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Dams and Reservoirs

Editorial

You will have noticed that this issue of *Dams and Reservoirs* combines issues 3 and 4 of 2025, as we are still suffering from a dearth of papers. However, I am pleased to say that the situation is starting to look better for 2026, when we aim to publish four full issues. However, to achieve this, it is essential that we continue to receive a steady flow of papers, so please do think about how you can contribute to the pool of knowledge that is essential for our industry. Can you submit a paper – or even just a short note?

This issue contains a range of papers, the first of which is a briefing note by Norris (2025) on the work of one of the many Technical Committees of the International Commission on Large Dams (ICOLD). Technical Committee C is preparing guidance on the design and surveillance of spillways, chutes, and stilling basins, and this note summarises the proposed content of the Technical Bulletins.

There are, however, many other ICOLD Technical Committees, which have produced numerous Technical Bulletins over the years, and are continuing to do so. As the British Dam Society is a member of ICOLD, all BDS members have free access to all published bulletins. Please contact Andrew Thompson, the Honorary Technical Secretary, at hontechsec@britishdams.org if you need assistance in accessing these bulletins.

Much of Technical Committee C's work involves the hydraulics of flow, and that is also the subject of the paper by Taghizadeh *et al*. (2025), who have examined vortex formation at water intakes. This phenomenon can draw air and floating debris into draw-off pipes, affecting the hydraulic efficiency of the system. With the current emphasis on the use of siphons to enhance drawdown capacity at reservoirs, this paper is particularly timely, as minimising the onset of air-entraining vortices will maximise the degree of drawdown that a syphon can achieve.

Turning now to water within the dam itself, Bruschi *et al*. (2025) have studied the risk of internal erosion in earth embankment dams, and how this risk can be identified before it becomes critical. Using data from an array of piezometers in a sediment retention dam in Brazil, they identified the changes in risk as the phreatic surface rose. Their analyses culminated in the preparation of a flow chart from which risk levels varying from 'Normal' to 'Emergency' could be deduced from the piezometer readings.

Staying with the topic of risk, Lavery (2025) reports that the Environment Agency has been examining 172 records of reported incidents at reservoirs for the 20 years from 2004. Prior to the 2013 incident, reporting was not mandatory, and some early records did not capture the type of details that are recorded in the current formal recording system. Nevertheless, from these incident reports, the Agency has ranked the frequency of occurrence in several categories, such as natural incident triggers, causes of incidents, and the effects on the dam. In this last category, internal erosion and external erosion (usually from overtopping) were, not surprisingly, ranked equal first in terms of frequency of reporting. The analysis also shows that half the recorded incidents related to dams were over 100 years old.

Many dams more than 200 years old are discussed in David Brown's paper on the reservoirs of the Worcester and Birmingham Canal (Brown, 2025), most of which are still in active service. The paper provides a fascinating description of the complex canal system – and the need to satisfy local mill owners that the water they used as an energy source would continue to be provided. Reservoirs were therefore needed not only to supply the canal with water lost through lockages, but also to ensure that compensation flows to the rivers on which the mills were situated could be maintained.

Please do consider sharing your interesting projects or innovations through this journal. Do contact the Editor, Andrew Pepper, at atpec@peppernet.org or editor@britishdams.org for any help or guidance you may need.

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