

Reservoir Watch January 2023

Reservoir Group	November 2022 Holding	December 2022 Holding	January 2023 Holding	Change in December – January period	Minimum historical* January holding (Year)
Kennet & Avon Canal	65.3%	77.2%	91.3%	14.1%	83.7% (2022)
Oxford & GU	57.5%	77.7%	95.3%	17.6%	33.4% (2012)
GU South	45.5%	47.7%	69.7%	22.0%	43.3% (2012)
GU North	47.8%	64.4%	99.9%	35.5%	28.1% (2012)
Lancaster Canal	100.0%	96.0%	98.1%	2.1%	96.9% (2019)
Leeds & Liverpool Canal	58.4%	61.1%	90.4%	29.3%	79.5% (2006)
Peak Forest & Macclesfield Canals	61.0%	50.5%	65.1%	14.6%	42.7% (2021)
Caldon Canal	69.3%	74.6%	86.3%	11.7%	73.0% (2019)
Huddersfield Narrow Canal	70.6%	65.3%	71.0%	5.7%	19.5% (2014)
Chesterfield Canal	41.1%	31.5%	24.4%	-7.1%	57.6% (1999)
Grantham Canal	93.2%	92.6%	92.4%	-0.2%	81.5% (2012)
Birmingham Canal Navigations	82.1%	87.1%	95.2%	8.1%	23.8% (2012)
Staffs & Worcs, Shropshire Union	88.0%	87.9%	88.0%	0.1%	55.9% (2002)

* for the purposes of this analysis, historical holdings cover 1998-2022 reservoir holding data, inclusive.

General Conditions

According to the UK Centre for Ecology and Hydrology December was characterised by cold, dry conditions in the first half of the month followed by mild, unsettled and wet conditions in the second half of the month. These conditions supported rapid river flow recoveries with locally high flows being recorded. However, December river flows were below average in many catchments and this was mirrored in reservoir stocks which were 4% below average in England and 7% in Wales. Overall, rainfall for the UK was 87% of the average for December, which reflected a wider trend of below normal rainfall levels across the year with England experiencing its driest year since 2011 and Wales experiencing its third driest year since 1976.

Soils moisture levels were recorded as being between normal and above average for all regions of the UK, with a few exceptions in the west. This enabled the elimination of soil moisture deficits were eliminated throughout much of the country, with only sites which are characterised by delayed responses failing to exhibit recharge. Additionally, groundwater levels responded to rainfall levels with increases recorded in responsive aquifers and many sites reaching normal to above average levels. However, some chalk sites in southern and eastern England remained below average.

Despite the wet autumn and early winter many regions in England remained in drought status, reflecting the lower levels of rainfall and river flows across the year. However, the recent wet weather has provided a positive outlook with above average river flows and increasing groundwater levels. Rainfall levels in the coming weeks will be vitally important in shaping the water resource situation for 2023, in areas where deficits are present.

The Met Office rainfall anomaly graphs and maps can be viewed at:

https://www.metoffice.gov.uk/pub/data/weather/uk/climate/anomalygraphs/2022/2022_Rainfall_Anomaly_1981-2010.gif

https://www.metoffice.gov.uk/pub/data/weather/uk/climate/anomacts/2022/12/2022_12_Rainfall_Actual.gif

The Trust's Water Resources

December saw increases for all but two of the Trusts reservoir groups with the largest change being recorded in the GU North with 35.5%. This is reflective of the hydrological situation across the latter half of December and early January.

In the south all reservoir groups saw an increase in their water resource availability from December to January with the GU south recording a percentage change in holding from the previous month of 22.0%, followed by the Oxford and Grand Union with 17.6% and then K&A (14.1%) and Birmingham Canal Navigations (8.1%).

Of the eight reservoir groups in the north, six experienced increases in their percentage holding with the largest increase being recorded in the Leeds & Liverpool (L&L) group with 29.3%. Following a large decrease in December (10.5%), the Peak Forest & Macclesfield illustrated a strong response with an increase of 14.6%, which can be attributed to the commencement of refilling Combs Reservoir following short-term engineering works. The Caldon saw an increase of 11.7%, the third highest for the north, followed by the HNC, Lancaster and Staffs & Worcs and Shropshire Union with 5.7%, 2.1% and 0.1% respectively. The Chesterfield Canal reservoir group saw the largest decrease with -7.1%, due to the drawdown of Harthill Reservoir for engineering works, whilst Grantham saw a decrease of -0.2%.

As always, the Water Management Team will continue to monitor all reservoir holdings during the coming months and work closely with operational staff to ensure water resources are deployed efficiently.

Boaters are advised to subscribe to email notifications of any waterway restrictions or closures at: <http://canalrivertrust.org.uk/notices> and a map showing drought related closures and restrictions is available at: <https://canalrivertrust.org.uk/specialist-teams/managing-our-water/drought/water-savings-restrictions>.

Issued by:

Water Management Team, Canal & River Trust
01 February 2023

Reservoir data presented is from the week ending Monday 23 January unless stated, along with data from the nearest comparable date in November and December.

Annex 1 – Canal & River Trust reservoir groups

Group name	Reservoirs within group
Kennet & Avon Canal	Crofton [<i>principally a spring-fed reservoir, and its yield is therefore greater than the storage volume indicates</i>]
Oxford & GU	Boddington, Wormleighton, Clattercote, Naseby, Sulby, Welford, Drayton & Daventry
GU South	Startopsend, Wilstone, Marsworth & Tringford
GU North	Saddington
Lancaster Canal	Killington
Leeds & Liverpool Canal	Rishton, Barrowford, Upper & Lower Foulridge, Slipper Hill, Whitemoor & Winterburn
Peak Forest & Macclesfield Canal	Sutton, Bosley, Toddbrook & Combs
Caldon Canal	Rudyard, Stanley & Knypersley
Huddersfield Narrow Canal	Sparth, Slaithwaite & Diggle
Chesterfield Canal	Harthill & Pebley
Grantham Canal	Knipton & Denton
Birmingham Canal Navigations	Windmill Pool, Terry's Pool, Engine Pool, Cofton, Upper Bittell, Rotton Park & Chasewater
Staffs & Worcs, Shropshire Union	Belvide, Gailey Upper, Gailey Lower & Calf Heath