

## Reservoir Watch December 2023

Reservoir Group	October 2023 Holding	November 2023 Holding	December 2023 Holding	Change in November-December period	Minimum historical* December holding (Year)
Kennet & Avon Canal	87.9%	87.9%	87.9%	0.0%	76.6% (2011)
Oxford & GU	65.4%	87.4%	99.2%	11.8%	24.0% (2011)
GU South	62.2%	74.2%	83.6%	9.4%	33.2% (2011)
GU North	64.0%	99.9%	99.9%	0.0%	20.7% (2003)
Lancaster Canal	99.3%	94.8%	100.0%	5.2%	97.1% (2016)
Leeds & Liverpool Canal	78.9%	86.8%	86.4%	-0.4%	55.2% (2003)
Peak Forest & Macclesfield Canals	58.2%	68.8%	68.5%	-0.3%	48.4% (2022)
Caldon Canal	76.2%	92.1%	95.3%	3.2%	46.5% (2003)
Huddersfield Narrow Canal	62.3%	62.9%	80.9%	11.7%	17.0% (2013)
Chesterfield Canal	28.2%	42.8%	43.9%	1.1%	31.4% (2022)
Grantham Canal	92.5%	92.4%	92.4%	0.0%	78.9% (2011)
Birmingham Canal Navigations	86.7%	96.9%	100.0%	3.1%	16.4% (2011)
Staffs & Worcs, Shropshire Union	83.9%	87.7%	87.8%	0.1%	55.7% (2001)

\* 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, November was overall a mild month. The first half of November started with unsettled conditions brought about by Storm Ciaran and Storm Debi. The influence of Storm Ciaran and Storm Debi resulted in total November rainfall being 96% of average with anomalies in south-east England. For the autumn (Sept-Nov) total UK rainfall was 122% of average, with parts of southern England receiving 150% of average autumn rainfall. River flows across the UK exhibited notable variations, starting with an increase due to the wet October and Storm Ciaran. This month saw several rivers reaching near-record peaks flows. Overall, river flows in November were generally above average, with some catchments in southern England experiencing exceptionally high flows.

At the end of November, soil moisture conditions at most COSMOS-UK sites were reported to be close to or above field capacity. In regard to groundwater levels, Chalk sites continued to rise with the exception of three sites. In Jurassic limestones, levels rose early in the month, and became significantly high and above normal by the end of the month. In Magnesian Limestone and Carboniferous Limestones, levels remained high. Recharge occurred at all four sites in the Permo-Triassic Sandstones.

The current Hydrological Outlook for the next three months favours above normal flows and groundwater levels due to a wet start to December. Overall, the outlook indicates potential challenges due to elevated flood risk from wet, unsettled conditions from previous months.

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

<https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-temperature-rainfall-and-sunshine-anomaly-graphs>

[https://www.metoffice.gov.uk/pub/data/weather/uk/climate/anomacts/2023/11/2023\\_11\\_Rainfall\\_Anomaly\\_1991-2020.gif](https://www.metoffice.gov.uk/pub/data/weather/uk/climate/anomacts/2023/11/2023_11_Rainfall_Anomaly_1991-2020.gif)

### **The Trust's Water Resources**

Of the thirteen of the Trusts reservoir groups, eight showed increases in holding, two showed decreases and the remaining three showed no change in holding.

In the southern reservoir groups, three of the five reservoir groups showed increases in holding, the remaining two reservoir groups showed no change, this was the Kennet & Avon and the Grand Union North. The reservoir group that showed the largest increase in holding was the Oxford & Grand Union with an increase of 11.8%. This was followed by Grand Union South with 9.4% increase and then the Birmingham Canal Navigations with 3.1%.

Of the eight reservoir groups in the north, five showed increases in holding, two showed decreases and the remaining group showed no change in holding, this was the Grantham Canal. The reservoir group that showed the biggest increase in holding was the Huddersfield Narrow Canal with 11.7%, this was followed by the Lancaster with 5.2%, and then the Caldon Canal with 3.2%, then the Chesterfield and Staffs & Worcs, Shropshire Union with 1.1% and 0.1% respectively. The remaining two reservoir groups had slight decreases in holding, this was the Leeds & Liverpool and Peak Forest & Macclesfield with -0.4% and -0.3%.

Due to the above average rainfall seen in October and the near-average rainfall in November, aided by Storm Babet and Storm Debi, this resulted in most reservoir levels increasing, and some maintained their holding.

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>.

#### **Issued by:**

Water Management Team, Canal & River Trust  
22 December 2023

Reservoir data presented is from the week ending Monday 18 December unless stated, along with data from the nearest comparable date in October and November.

## 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	Startopend, 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