Reservoir Watch July 2023

Reservoir Group	May 2023 Holding	June 2023 Holding	July 2023 Holding	Change in June -July period	Minimum historical* July holding (Year)
Kennet & Avon Canal	87.9%	87.9%	87.9%	0.0%	76.9% (2022)
Oxford & GU	99.7%	90.4%	85.5%	-4.9%	55.9% (2011)
GU South	83.4%	77.1%	72.0%	-5.1%	73.1% (2022)
GU North	99.9%	88.1%	82.4%	-5.7%	34.2% (2011)
Lancaster Canal	96.9%	83.3%	78.3%	-5.0%	50.6% (2018)
Leeds & Liverpool Canal	87.5%	66.7%	52.8%	-13.9%	27.2% (2022)
Peak Forest & Macclesfield Canals	67.2%	56.8%	50.5%	-6.3%	26.3% (2022)
Caldon Canal	95.1%	82.9%	71.9%	-11.0%	49.6% (2022)
Huddersfield Narrow Canal	70.9%	55.4%	51.4%	-4.0%	13.8% (2013)
Chesterfield Canal	32.7%	27.6%	26.0%	-1.6%	37.7% (2022)
Grantham Canal	92.4%	91.5%	91.2%	-0.3%	88.5% (2006)
Birmingham Canal Navigations	99.8%	94.1%	92.9%	-1.2%	27.0% (2011)
Staffs & Worcs, Shropshire Union	87.3%	85.5%	84.5%	-1.0%	67.6% (2010)

** 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, June was the warmest June on record for the UK. The first half of the month had notably dry weather due to the anticyclonic conditions that had been established in May. This dry weather was interrupted by a series of thunderstorms which lead to the second half being characterised as wet with localised heavy rainfall in some parts of the UK. These wet conditions resulted in surface water flooding in areas such as Wrexham, Greater Manchester, Sheffield, Norfolk, and Devon. Despite these wet conditions, most of the UK received below average rainfall, with some parts receiving less than 70% of the average, these areas included eastern England and south Wales. Above average rainfall was found in a band from London to the Wirral, however this had a small impact on the regional rainfall totals. Nationally, June rainfall for the

UK was 68% of average. Additionally, due to the recessions that were established in May, river flows were generally in the normal range to exceptionally low, rarely peaking above average.

Soil moisture deficits were found across most of Great Britain during June, this was due to the low rainfall and high rates of evapotranspiration. However, there were recordings of an increase in soil wetness towards the end of the month as there was more rainfall. The mixed groundwater situation of recent months persisted, with groundwater levels in Chalk receding and levels in the Permo Triassic aquifers remaining in the normal range.

The latest Hydrological Outlook has suggested that river flows are likely to continue to be below average in the coming months, meaning that continuous monitoring is required in areas that didn't benefit from the wet spring. Nevertheless, the wet weather at the start of July has alleviated pressures and concerns on the environment and agriculture sector.

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/2023/6/2023_6_Rainfall_Anomaly_1991-2020.gif

The Trust's Water Resources

Of the thirteen of the Trusts reservoir groups, twelve recorded decreases in holding, with the remaining reservoir group showing no change, this was the Kennet & Avon canal.

In the southern reservoir groups, four of the five reservoir groups, showed a decrease in holding, the remaining reservoir group that did not show any change was the Kennet & Avon Canal and remained at 87.9%. The largest decrease was found in the Grand Union North with a decrease of -5.7%, this was followed by Grand Union South with -5.1%, then Oxford & GU and Birmingham Canal Navigation with a percentage change of -4.9% and -1.2% respectively.

Of the eight reservoir groups in the north, all of them showed a decrease in holding. The largest decrease in holding was found in the Leeds & Liverpool Canal with a decrease of -13.9%, this was closely followed by the Caldon Canal with -11.0% decrease. The remaining six reservoir groups, Peak Forest & Macclesfield, Lancaster, Huddersfield Narrow Canal, Chesterfield, Staffs & Worcs and Shropshire Union and Grantham, recorded decreases of -6.3%, -5.0%, -4.0%, -1.6%, -1.0% and -0.3%, respectively. This decrease across most reservoir groups can be attributed to increased usage of reservoir stocks to support the canals as boating traffic is increasing as well as the UK receiving below average rainfall for June.

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
28 July 2023

Reservoir data presented is from the week ending Monday 17 July unless stated, along with data from the nearest comparable date in May and June.

Annex 1 – Canal & River Trust reservoir groups

Group name	Reservoirs within group
Kennet & Avon Canal	Crofton [*principally a spring-fed reservoir, and its yield is therefore greater than the storage volume indicates*]
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