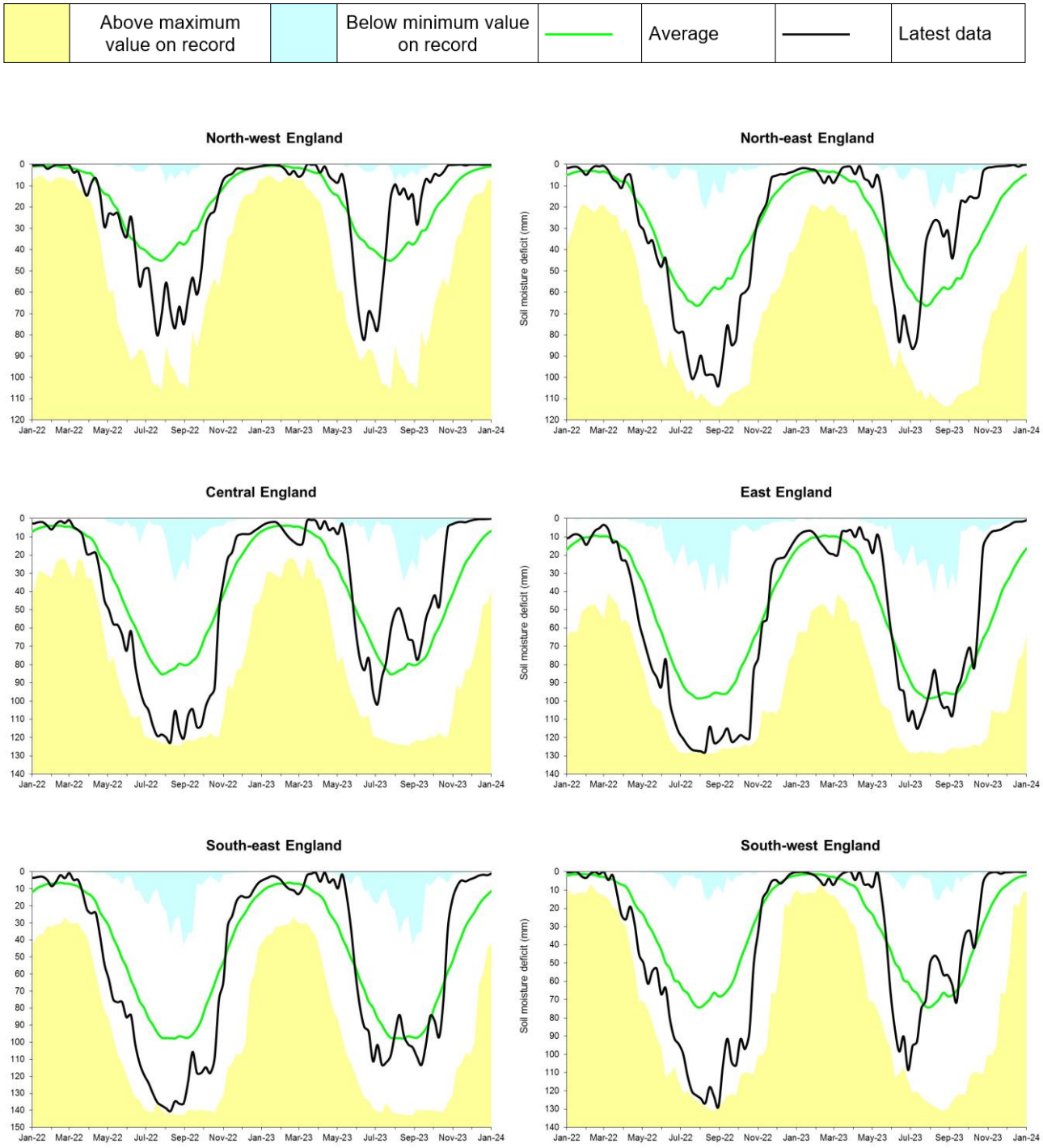
End of December 2023





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.



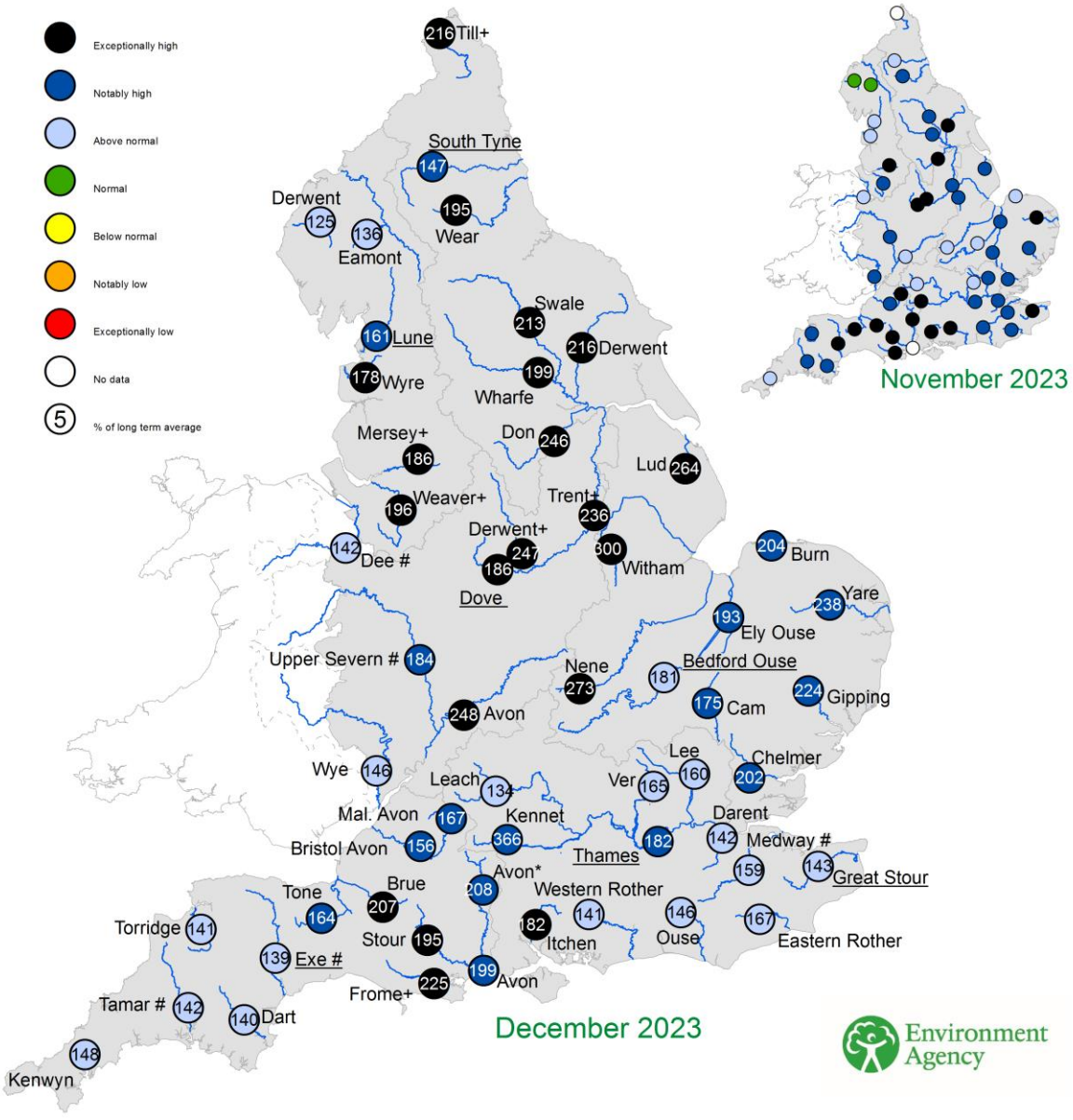
(Source: Met Office. Crown copyright, 2024).

4 River flows

4.1 River flow map

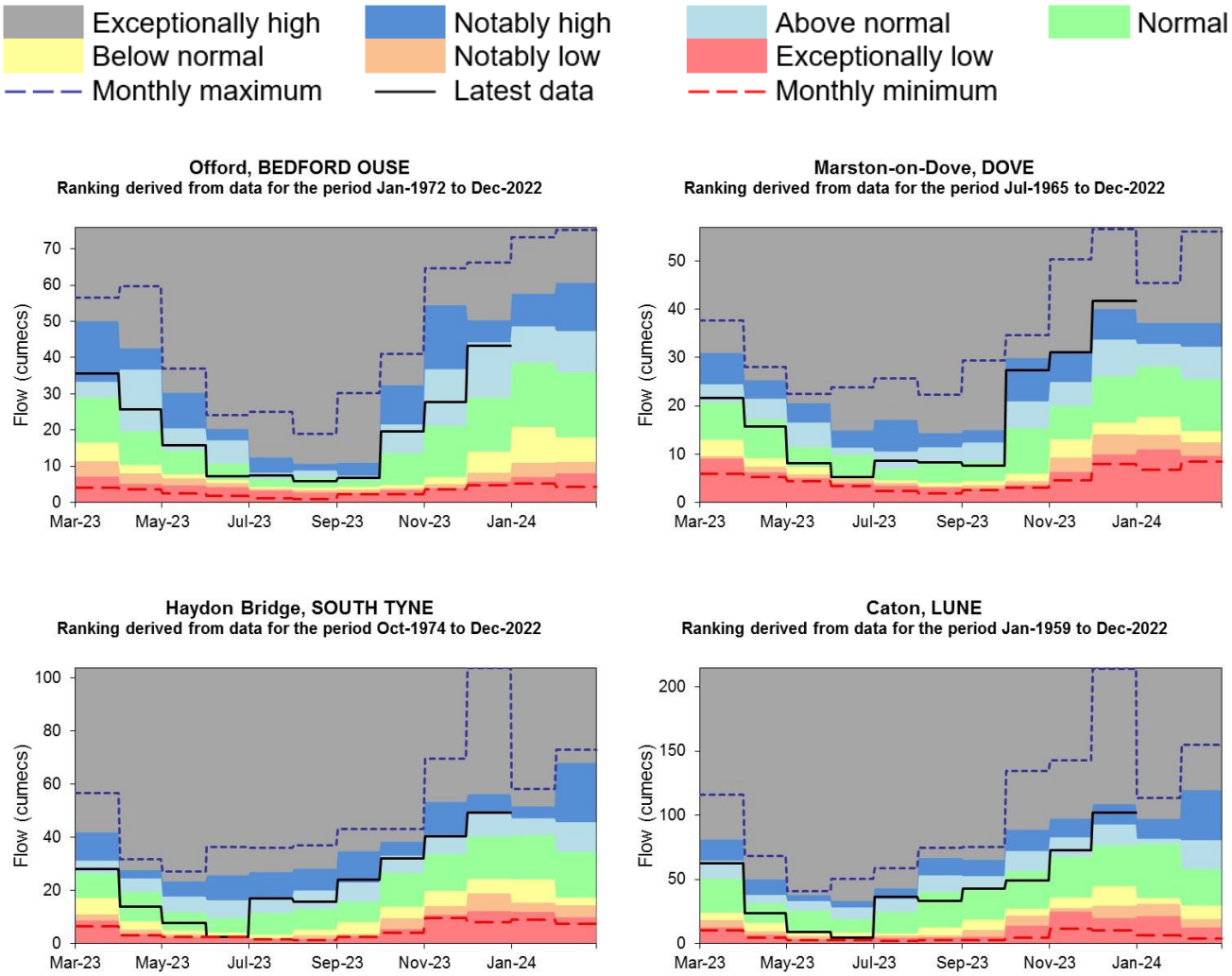
Figure 4.1: Monthly mean river flow for indicator sites for November 2023 and December 2023, expressed as a percentage of the respective long term average and classed relative to an analysis of historic November and December monthly means. Table available in the appendices with detailed information.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

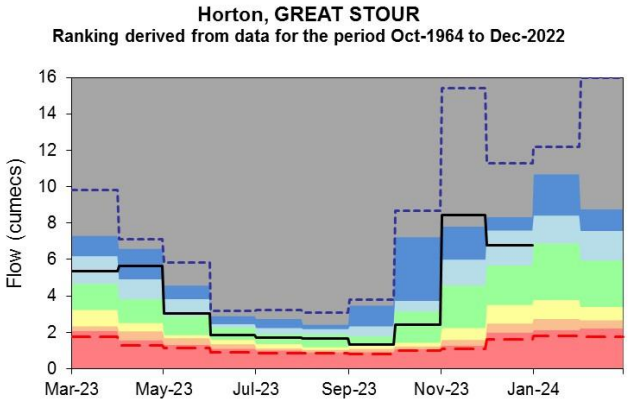
Naturalised flows are provided for the River Thames and the River Lee. +/- Monthly mean flow is the highest/lowest on record for the current month (note that record length varies between sites). * Flows may be overestimated at these sites – data should be treated with caution. # Flows may be impacted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

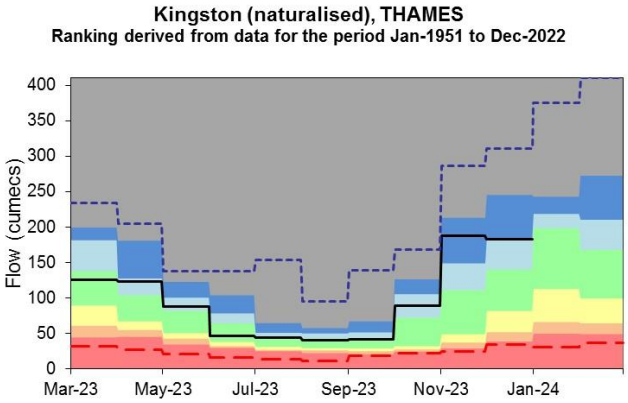


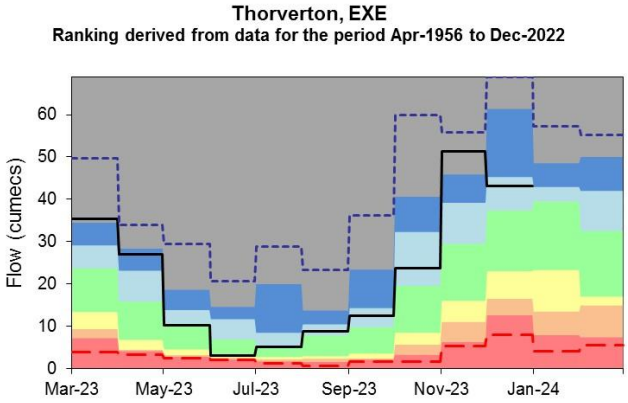
4.2 River flow charts

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.









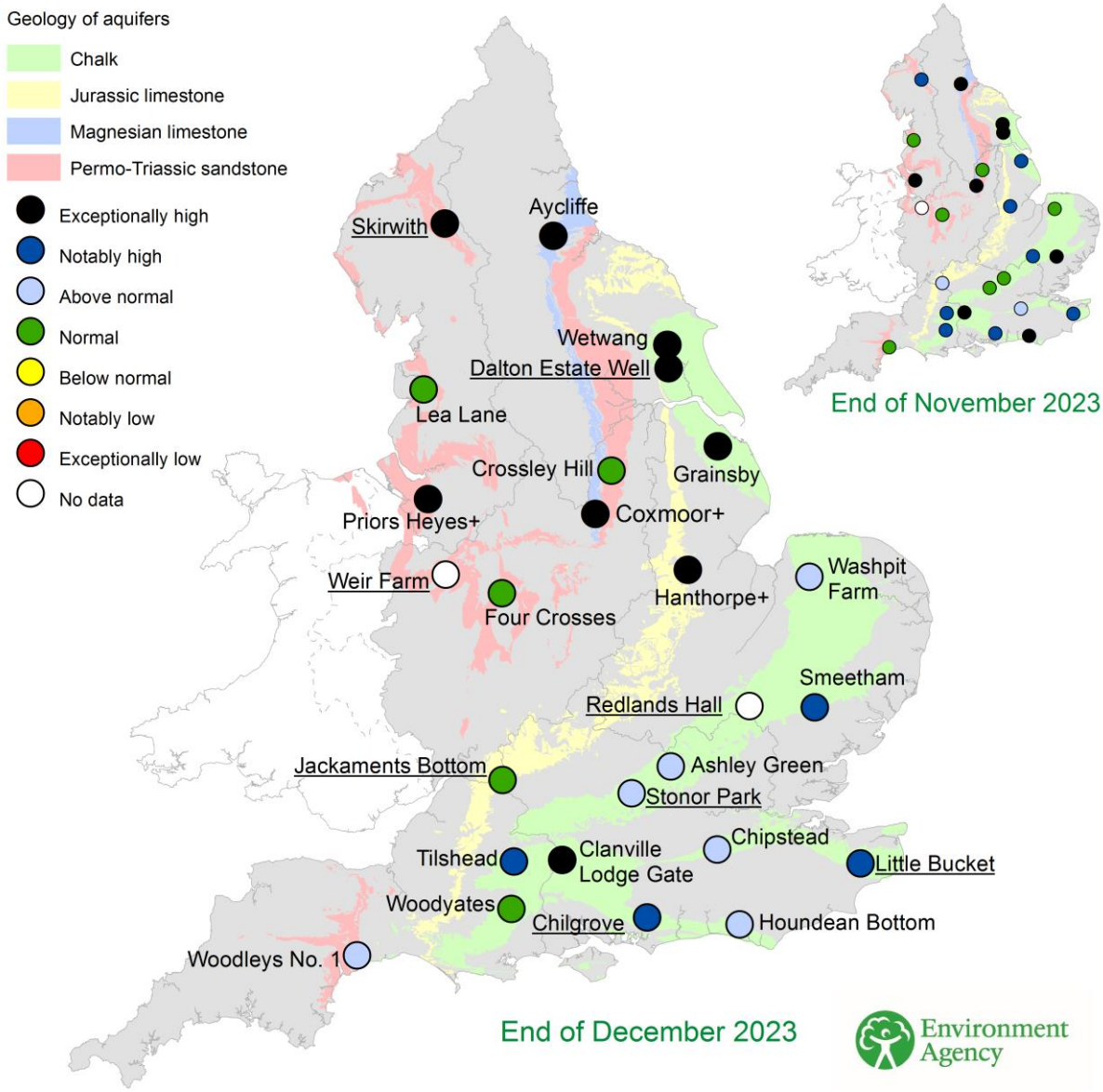
(Source: Environment Agency).

5 Groundwater levels

5.1 Groundwater levels map

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

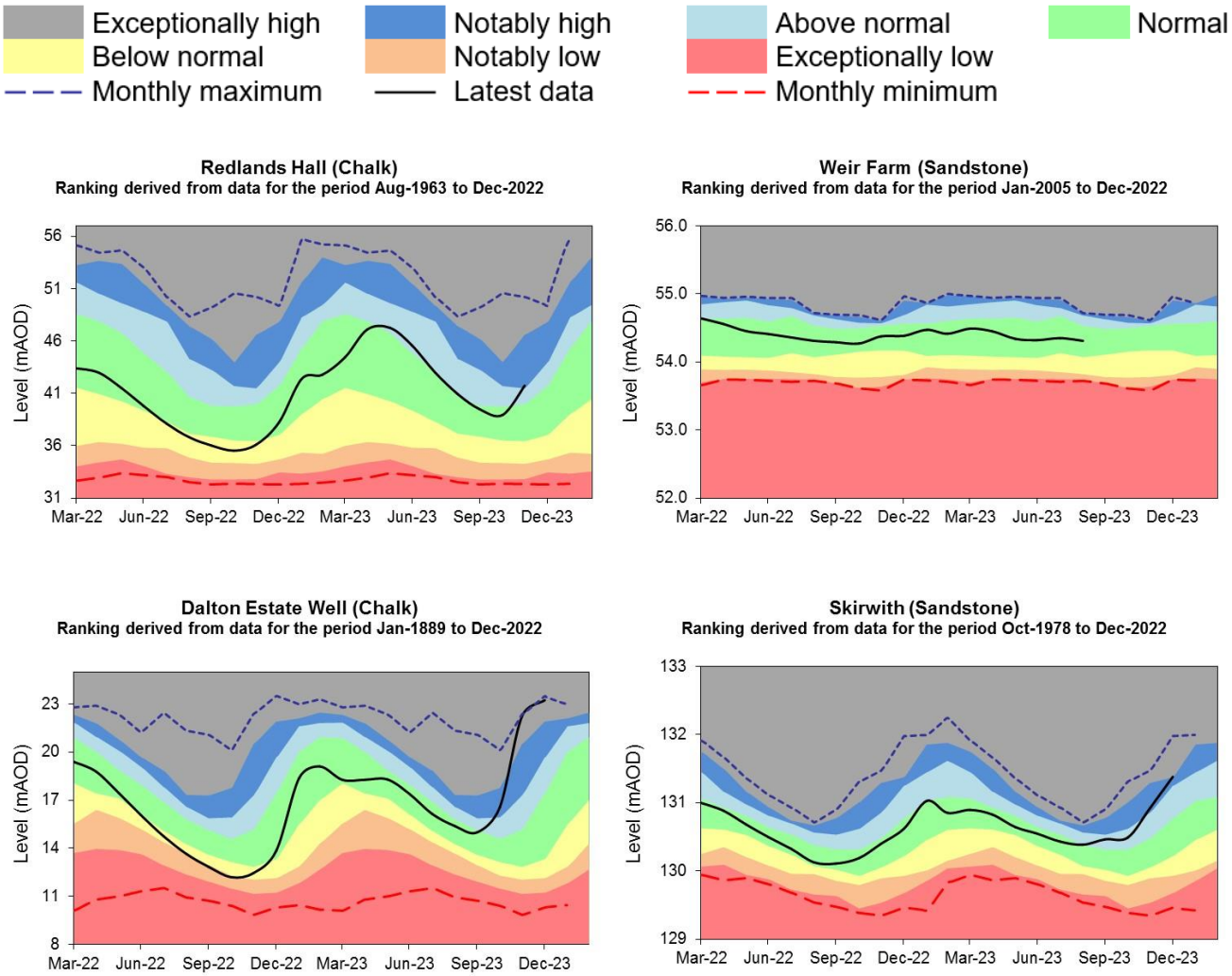
Redlands Hall and Aycliffe are manually dipped at different times during the month and so may not be fully representative of month end levels. Levels at Priors Heyes remain high compared to historic levels because the aquifer is recovering from the effects of historic abstraction. +/- End of month groundwater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

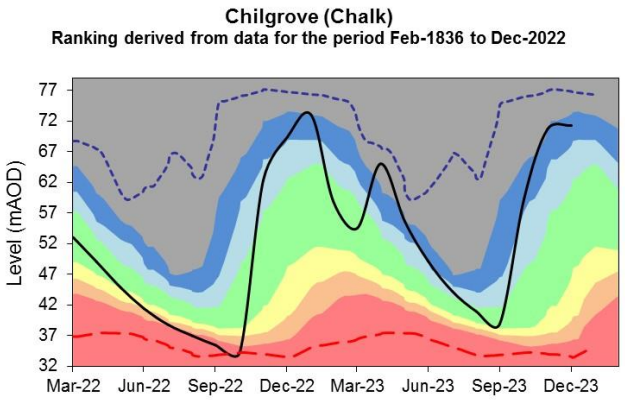


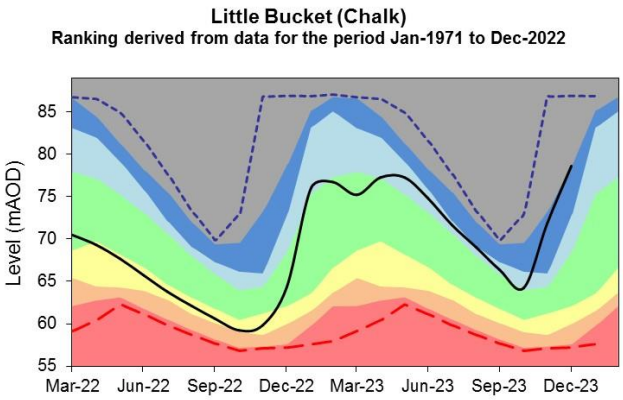
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2024.

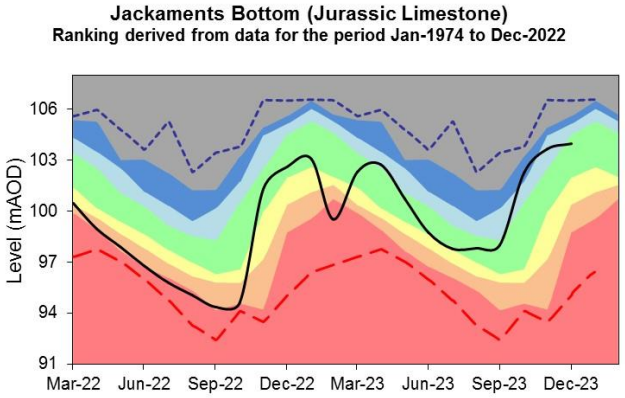
5.2 Groundwater level charts

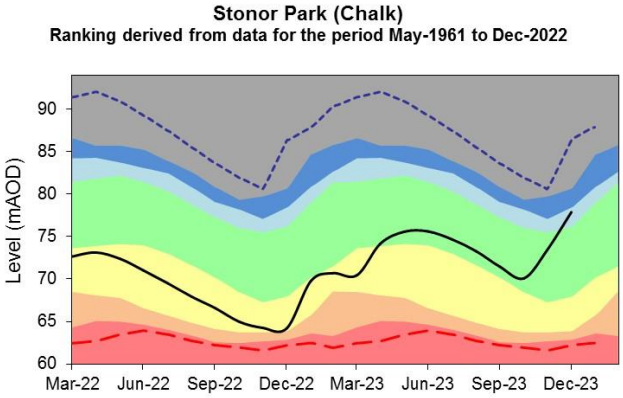
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. Past 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.









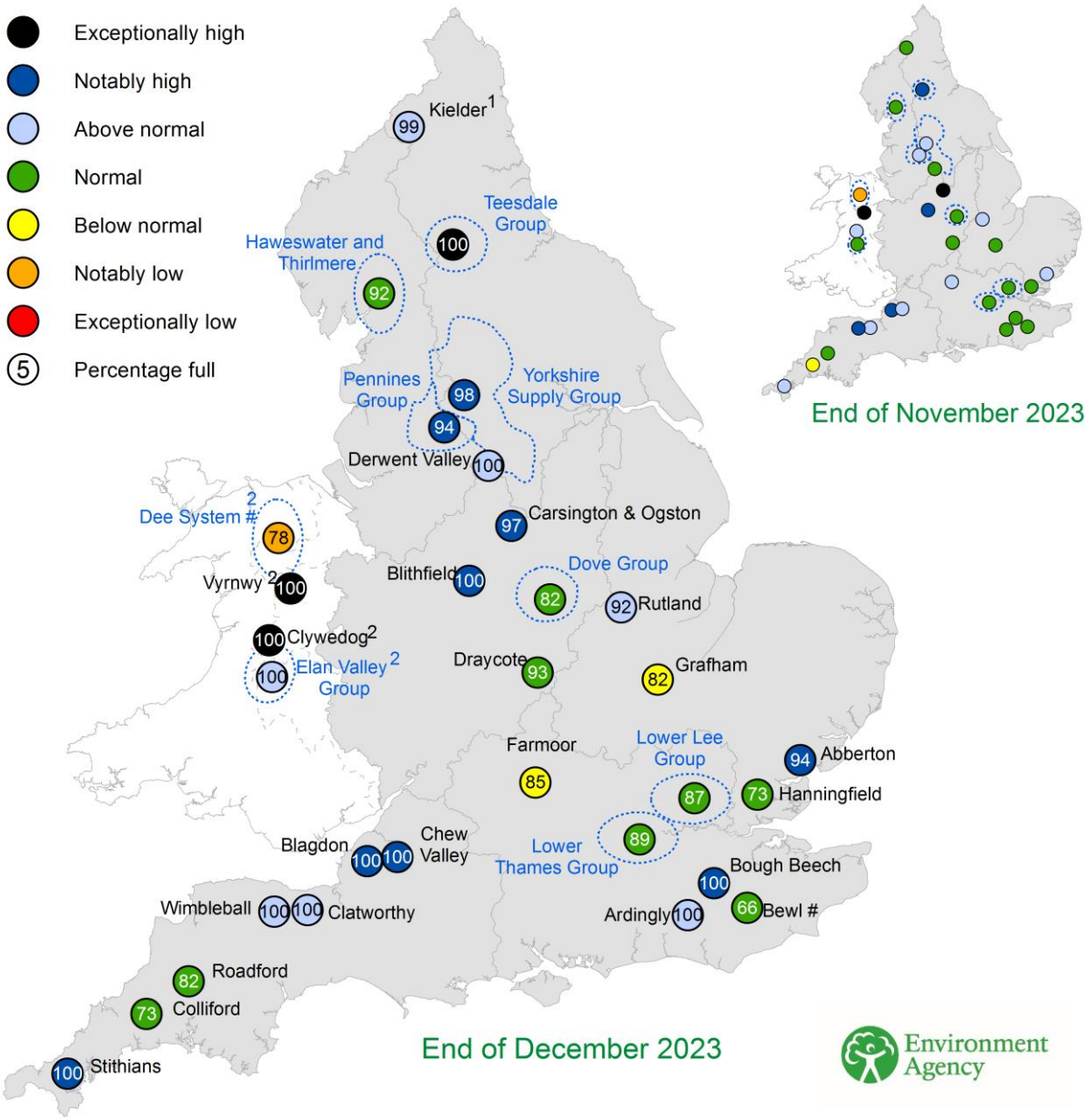


(Source: Environment Agency, 2024)

6 Reservoir storage

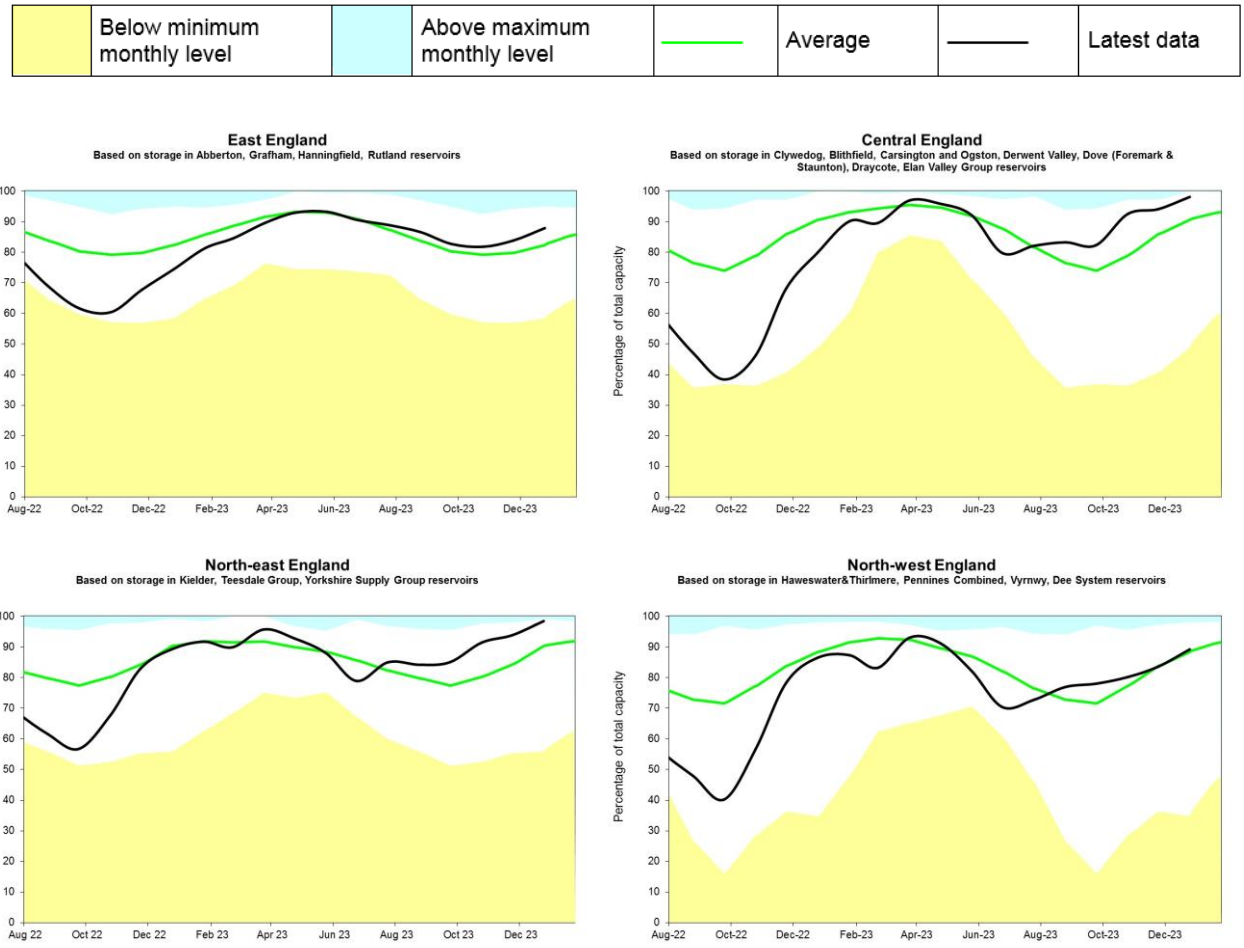
6.1 Reservoir storage map

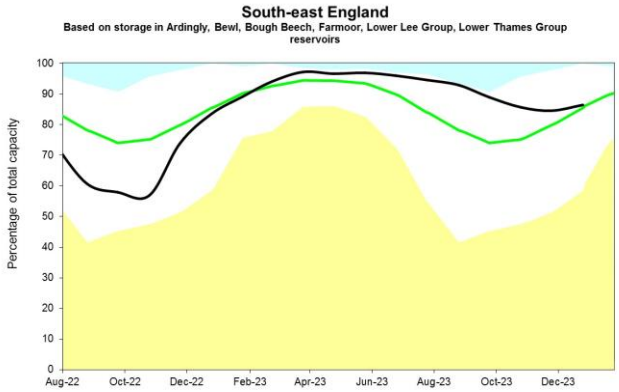
Figure 6.1: Reservoir stocks at key individual and groups of reservoirs at the end of November 2023 and December 2023 as a percentage of total capacity and classed relative to an analysis of historic November and December values respectively. Note: Classes shown may not necessarily relate to control 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 and Bewl reservoir have been drawn down as part of planned reservoir safety works.

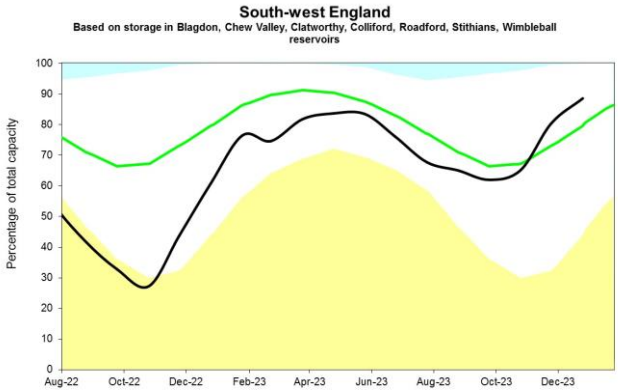


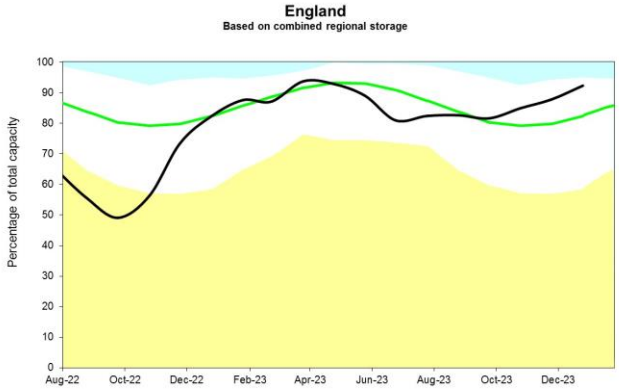
6.2 Reservoir storage charts

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.







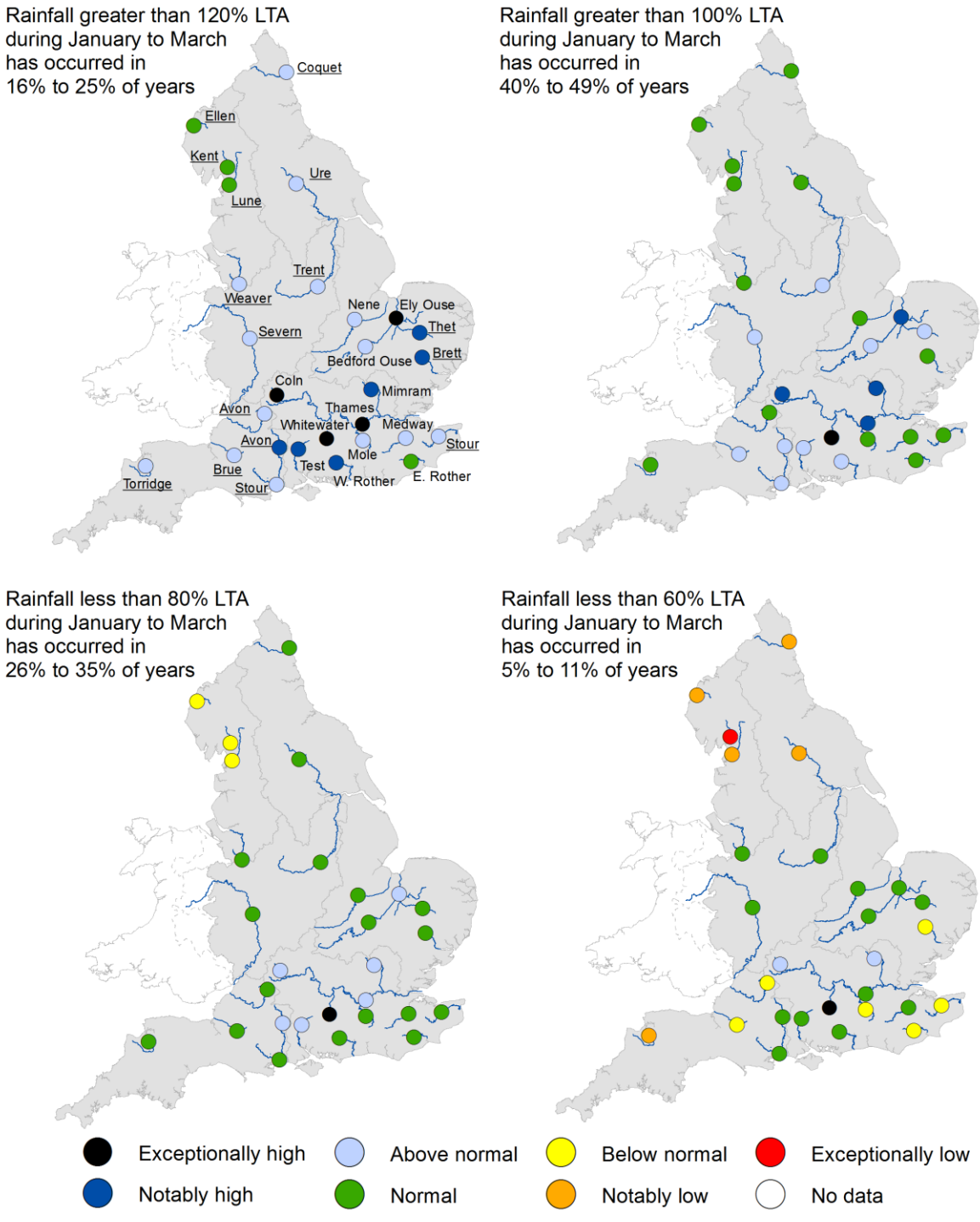


(Source: Water Companies).

7 Forward look

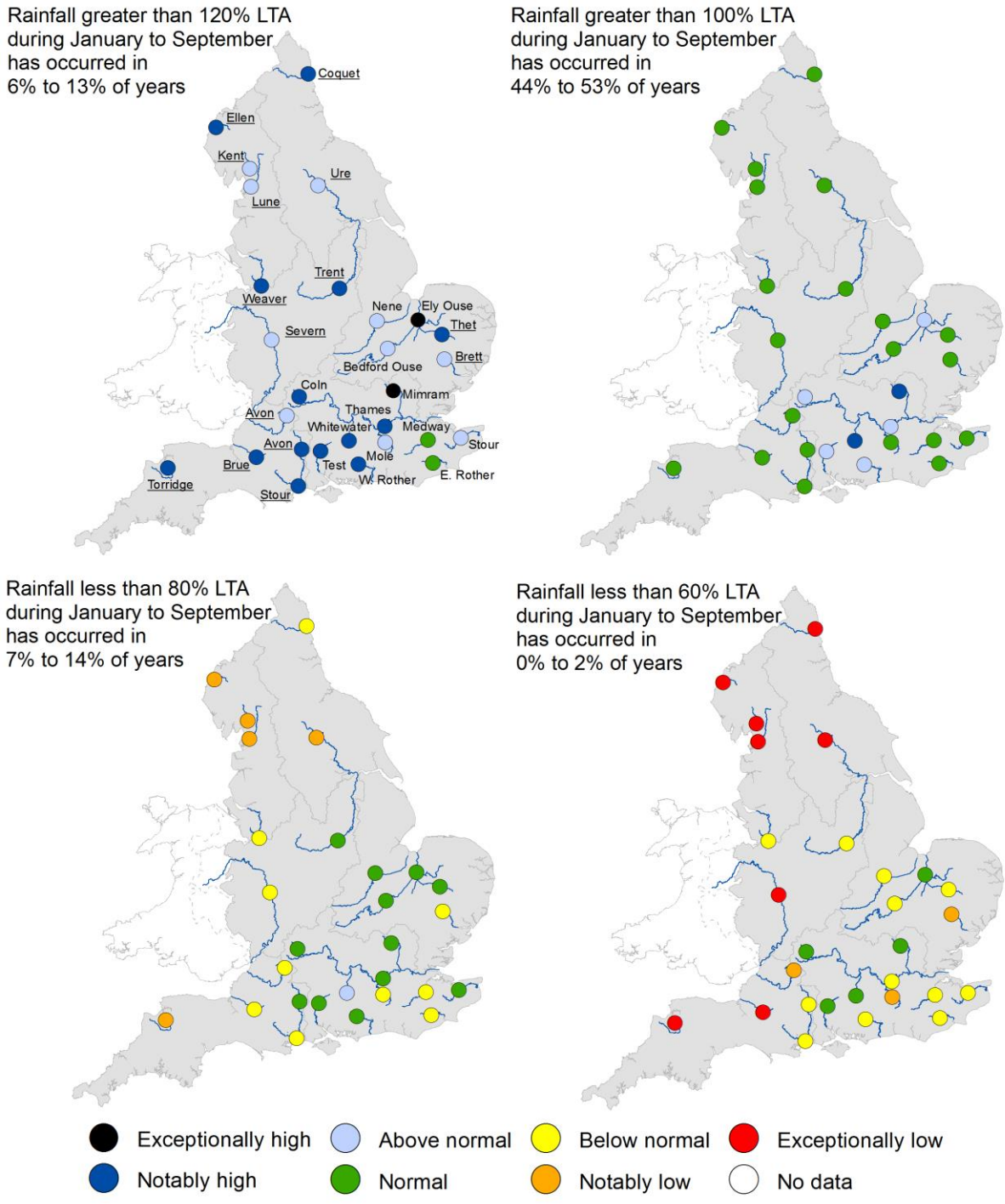
7.1 River flow

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 January 2024 and March 2024. Rainfall statistics based on occurrence in the historic record since 1871. Projections for underlined sites produced by CEH.



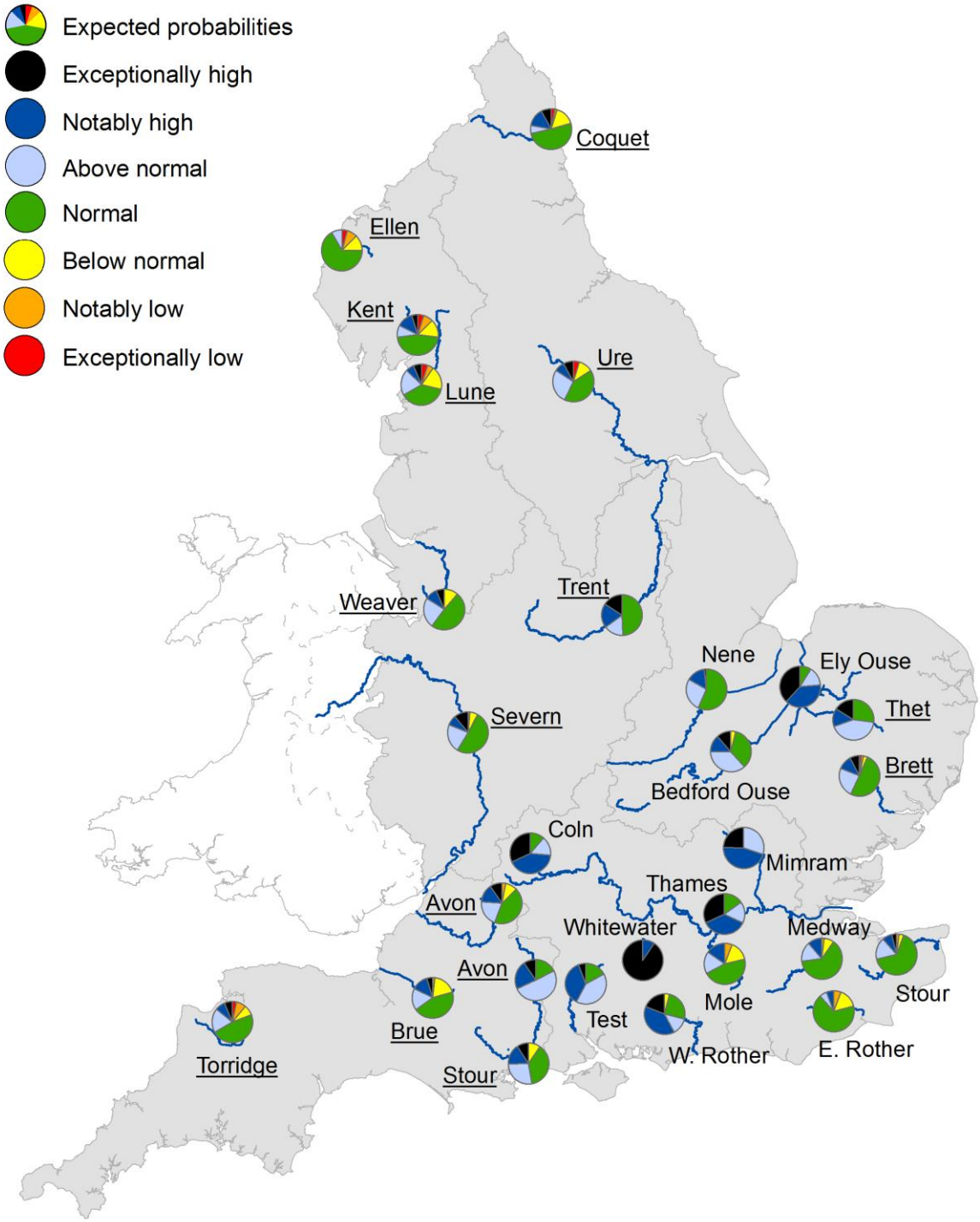
(Source: UK Centre for Ecology and Hydrology, Environment Agency).

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 January 2024 and September 2024. Rainfall statistics based on occurrence in the historic record since 1871. Projections for underlined sites produced by CEH.



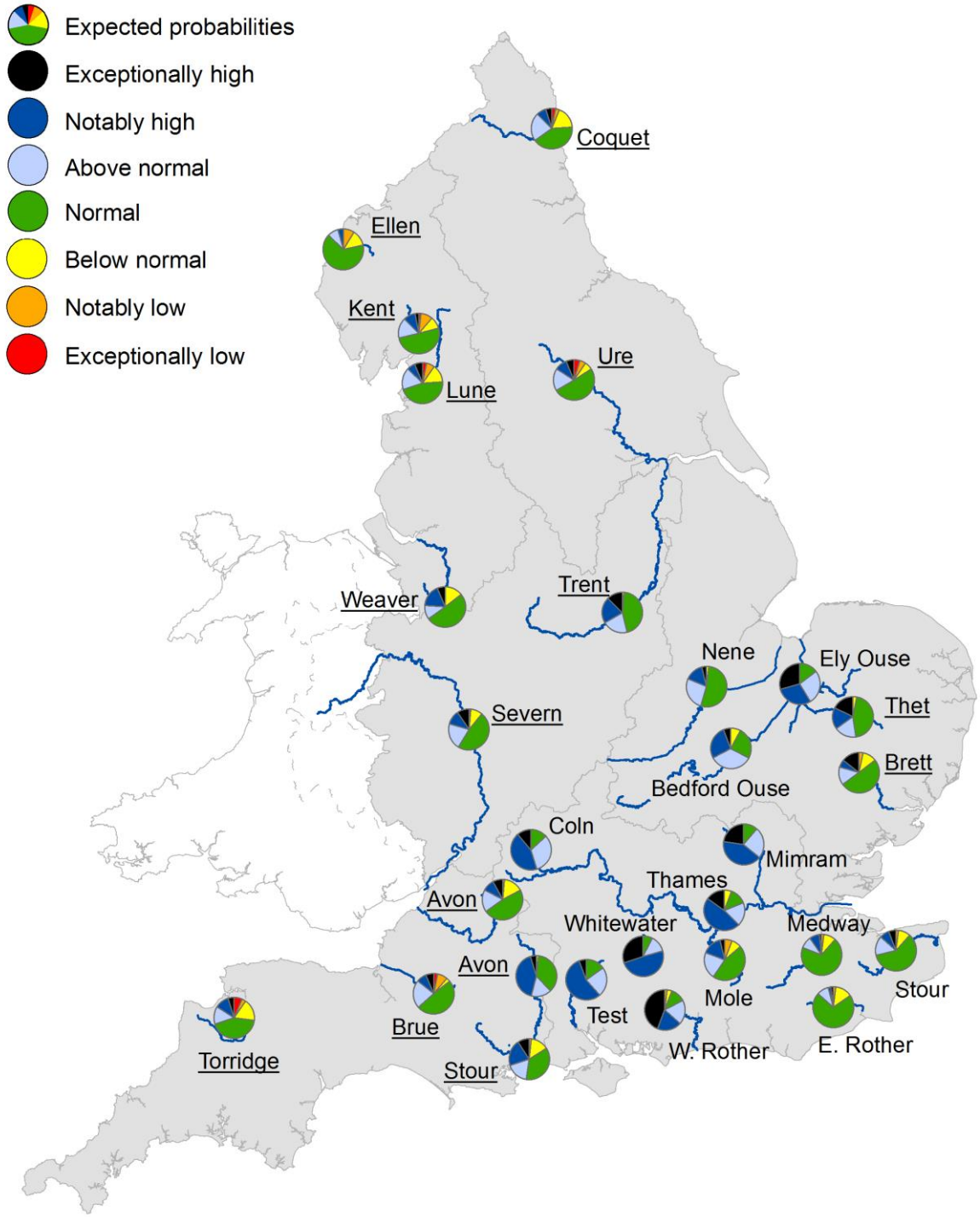
(Source: UK Centre for Ecology and Hydrology, Environment Agency)

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.



16.3

(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 January 2024 and March 2024. Rainfall statistics based on occurrence in the historic record since 1871. Projections for underlined sites produced by BGS.

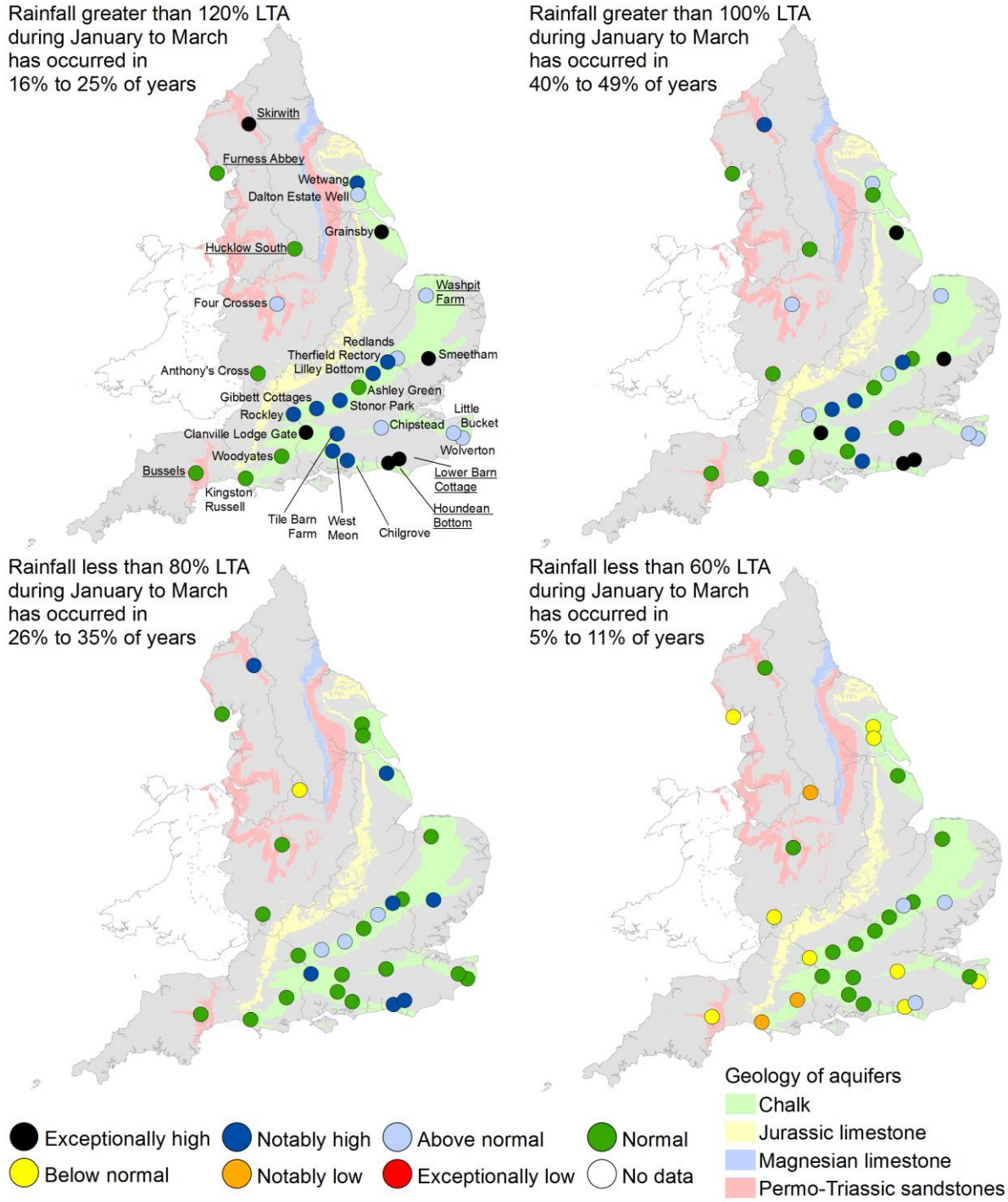


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Figure 7.6: Projected groundwater levels at key indicator sites at the end of September 2024. Projections based on four scenarios: 120%, 100%, 80% and 60% of long term average rainfall between January 2024 and September 2024. Rainfall statistics based on occurrence in the historic record since 1871. Projections for underlined sites produced by BGS.

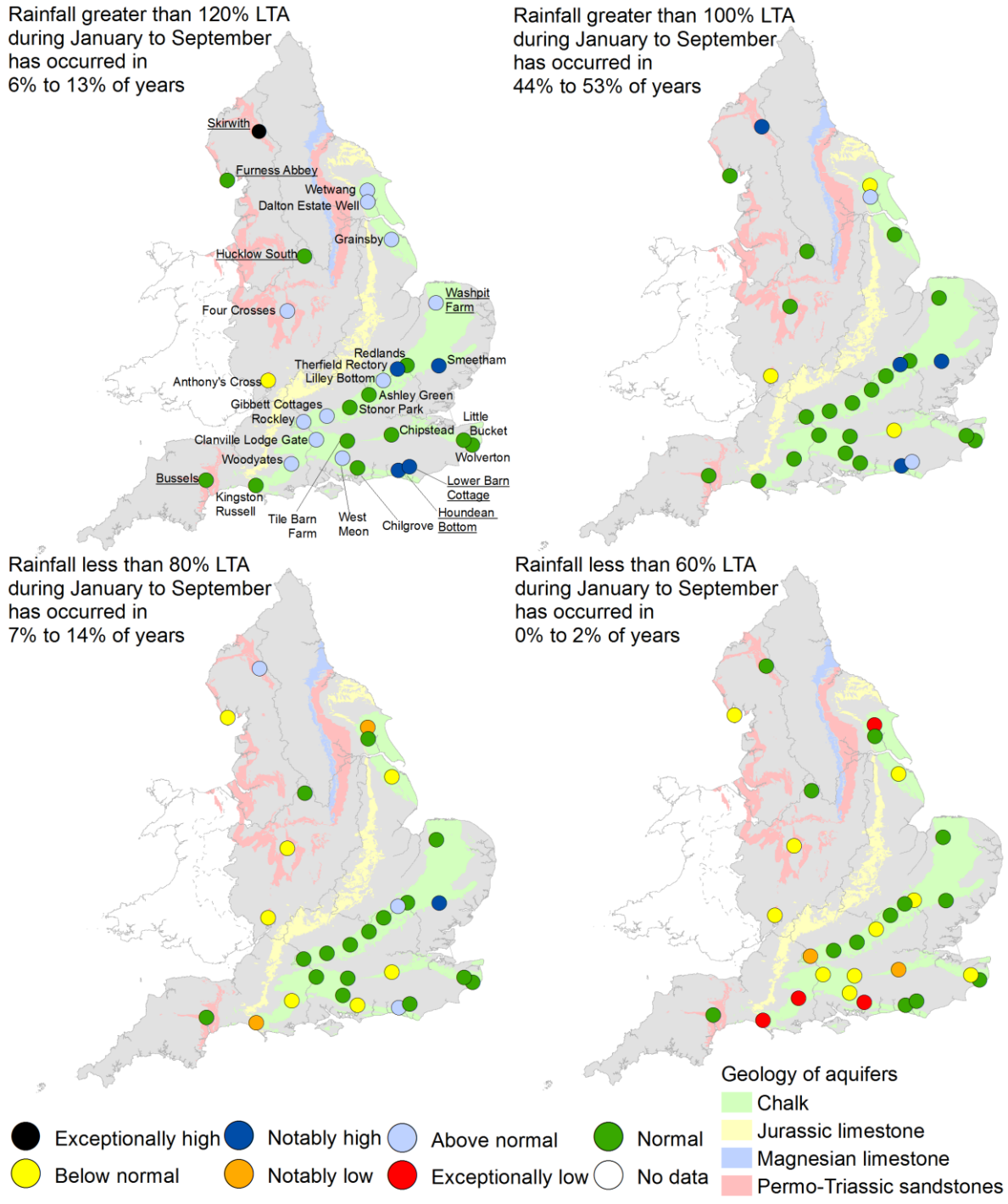

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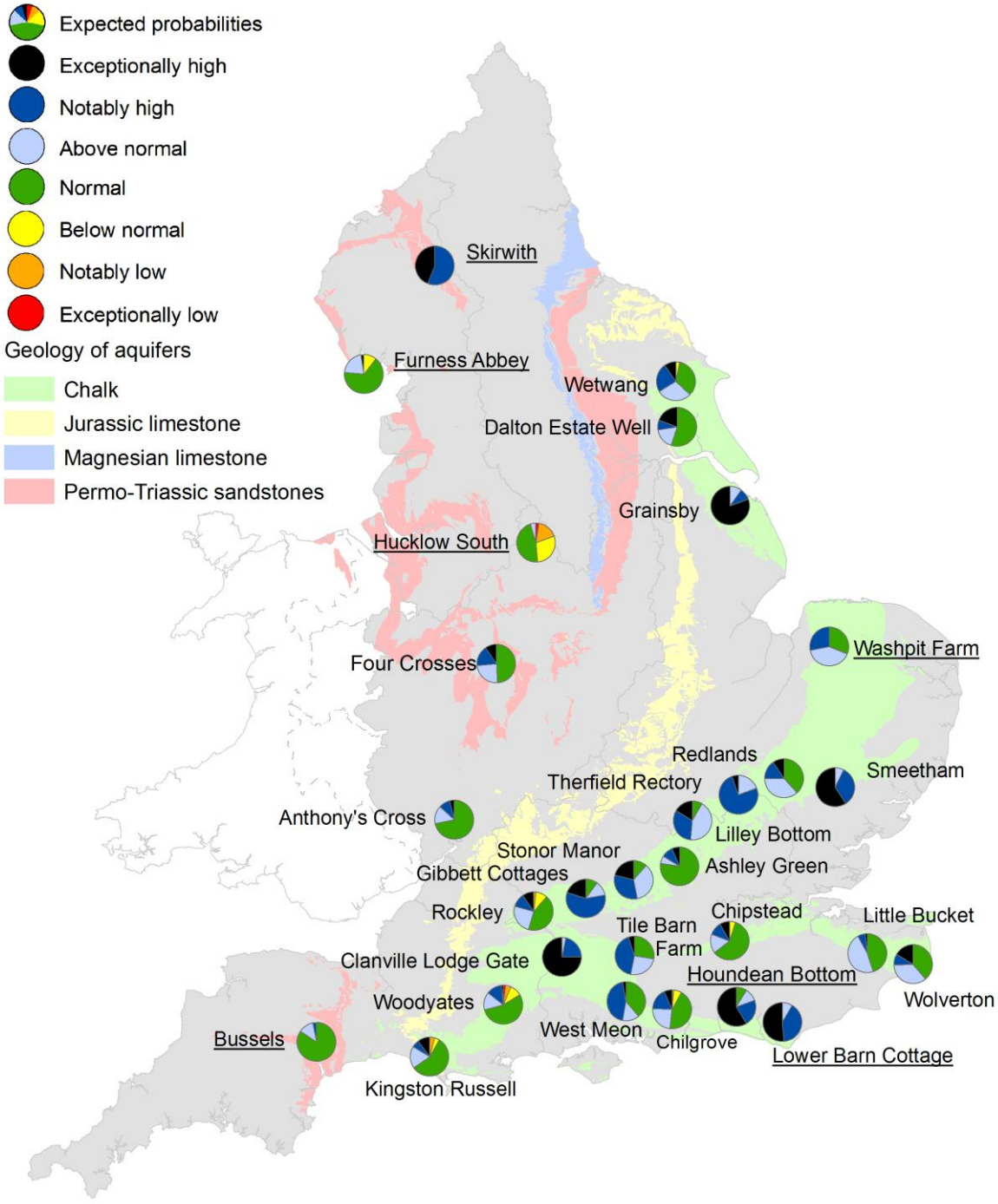
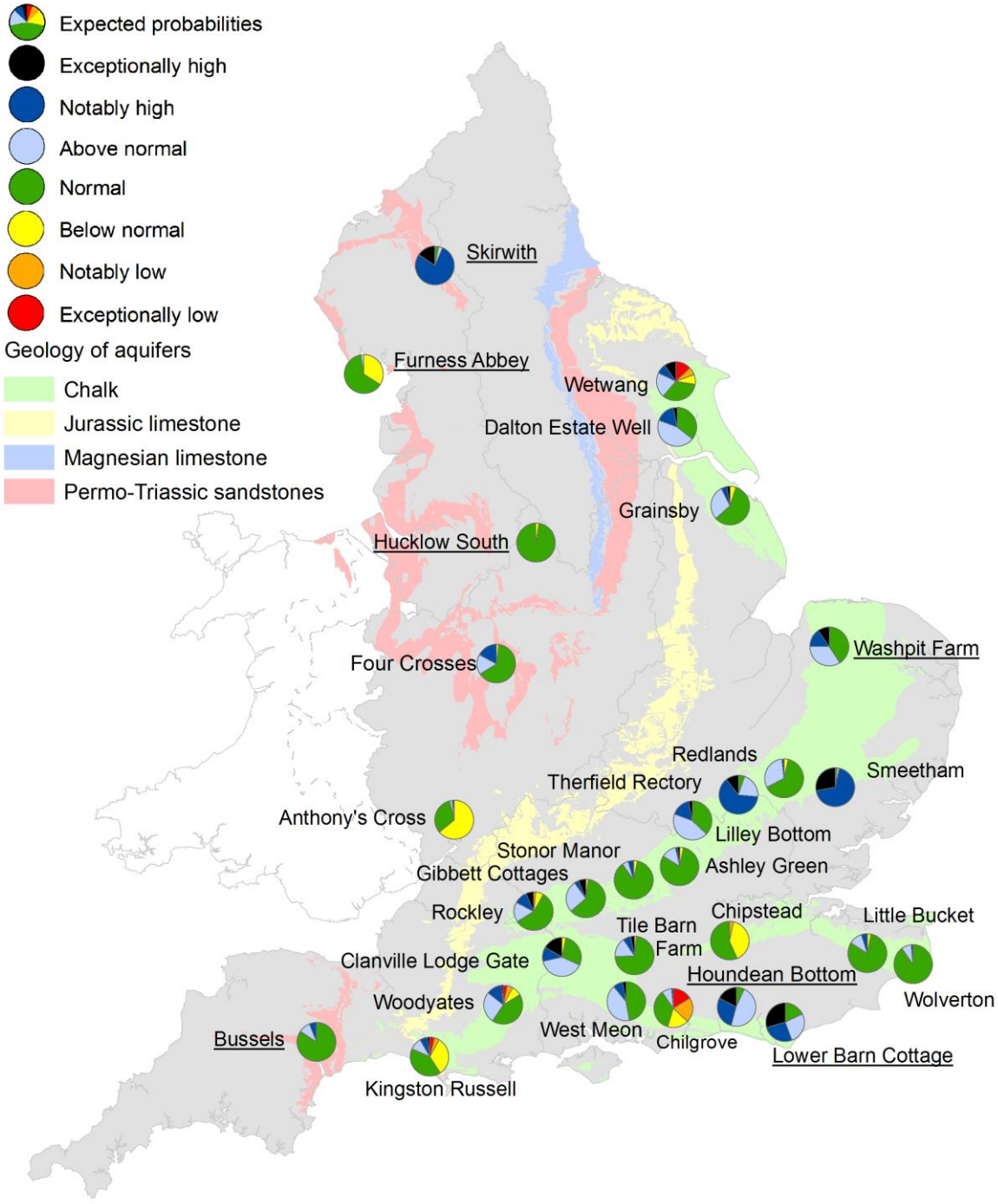
Figure 7.7: Probabilistic ensemble projections of groundwater levels at key indicator sites at the end of March 2024. Pie charts indicate probability, based on climatology, of the groundwater level at each site being e.g. exceptionally low for the time of year. Projections for underlined sites produced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



(Source: Environment Agency) Geological map reproduced with kind permission from UK Groundwater Forum, BGS © NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2024.

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	Dec 2023 rainfall % of long term average 1961 to 1990	Dec 2023 band	Oct 2023 to December 2023 cumulative band	Jul 2023 to December 2023 cumulative band	Jan 2023 to December 2023 cumulative band
East England	166	Notably High	Exceptionally high	Exceptionally high	Notably high
Central England	191	Exceptionally High	Exceptionally high	Exceptionally high	Exceptionally high
North East England	193	Exceptionally High	Exceptionally high	Exceptionally high	Exceptionally high
North West England	185	Exceptionally High	Exceptionally high	Exceptionally high	Exceptionally high
South East England	147	Above Normal	Exceptionally high	Exceptionally high	Notably high
South West England	159	Notably High	Exceptionally high	Exceptionally high	Exceptionally high
England	172	Notably High	Exceptionally high	Exceptionally high	Exceptionally high

9.2 River flows table

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

Central	North Muskham	Trent	Exceptionally high	Notably high
North East	Buttercrambe	Derwent	Exceptionally high	Exceptionally high
North East	Crakehill Topcliffe	Swale	Exceptionally high	Notably high
North East	Heaton Mill	Till	Exceptionally high	
North East	Doncaster	Don	Exceptionally high	Exceptionally high
North East	Haydon Bridge	South Tyne	Notably high	Above normal
North East	Tadcaster	Wharfe	Exceptionally high	Notably high
North East	Witton Park	Wear	Exceptionally high	Notably high
North West	Ashton Weir	Mersey	Exceptionally high	Exceptionally high
North West	Caton	Lune	Notably high	Above normal
North West	Ouse Bridge	Derwent	Above normal	Normal
North West	Pooley Bridge	Eamont	Above normal	Normal
North West	St Michaels	Wyre	Exceptionally high	Above normal
North West	Ashbrook	Weaver	Exceptionally high	Notably high
South East	Allbrook & Highbridge	Itchen	Exceptionally high	Exceptionally high

South East	Ardingley	Ouse	Above normal	Notably high
South East	Feildes Weir	Lee	Above normal	Notably high
South East	Hansteads	Ver	Above normal	Above normal
South East	Hawley	Darent	Above normal	Notably high
South East	Horton	Great Stour	Above normal	Exceptionally high
South East	Kingston (naturalised)	Thames	Notably high	Notably high
South East	Lechlade	Leach	Above normal	Above normal
South East	Marlborough	Kennet	Notably high	Exceptionally high
South East	Princes Marsh	Rother	Above normal	Exceptionally high
South East	Teston & Farleigh	Medway	Above normal	Notably high
South East	Udiam	Rother	Above normal	Notably high
South West	Amesbury	Upper Avon	Notably high	Exceptionally high
South West	Austins Bridge	Dart	Above normal	Notably high
South West	Bathford	Avon	Notably high	Notably high
South West	Bishops Hull	Tone	Notably high	Exceptionally high
South West	East Stoke	Frome	Exceptionally high	Exceptionally high

South West	Great Somerford	Avon	Notably high	Exceptionally high
South West	Gunnislake	Tamar	Above normal	Notably high
South West	Hammoon	Middle Stour	Exceptionally high	Exceptionally high
South West	Knapp Mill	Avon		
South West	Lovington	Upper Brue	Exceptionally high	Exceptionally high
South West	Thorverton	Exe	Above normal	Exceptionally high
South West	Torrington	Torridge	Above normal	Notably high
South West	Truro	Kenwyn	Above normal	Above normal
EA Wales	Manley Hall	Dee	Above normal	Above normal
EA Wales	Redbrook	Wye	Above normal	Notably high

9.3 Groundwater table

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

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

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

9.4 Reservoir table

Geographic region	% Full	Average comparison
East England	88	Above average
Central England	98	Above average
North-east England	98	Above average
North-west England	89	Above average
South-east England	86	Above average
South-west England	89	Above average
England	92	Above average