

Reservoir Watch October 2023

Reservoir Group	August 2023 Holding	September 2023 Holding	October 2023 Holding	Change in September-October period	Minimum historical* October holding (Year)
Kennet & Avon Canal	87.9%	87.9%	87.9%	0.0%	57.1% (1998)
Oxford & GU	81.3%	65.7%	65.4%	-0.3%	25.0% (2011)
GU South	70.8%	62.9%	62.2%	-0.7%	37.3% (2011)
GU North	75.9%	64.0%	64.0%	0.0%	14.6% (2011)
Lancaster Canal	85.9%	77.6%	99.3%	21.7%	67.4% (2014)
Leeds & Liverpool Canal	67.9%	56.1%	78.9%	22.8%	24.6% (2003)
Peak Forest & Macclesfield Canals	55.9%	51.1%	58.2%	7.1%	17.2% (2003)
Caldon Canal	78.7%	67.5%	76.2%	8.7%	29.9% (2022)
Huddersfield Narrow Canal	64.8%	50.7%	62.3%	11.6%	21.2% (2013)
Chesterfield Canal	26.9%	23.9%	28.2%	4.3%	28.2% (2022)
Grantham Canal	92.2%	92.2%	92.5%	0.3%	71.8% (2014)
Birmingham Canal Navigations	92.2%	87.0%	86.7%	-0.3%	14.7% (2011)
Staffs & Worcs, Shropshire Union	84.2%	83.1%	83.9%	0.8%	51.9% (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, September was split into two halves, the first being characterised by high pressure and temperatures, and the second consisting of autumnal wind and rain. During the first week of the month, temperatures exceeded 30°C, this was longest run of consecutive days seen in September. This contributed to it being the joint warmest September for the UK (the other year being 2006) in a series of 140 years. Rainfall was above average, with intense but localised thunderstorms. Overall, the UK rainfall was 131% of average, with areas in the north-west and south-west of England contributing to this average, with averages exceeding 170%. Only the south saw below average rainfall with 88% of average this explained by the deficits that were found in the south-east being 50% of the average. The above average rainfall

resulted in the river flows being above average this month. Peak flows ranking in the top three for September were recorded on the 19th and the 20th, all in series of 50 years or more. Mean flows for July-September were similarly normal or above normal.

Soil wetness increased in many areas but remained low in the south-east region. Groundwater level receded in the majority of Chalk sites but remained in the normal range. In Jurassic limestones and Magnesian Limestone, levels fell but remained in the normal range.

The outlook for the next three months for most of the UK is for normal to above normal river flows and groundwater levels. However, areas that received below average rainfall, have below normal groundwater levels and river flows, therefore continued monitoring of the areas will be essential through the autumn 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/2023/9/2023_9_Rainfall_Anomaly_1991-2020.gif

The Trust's Water Resources

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

In the southern reservoir groups, three of the five reservoir groups showed a decrease in holding, the other two showed no change in holding. The reservoir group that showed the biggest decrease in holding was Grand Union South with -0.7% decrease, this was followed by Oxford & Grand Union and Birmingham Canal Navigations both with a -0.3% decrease in holding. The other two reservoirs that showed no change in holding was the Kennet & Avon and Grand Union North.

Of the eight reservoir groups in the north, all groups showed an increase in holding. The most significant increase in holding was observed in the Leeds & Liverpool Canal with an increase of 22.8%, this was closely followed by the Lancaster Canal with a notable 21.7% increase. The other Northern reservoir groups also demonstrated increases in holding with the Huddersfield Narrow Canal showing an increase of 11.6%, this was followed by the Caldon Canal (8.7%), Peak Forest and Macclesfield (7.1%), Chesterfield (4.3%), Staffs & Worcs, Shropshire Union (0.8%) and Grantham Canal (0.3%).

As we enter the autumnal months, the increases in holding, especially in the north, can be attributed to the increase in rainfall. The difference in percentage holdings between the north and south is reflected by the weather conditions, with the north receiving higher than average rainfall than the south. Despite the south receiving decreases in holding, the percentage differences are minimal and close to 0%.

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
27 October 2023

Reservoir data presented is from the week ending Monday 16 October unless stated, along with data from the nearest comparable date in September and October.

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