

Reservoir Watch November 2023

Reservoir Group	September 2023 Holding	October 2023 Holding	November 2023 Holding	Change in October-November period	Minimum historical* November holding (Year)
Kennet & Avon Canal	87.9%	87.9%	87.9%	0.0%	54.4% (2011)
Oxford & GU	65.7%	65.4%	87.4%	22.0%	22.4% (2011)
GU South	62.9%	62.2%	74.2%	12.0%	31.9% (2011)
GU North	64.0%	64.0%	99.9%	35.9%	14.6% (2011)
Lancaster Canal	77.6%	99.3%	94.8%	-4.5%	65.0% (2009)
Leeds & Liverpool Canal	56.1%	78.9%	86.8%	7.9%	18.3% (2003)
Peak Forest & Macclesfield Canals	51.1%	58.2%	68.8%	10.6%	18.0% (2003)
Caldon Canal	67.5%	76.2%	92.1%	15.9%	28.9% (2003)
Huddersfield Narrow Canal	50.7%	62.3%	62.9%	6.9%	32.0% (2013)
Chesterfield Canal	23.9%	28.2%	42.8%	14.6%	29.5% (2022)
Grantham Canal	92.2%	92.5%	92.4%	-0.1%	73.2% (2014)
Birmingham Canal Navigations	87.0%	86.7%	96.9%	10.2%	14.6% (2011)
Staffs & Worcs, Shropshire Union	83.1%	83.9%	87.7%	3.8%	52.1% (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, despite the unseasonal autumnal warmth established in September, October was marked by unsettled conditions, bringing significant rainfall and flooding. These wet conditions were a result of Atlantic weather systems bringing heavy rainfall and severe flooding events. This was the sixth wettest October since 1890, with rainfall for the UK being 140% of average, with parts of central and eastern England being among the wettest nationally. From the 18th-21st, Storm Babet brought substantial rainfall. During this four-day period, large areas of north-east UK, midlands, and East Anglia exceeded typical average rainfall for October. In regard to river flows, as Storm Babet brought severe and widespread flooding, flows in northern England rose rapidly, with many rivers reaching their highest peak for October. October

mean flows were in the normal range along the west coast, but elsewhere were significantly above normal.

As a result of a wet October, the majority of areas in the UK were above field capacity for soil moisture, except in parts of southern England. For groundwater, recharge occurred at most Chalk sites, with groundwater levels increases. At Jurassic limestones, Magnesian limestone and Carboniferous limestone sites, groundwater levels increased significantly. Recharge events were found in the Upper Greensand and Devonian sandstone.

The hydrological outlook indicates that water resources are favourable, however, flood risk has increased in many areas across the UK. Therefore, while the outlook favours above normal flows over the coming months, further flood impacts will occur especially with October ending with Storm Ciaran which brought further flooding in early November.

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/2023/10/2023_10_Rainfall_Anomaly_1991-2020.gif

The Trust's Water Resources

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

In the southern reservoir groups, four of the five reservoir groups showed increases in holding, the remaining group that showed no change in holding was the Kennet & Avon. The reservoir group that showed the biggest increase in holding was the Grand Union North with a 35.9% gain in holding. This was followed by Oxford & Grand Union with 22.0%, then Grand Union South with 12.0% and then the Birmingham Canal Navigations with 10.2%.

Of the eight reservoir groups in the north, six showed increases in holding, while the remaining two showed a decrease in holding. The two reservoir groups that showed a decrease in holding were the Lancaster Canal with -4.5% and the Grantham Canal with -0.1%. The reservoir group that showed the biggest increase in holding was Caldon Canal with a 15.9% increase, this was followed by Chesterfield (14.6%), Peak Forest & Macclesfield Canal (10.6%), Leeds & Liverpool Canal (7.9%), Huddersfield Narrow Canal (6.9%), and the Staffs & Worcs, Shropshire Union (3.8%).

October received above average rainfall, this was aided by Storm Babet which brought substantial rainfall, this therefore resulted in the increases in holding across ten reservoir groups nationally.

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
17 November 2023

Reservoir data presented is from the week ending Monday 13 November 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